



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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June 27, 2012

Mr. M. J. Ajluni  
Nuclear Licensing Director  
Southern Nuclear Operating Company, Inc.  
40 Inverness Center Parkway  
Post Office Box 1295, Bin - 038  
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2, CLOSEOUT OF  
BULLETIN 2011-01, "MITIGATING STRATEGIES" (TAC NOS. ME6497 AND  
ME6498)

Dear Mr. Ajluni:

On May 11, 2011, the U.S. Nuclear Regulatory Commission (NRC) issued Bulletin 2011-01, "Mitigating Strategies" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML111250360), to all holders of operating licenses for nuclear power reactors, except those that have permanently ceased operation and have certified that fuel has been removed from the reactor vessel. The purpose of the bulletin was to obtain a comprehensive verification that licensees' mitigating strategies to maintain or restore core cooling, spent fuel cooling, and containment following a large explosion or fire were compliant with Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.54(hh)(2).

The bulletin required two sets of responses pursuant to the provisions of 10 CFR 50.54(f). Vogtle Electric Generating Plant, Units 1 and 2, provided its responses to the bulletin by letters dated June 8 and July 8, 2011 (ADAMS Accession Nos. ML111590883 and ML111890487). By letter dated November 29, 2011 (ADAMS Accession No. ML11308A090), the NRC sent the licensee a request for additional information (RAI) on its July 8, 2011, response. The licensee responded to the RAI by letter dated December 15, 2011 (ADAMS Accession No. ML113500158).

M. Ajluni

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The NRC staff has reviewed the information submitted by the licensee, and concludes that its response to the bulletin is acceptable. As summarized in the enclosure, the staff verified that the licensee provided the information requested in the bulletin. We find that no further information or actions under the bulletin are requested.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick G. Boyle", with a long horizontal flourish extending to the right.

Patrick G. Boyle, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosure: Summary of Bulletin

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SUMMARY OF NRC BULLETIN 2011-01,  
"MITIGATING STRATEGIES" RESPONSE REVIEW  
VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-424 AND 50-425

On May 11, 2011, the U.S. Nuclear Regulatory Commission (NRC) issued Bulletin 2011-01, "Mitigating Strategies," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML111250360) to all holders of operating licenses for nuclear power reactors, except those that have permanently ceased operation and have certified that fuel has been removed from the reactor vessel. The bulletin required two sets of responses pursuant to the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(f). The first responses were due 30 days after issuance of the bulletin. By letter dated June 8, 2011 (ADAMS Accession No. ML111590883), Vogtle Electric Generating Plant, Units 1 and 2, (Vogtle) provided its response to this first set of questions (first response). The second responses were due 60 days after issuance of the bulletin. By letter dated July 8, 2011 (ADAMS Accession No. ML111890487), Vogtle provided its response to this second set of questions (second response). By letter dated November 29, 2011 (ADAMS Accession No. ML11308A090), the NRC sent a request for additional information (RAI) on the second response. Vogtle responded to the RAI by letter dated December 15, 2011 (ADAMS Accession No. ML113500158). As summarized below, the NRC staff has verified that Vogtle provided the information requested in the bulletin.

## **1.0 BACKGROUND**

On February 25, 2002, the NRC issued EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures" (ICM Order). Section B.5.b of the ICM Order required licensees to develop specific guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using readily available resources (equipment and personnel) that can be effectively implemented under the circumstances associated with the loss of large areas of the plant due to explosions or fire.

By letter dated July 18, 2007 (ADAMS Accession No. ML071940003), the NRC staff issued its Safety Evaluation (SE) to document the final disposition of information submitted by Vogtle regarding Section B.5.b of the ICM Order. Along with the SE, the staff issued a conforming license condition to incorporate the B.5.b mitigating strategies into the licensing basis.

On March 27, 2009, the NRC issued 10 CFR 50.54(hh)(2) as a new rule, in order to capture the B.5.b mitigating strategies and related license conditions as regulatory requirements for both current and future licensees. At that time, licensee compliance with the conforming license conditions was sufficient to demonstrate compliance with 10 CFR 50.54(hh)(2) (74 FR 13926) so no further actions were required on the part of current licensees.

Enclosure

## **2.0 30-DAY REQUEST**

In order to confirm continued compliance with 10 CFR 50.54(hh)(2), the bulletin requested that licensees address the following two questions within 30 days of issuing the bulletin:

1. Is the equipment necessary to execute the mitigating strategies, as described in your submittals to the NRC, available and capable of performing its intended function?
2. Are the guidance and strategies implemented capable of being executed considering the current configuration of your facility and current staffing and skill levels of the staff?

The NRC staff reviewed Vogtle's first response to determine if it had adequately addressed these questions.

### **2.1 Question 1: Availability and Capability of Equipment**

In its first response, Vogtle confirmed that equipment it needs to execute the 10 CFR 50.54(hh)(2) mitigating strategies is available and capable of performing its intended function. The NRC staff verified that this confirmation covered equipment needed for each of the three phases of B.5.b mitigation strategies. Therefore, the NRC staff finds that Vogtle has adequately responded to Question 1.

### **2.2 Question 2: Guidance and Strategies Can Be Executed**

In its first response, Vogtle confirmed that the guidance and strategies it has implemented for 10 CFR 50.54(hh)(2) are capable of being executed considering the current facility configuration, staffing levels, and staff's skills. Since Vogtle has considered its current facility configuration, staffing levels, and staff's skills, and confirmed that it can execute its implemented guidance and strategies, the NRC staff finds that Vogtle has adequately responded to Question 2.

## **3.0 60-DAY REQUEST**

The bulletin required a response to the following five questions within 60 days of issuing the bulletin:

1. Describe in detail the maintenance of equipment procured to support the strategies and guidance required by 10 CFR 50.54(hh)(2) in order to ensure that it is functional when needed.
2. Describe in detail the testing of equipment procured to support the strategies and guidance required by 10 CFR 50.54(hh)(2) in order to ensure that it will function when needed.
3. Describe in detail the controls for ensuring that the equipment is available when needed.

4. Describe in detail how configuration and guidance management is ensured so that strategies remain feasible.
5. Describe in detail how you ensure availability of offsite support.

The NRC staff reviewed Vogtle's submittals to determine if it had adequately addressed these questions. This was accomplished by verifying that the submittals listed equipment, training, and offsite resources which were relied upon to make conclusions in the July 18, 2007, SE or are commonly needed to implement the mitigating strategies.

### **3.1 Questions 1 and 2: Maintenance and Testing of Equipment**

Questions 1 and 2 of the 60-day request required licensees to describe in detail the maintenance and testing of equipment procured to support the strategies and guidance required by 10 CFR 50.54(hh)(2) in order to ensure that it is functional when needed. In its second response, Vogtle listed the equipment used to support the 10 CFR 50.54(hh)(2) mitigating strategies which receives maintenance or testing. For each item, Vogtle described the maintenance and testing performed, including the frequency and basis for the maintenance or testing activity.

The NRC staff verified that Vogtle listed equipment that typically requires maintenance or testing which was relied upon to make conclusions in the SE or commonly needed to implement the mitigating strategies. In its second response, Vogtle stated that the portable pump, hoses, and phones receive maintenance or testing. In its RAI response, Vogtle described how it ensures that radios will be available and functional if needed. The NRC staff noted that the fuel level for the portable pump is verified during inventory. The NRC staff also noted that the condition of nozzles and other equipment is verified during inventory which would ensure that they are functional when needed.

The NRC staff verified that Vogtle described the process used for corrective actions and listed the testing performed to ensure that the strategies were initially feasible. Vogtle stated in its second response that its 10 CFR Part 50, Appendix B, corrective action program is used to document equipment failure, establish priorities, and perform trending.

Based upon the information above, the NRC staff finds that Vogtle has provided the information requested by Questions 1 and 2.

### **3.2 Question 3: Controls on Equipment**

Question 3 of the 60-day request required licensees to describe in detail the controls on equipment, such as inventory requirements, to ensure that the equipment is available when needed. A list of inventory deficiencies and associated corrective actions to prevent loss was also requested.

The NRC staff verified that Vogtle described its process for ensuring that B.5.b equipment will be available when needed. In its second response, Vogtle identified equipment included in its inventory, the inventory frequency, storage requirements, and items verified. Items verified include proper quantity and location of equipment. Vogtle states that at the time of its second response there were no outstanding inventory deficiencies that would render the strategies not viable. Vogtle also stated that it had found inventory deficiencies in the past, which have been corrected, and stated it implementing additional measures to prevent recurrence.

The NRC staff verified that Vogtle inventoried equipment which was relied upon to make conclusions in the SE or commonly needed to implement the mitigating strategies. In its second response, Vogtle stated that procured non-permanently installed B.5.b equipment is inventoried at least quarterly in accordance with station procedures. The second response specifically states that the following items are included in the inventory: portable pump; hoses; phones; spray nozzles; and adapters. In its RAI response, Vogtle described how it ensures the availability of a vehicle to move the portable pump and other B.5.b equipment. Vogtle also identified other items that support the mitigating strategies that are inventoried or will be included in its inventory in the future.

Based upon the information above, the NRC staff finds that Vogtle has provided the information requested by Question 3.

### **3.3 Question 4: Configuration and Guidance Management**

Question 4 of the 60-day request required licensees to describe in detail how configuration and guidance management is assured so that the strategies remain feasible.

The NRC staff verified that Vogtle described its measures to evaluate plant configuration changes for their effects on the mitigating strategies and to ensure its procedures are current. In its second response, Vogtle stated that plant configuration changes are procedurally evaluated against the licensing basis, which includes the B.5.b mitigating strategies. Part of this process includes a review to determine if a proposed change would adversely affect the feasibility of the mitigating strategies.

The NRC staff verified that Vogtle described measures it has taken to validate the procedures or guidelines developed to support the mitigating strategies. In its second response, Vogtle identified testing in response to Question 2 that demonstrated the ability to execute some strategies. Vogtle stated that it previously validated the mitigating strategies and it is implementing administrative controls to ensure that future changes to the mitigation strategies get revalidated.

The NRC staff verified that Vogtle described the training program implemented in support of the mitigating strategies and how its effectiveness is evaluated. In its second response, Vogtle identified the training provided to its operations personnel, emergency response organization key decision makers and evaluators, and fire brigade. Vogtle also identified the frequency with which each type of training is provided and the methods for training evaluating.

Based upon the information above, the NRC staff finds that Vogtle has provided the information requested by Question 4.

### **3.4 Question 5: Offsite Support**

Question 5 of the 60-day request required licensees to describe in detail how offsite support availability is assured.

The NRC staff verified that Vogtle listed the offsite organizations it relies upon for emergency response, including a description of agreements and related training. The NRC staff compared the list of offsite organizations that Vogtle provided in its second response with the information relied upon to make conclusions in the SE. Vogtle stated that it maintains letters of agreement or contracts with these offsite organizations, which are reviewed or renewed as needed, and that these agreements were current at the time of its second response. The NRC staff noted that the letters of agreement are all validated annually. Vogtle also described the training and site familiarization it provides to these offsite organizations. Vogtle stated that it reviewed its corrective action program back to 2008 and the only issue identified was that they could not find the letters of agreement for 2009 and 2010.

Based upon the information above, the NRC staff finds that Vogtle has provided the information requested by Question 5.

## **4.0 CONCLUSION**

As described above, the NRC staff has verified that Vogtle has provided the information requested in Bulletin 2011-01. Specifically, Vogtle responded to each of the questions in the bulletin as requested. The NRC staff concludes that Vogtle has completed all of the requirements of the bulletin and no further information or actions under the bulletin are needed.

Principal Contributor: B. Purnell

Date:

M. Ajluni

- 2 -

The NRC staff has reviewed the information submitted by the licensee, and concludes that its response to the bulletin is acceptable. As summarized in the enclosure, the staff verified that the licensee provided the information requested in the bulletin. We find that no further information or actions under the bulletin are requested.

Sincerely,

*/RA/*

Patrick G. Boyle, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

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B. Purnell, NRR

ADAMS Accession No. ML12171A378

\* By memo dated

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