



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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July 17, 2012

Mr. Regis T. Repko  
Vice President  
McGuire Nuclear Station  
Duke Energy Carolinas, LLC  
12700 Hagers Ferry Road  
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 - CLOSEOUT OF BULLETIN  
2011-01, "MITIGATING STRATEGIES" (TAC NOS. ME6448 AND ME6449)

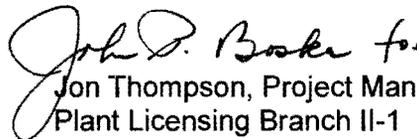
Dear Mr. Repko:

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). McGuire Nuclear Station, Units 1 and 2, provided its responses to the bulletin by letters dated June 6 and June 30, 2011 (ADAMS Accession Nos. ML11161A141 and ML11200A134, respectively). By letter dated December 21, 2011 (ADAMS Accession No. ML11335A059), the NRC sent the licensee a request for additional information (RAI) on its June 30, 2011, response. The licensee responded to the RAI by letter dated January 11, 2012 (ADAMS Accession No. ML12020A170).

The NRC staff has reviewed the information submitted by McGuire Nuclear Station, Units 1, and 2, and concludes that its response to the bulletin is acceptable. As summarized in the enclosure, the NRC staff verified that the licensee provided the information requested in the bulletin. No further information or actions under the bulletin are requested.

Sincerely,

  
Jon Thompson, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure: Summary of NRC Bulletin 2011-01 Response Review

cc w/ encl: Distribution via Listserv

## SUMMARY OF NRC BULLETIN 2011-01

### "MITIGATING STRATEGIES" RESPONSE REVIEW

#### MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

#### DOCKET NOS. 50-369 and 50-370

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. ML11250360) 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 6, 2011 (ADAMS Accession No. ML11161A141), McGuire Nuclear Station (MNS), Units 1 and 2, 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 June 30, 2011 (ADAMS Accession No. ML11200A134), MNS provided its response to this second set of questions (second response). By letter dated December 21, 2011 (ADAMS Accession No. ML11335A059), the NRC sent a request for additional information (RAI) on the second response. MNS responded to the RAI by letter dated January 11, 2012 (ADAMS Accession No. ML12020A170). As summarized below, the NRC staff has verified that MNS 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 26, 2007 (ADAMS Accession No. ML071970002), the NRC staff issued its Safety Evaluation (SE) to document the final disposition of information submitted by MNS 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 MNS'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, MNS 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 MNS has adequately responded to Question 1.

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

In its first response, MNS 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 MNS 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 MNS 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 MNS'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 26, 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, MNS listed the equipment used to support the 10 CFR 50.54(hh)(2) mitigating strategies which receives maintenance or testing. For each item, MNS described the maintenance and testing performed, including the frequency and basis for the maintenance or testing activity. The NRC staff verified that MNS 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, MNS stated that the portable pump, portable power supply, hoses, and communications equipment receive maintenance or testing. The NRC staff noted that during inventory nozzles are verified to be in usable condition. The NRC staff noted that the fuel level for the portable pump is verified during maintenance. MNS also identified other items that support the mitigating strategies that receive maintenance or testing.

The NRC staff verified that MNS described the process used for corrective actions and listed the testing performed to ensure that the strategies were initially feasible. MNS 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 MNS 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 MNS described its process for ensuring that B.5.b equipment will be available when needed. In its second response, MNS identified equipment included in its inventory, the inventory frequency, storage requirements, and items verified. Items verified include proper quantity, location, and accessibility of equipment; compressed gas bottle pressures; calibrations; equipment shelf lives; and controls on storage locations. MNS states that at the time of its second response there were no outstanding inventory deficiencies that would render the strategies not viable.

The NRC staff verified that MNS inventoried equipment which was relied upon to make conclusions in the SE or commonly needed to implement the mitigating strategies. In its second response, MNS stated that procured non-permanently installed B.5.b equipment is inventoried at least annually in accordance with station procedures. The second response specifically states that the following items are included in the inventory: portable pump; portable power supply;

hoses; communications equipment; nozzles; and connectors. The NRC staff noted that an operations truck is used to move the portable pump and hose trailer as part of the annual testing, which would ensure that availability of the truck. MNS also identified other items that support the mitigating strategies that are inventoried.

Based upon the information above, the NRC staff finds that MNS 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 MNS 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, MNS stated that the engineering change process requires a review of affected procedures and personnel that review plant changes for their affect on procedures are knowledgeable of B.5.b guidance.

The NRC staff verified that MNS described measures it has taken to validate the procedures or guidelines developed to support the mitigating strategies. In its second response, MNS identified testing in response to Question 2 that demonstrated the ability to execute some strategies. MNS also states that “the mitigating strategies were initially validated by walk downs, engineering evaluations and/or table top reviews” and they were similarly revalidated in 2011.

The NRC staff verified that MNS described the training program implemented in support of the mitigating strategies and how its effectiveness is evaluated. In its second response, MNS identified the training provided to its operations personnel; emergency response organization, including key decision makers; security personnel; fire brigade; and other personnel. MNS 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 MNS 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 MNS 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 MNS provided in its second response with the information relied upon to make conclusions in the SE. The NRC staff noted that MNS did not identify any local law enforcement agencies in its second response. In its RAI response, MNS described how it ensures the availability of several local law enforcement agencies to respond to a B.5.b event. In its RAI response, MNS also stated that the Gilead Volunteer Fire Department, which was listed in the SE but not in the second response, changed its name to the Huntersville Fire Department

which was listed in the second response. MNS stated that it maintains memorandum of understanding or other types of agreements with these offsite organizations, which are reviewed annually, and that these agreements were current at the time of its second response. MNS also described the training and site familiarization it provides to these offsite organizations. MNS stated that it reviewed its corrective action program back to 2008 and found no issues involving lapsed agreements related to offsite support for B.5.b events.

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

#### **4.0 CONCLUSION**

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

July 17, 2012

Mr. Regis T. Repko  
Vice President  
McGuire Nuclear Station  
Duke Energy Carolinas, LLC  
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Sincerely,  
**/RA by John P. Boska for/**  
Jon Thompson, Project Manager  
Plant Licensing Branch II-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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