



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 19, 2012

Mr. Mark E. Reddemann  
Chief Executive Officer  
Energy Northwest  
P.O. Box 968 (Mail Drop 1023)  
Richland, WA 99352-0968

SUBJECT: COLUMBIA GENERATING STATION - CLOSEOUT OF NRC BULLETIN  
2011-01, "MITIGATING STRATEGIES" (TAC NO. ME6417)

Dear Mr. Reddemann:

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). By letters dated June 9 and July 11, 2011 (ADAMS Accession Nos. ML11172A188 and ML11195A156, respectively), Energy Northwest, the licensee, provided its responses to the bulletin for Columbia Generating Station. Portions of the letter dated July 11, 2011, contain sensitive unclassified non-safeguards information and, accordingly, those portions have been withheld from public disclosure.

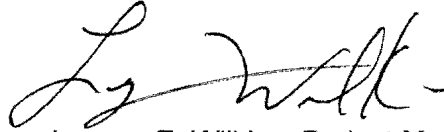
The NRC has reviewed the information submitted by the licensee and concludes that the response to the bulletin is acceptable. As summarized in the enclosure, the NRC staff verified that the licensee provided the information requested in the bulletin. No further information or actions under the bulletin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

M. Reddeman

- 2 -

If you have any questions, please contact me at 301-415-1377 or via e-mail at [lynnea.wilkins@nrc.gov](mailto:lynnea.wilkins@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Lynnea E. Wilkins". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Lynnea E. Wilkins, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure:  
As stated

cc w/encl: Distribution via Listserv

SUMMARY OF NRC REVIEW OF LICENSEE'S RESPONSES

TO NRC BULLETIN 2011-01, "MITIGATING STRATEGIES"

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

DOCKET NO. 50-397

1.0 INTRODUCTION

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 with 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 9, 2011 (ADAMS Accession No. ML11172A188), Energy Northwest (the license) provided its response for Columbia Generating Station (Columbia) to this first set of questions (first response). The second responses were due 60 days after issuance of the bulletin. By letter dated July 11, 2011 (ADAMS Accession No. ML11195A156), the licensee provided its response to this second set of questions (second response). Portions of the letter dated July 11, 2011, contain sensitive unclassified non-safeguards information and, accordingly, those portions have been withheld from public disclosure. As summarized below, the NRC staff has verified that the licensee provided the information requested in the bulletin.

2.0 BACKGROUND

On February 25, 2002, the NRC issued EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures" (ICM Order) (ADAMS Accession No. ML020510635). 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. ML072040097), the NRC staff issued its safety evaluation (SE) to document the final disposition of information submitted by the licensee 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; March 27, 2009), so no further actions were required on the part of current licensees.

Enclosure

### 3.0 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 the licensee's first response to determine if it had adequately addressed these questions.

#### 3.1 Question 1: Availability and Capability of Equipment

In its first response, the licensee confirmed that the 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 concludes that the licensee has adequately responded to Question 1.

#### 3.2 Question 2: Guidance and Strategies Can Be Executed

In its first response, the licensee 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 skills. Since the licensee has considered its current facility configuration, staffing levels, and staff skills, and confirmed that it can execute its implemented guidance and strategies, the NRC staff concludes that the licensee has adequately responded to Question 2.

### 4.0 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 assuring that the equipment is available when needed.
4. Describe in detail how configuration and guidance management is assured so that strategies remain feasible.
5. Describe in detail how you assure availability of offsite support.

The NRC staff reviewed the licensee's second response to determine if it had adequately addressed these questions. The staff also reviewed the NRC's SE dated August 9, 2007 to determine what equipment, training, and offsite resources at Columbia that were relied upon by NRC staff to conclude that the licensee's actions would ensure compliance with Section B.5.b of the ICM Order and the conforming license condition.

#### 4.1 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, the licensee listed the equipment used to support the 10 CFR 50.54(hh)(2) mitigating strategies which receives maintenance or testing. For each item, the licensee described the maintenance and testing performed, including the frequency and basis for the maintenance or testing activity.

The NRC staff verified that the licensee 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, the licensee stated that the fire pumper truck, portable power supply, hoses, and communications equipment receive maintenance or testing. The licensee also stated that the testing of fire nozzles and devices is included as part of the fire pumper truck testing. The NRC staff noted that the fuel level for the fire pumper truck is verified during inventory. The licensee also identified other items that support the mitigating strategies that receive maintenance or testing.

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

Based on the above, the NRC staff concludes that the licensee has provided the information requested by Questions 1 and 2.

#### 4.2 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 the licensee described its process for ensuring that B.5.b equipment will be available when needed. In its second response, the licensee identified equipment included in its inventory, the inventory frequency, storage requirements, and items verified. Items verified include proper quantities and locations. Verification of compressed gas bottle pressures, equipment shelf lives, and equipment accessibility were considered as testing and were identified in response to Question 2. The licensee also stated that there were no outstanding inventory deficiencies that would render the strategies not viable.

The NRC staff verified that the licensee inventoried equipment which was relied upon to make conclusions in the SE or commonly needed to implement the mitigating strategies. In its second response, the licensee stated that procured non-permanently installed B.5.b equipment is inventoried at least annually in accordance with station procedures and indicated that many items specifically listed in response to Question 3 are inventoried more frequently. The second response specifically states that the following items are included in the inventory: fire pumper truck; portable power supply; hoses; communications equipment; spray nozzles; connectors; and firefighter turnout gear. The licensee also identified other items that support the mitigating strategies that are inventoried.

Based on the above, the NRC staff concludes that the licensee has provided the information requested by Question 3.

#### 4.3 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 the licensee 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, the licensee described both its design and procedure change processes as they relate to the B.5.b mitigating strategies. The licensee stated that its configuration management ensures that plant changes do not negatively impact B.5.b mitigating strategies and that implementing procedures are maintained and consistent with design requirements.

The NRC staff verified that the licensee described measures it has taken to validate the procedures or guidelines developed to support the mitigating strategies. In its second response, the licensee identified testing in response to Question 2 that demonstrated the ability to execute some strategies. In addition, the licensee stated that the B.5.b strategies are governed by a controlled station design document which defines the mitigation responses and provides the analytic bases for the required actions. Design changes are verified against this document to confirm the impact on the B.5.b strategies.

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

Based on the above, the NRC staff concludes that the licensee has provided the information requested by Question 4.

#### 4.4 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 the licensee 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 the licensee provided in its second response with the information relied upon to make conclusions in the SE. The licensee 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. The licensee also described the training and site familiarization it provides to these offsite organizations.

Based on the above, the NRC staff concludes that the licensee has provided the information requested by Question 5.

#### 5.0 CONCLUSION

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

M. Reddeman

- 2 -

If you have any questions, please contact me at 301-415-1377 or via e-mail at [lynnea.wilkins@nrc.gov](mailto:lynnea.wilkins@nrc.gov).

Sincerely,

/RA/

Lynnea E. Wilkins, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure:  
As stated

cc w/encl: Distribution via Listserv

**DISTRIBUTION:**

PUBLIC

LPLIV Reading

RidsAcrsAcnw\_MailCTR Resource

RidsNrrDorLpl4 Resource

RidsNrrPMColumbia Resource

RidsNrrLAJBurkhardt Resource

RidsNrrDprPgcb Resource

RidsOgcRp Resource

RidsRgn4MailCenter Resource

BPurnell, NRR/DPR/PGCB

**ADAMS Accession No. ML12164A627**

**\*by memo dated**

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/DPR/PGCB/BC	NRR/LPL4/BC	NRR/LPL4/PM
NAME	LWilkins	JBurkhardt	KMorgan-Butler*	MMarkley	LWilkins
DATE	6/15/12	6/15/12	3/20/12	6/18/12	6/19/12

**OFFICIAL RECORD COPY**