

## SAFETY EVALUATION REPORT

DOCKET: 70-27

LICENSEE: Babcock & Wilcox Nuclear Operations Group, Inc. (B&W NOG)  
Lynchburg, Virginia

SUBJECT: Request to Amend Chapters 1 through 7 and 11 of License SNM-42 License Application and a Request for License Condition Regarding Changes That Do Not Decrease the Effectiveness of the License Application

### BACKGROUND

In a letter dated May 27, 2011, B&W NOG submitted a request for minor corrections to Chapters 1 through 7 and 11 of the License Application, as well as a request to insert a license condition which would define the types of changes that could be made to text in the License Application without prior approval by the U.S. Nuclear Regulatory Commission (NRC).

The letter was accompanied by 10 enclosures, including: a summary of all the changes, public (redacted) and non-public versions of Chapter 1; as well as Chapters 2 through 7 and 11, all publically available. The submittal was properly profiled in (Agencywide Documents Access and Management System (ADAMS) after a SUNSI review by staff of the Fuel Manufacturing Branch.

### DISCUSSION

The changes are summarized as follows:

#### **Chapter 1 - General Information**

Section 1.2, *Site Location and Description*, was revised to clarify that the license applies to the Babcock & Wilcox Nuclear Operations Group, Mount Athos Road site in Lynchburg, Virginia; which is different from other Babcock & Wilcox Nuclear Operations Group business units, located in Virginia, Ohio, Indiana, and Tennessee.

Section 1.4, *Possession Limits*, was revised to conform to Amendment 8, which transferred regulation of source and byproduct material to the Commonwealth of Virginia when Virginia became an Agreement State. Further information may be found at ADAMS Accession No. ML102150207.

The licensee furnished a redacted version of Chapter 1 with key possession limits, locations, and process details removed in accordance with the SUNSI guidance in RIS-2005-031.

Conclusion: These are minor administrative changes.

#### **Chapter 2 – Organization and Administration**

Section 2.1 was revised to clarify that the license applies to the Mount Athos Road site.

Section 2.2, *Personnel Education and Experience*, was incorporated into Section 2.1, *Organizational Responsibilities and Authority*, for clarity. In addition, "Department" was added to a number of the position titles in Section 2.1; and "Supervisor" was replaced with "Front Line

Manager” to ensure that the position title matches the organizational structure (organization chart). Former Section 2.1.4, *Licensing Officer*, was removed; and this function is listed under the *Manager of Licensing and Safety Analysis*. Section 2.1.17 was expanded to list the responsibilities of the *Quality Control Department Manager* in a manner similar to those of other managers.

Section 2.1.19 was deleted with removal of the position of *Quality Assurance (QA) Auditor* from the License Application. This is not a management position required for safety functions. The staff found this acceptable, because QA functions should be separate from operations functions. All commitments for QA audits and assessments of safety operations remain in Chapter 11, *Management Measures*.

Qualifications for managers of the QA and Uranium Processing Departments were revised to match those of other departments.

Conclusion: These are minor administrative changes and comply with the regulatory requirement that the licensee’s corporate organization and staff experience provide adequate safety for workers, the public, and the environment.

### **Chapter 3 – Integrated Safety Analysis**

Section 3.1 was revised to clarify that the license applies to the Mount Athos Road site.

Conclusion: This is a minor administrative change.

### **Chapter 4 – Radiation Safety**

Section 4.1 was revised to clarify that the license applies to the Mount Athos Road site.

Section 4.3.3.2: The action level for exposures measured by personal air sampling devices was revised from a daily exposure exceeding 16 derived air concentration (DAC)-hours to 50 mrem Committed Effective Dose Equivalent (CEDE). The action level for a weekly exposure exceeding 40 DAC-hours was revised to 100 mrem CEDE.

Conclusion: These are both units of dose. The NRC staff concluded that although DAC-hours may be more appropriate for planning purposes, it may not be as usable for decision-making such as action levels. The action levels were found to be reasonably equivalent for both cases, do not exceed any regulatory limits, and are acceptable.

### **Chapter 5 – Nuclear Criticality Safety**

Section 5.1 was revised to clarify that the license applies to the Mount Athos Road site.

The title of Section 5.1.2 was revised to *Nuclear Criticality Safety Procedures and Postings*, because the site uses no labels for criticality safety controls.

Conclusion: This is a minor administrative change.

## **Chapter 6 – Chemical Process Safety**

Section 6.1 was revised to clarify that the license applies to the Mount Athos Road site.

Conclusion: This is a minor administrative change.

## **Chapter 7 – Fire Safety**

Section 7.1 was revised to clarify that the license applies to the Mount Athos Road site.

Conclusion: This is a minor administrative change.

## **Chapter 11 – Management Measures**

Section 11.1 was revised to clarify that the license applies to the Mount Athos Road site.

Section 11.1.3.1 was revised to delete the qualifications for safety and environmental positions, since they repeat the qualifications listed in Chapter 2. In addition, the licensing function was deleted.

Section 11.5.1.1: The frequency of Nuclear Criticality Safety inspections was corrected to clarify that they will be performed at least monthly, on weekends or backshifts, but not both.

Sections 11.5.3.1 through 11.5.3.5: The wording for audit reports was revised to be consistent with language in the site corrective action tracking program, regarding reports, summaries, observations, and findings.

Conclusion: These are minor administrative changes.

License Condition:

The licensee requested a license condition which would define the types of changes that could be made to text in the License Application without prior approval by the NRC as follows:

- The change does not decrease the level of effectiveness of the design basis as described in the License Application.
- The change does not result in a departure from the methods of evaluation described in the License Application used in establishing the design basis.
- The change does not result in a degradation of safety.
- The change does not affect compliance with applicable regulatory requirements
- The change does not conflict with an existing license condition.
- Within 6 months after each change is made, the licensee shall submit the revised chapters of the License Application to the Director, Office of Nuclear Material Safety and Safeguards, using an appropriate method listed in 10 CFR 70.5(a) with a copy to the appropriate NRC Regional Office.

The staff reviewed this amendment request using the applicable guidance in NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," and confirmed that the license application contains commitments to ensuring operations are conducted safely and in compliance with all regulations. Organizational responsibility for

compliance begins with the general manager. The proposed license condition, including the timeframe for reporting changes, is reasonable and consistent with the process for making changes in 10 CFR 70.72. It is noted that a similar condition was approved for the Mixed Oxide Fabrication Facility as documented in ADAMS Accession No. ML103430615. Staff noted, however, that the B&W NOG license does not have a design basis, but has a safety basis or safety demonstration. After confirmation from the licensee that this request applies to the safety basis in the License Application, safety basis will be used in the new license condition

### ENVIRONMENTAL REVIEW

The staff has determined that the other changes requested are related to administrative matters which do not: (1) result in a significant change to the types or amounts of any effluents, (2) result in a significant increase in an individual or cumulative occupational radiation exposure, (3) result in any construction impact, or (4) significant increase in the potential for or consequences from radiological accidents; and are therefore in accordance with 10 CFR 51.22(c)(11) categorically excluded from the requirements to prepare a site-specific environmental assessment.

### CONCLUSION AND RECOMMENDATION

Based on the review and evaluation of the licensee's submittal, the staff has determined that the proposed changes to the facility's License Application are administrative in nature, and the commitments in the License Application continue to ensure effective programs at the B&W NOG facility. Approval of the amendment request and new license condition is recommended.

A new License Condition S-14 should be issued to reflect the proposed license application change criteria as follows:

- S-14 B&W NOG may make changes to the License Application that do not reduce the effectiveness of the License Application, without prior NRC approval, if the change meets the following provisions:
- The change does not decrease the level of effectiveness of the safety basis as described in the License Application.
  - The change does not result in a departure from the approved methods of evaluation described in the License Application.
  - The change does not result in a degradation of safety.
  - The change does not affect compliance with applicable regulatory requirements.
  - The change does not conflict with an existing license condition.
  - Within 6 months after each change is made, the licensee shall submit the revised chapters of the License Application to the Director, Office of Nuclear Material Safety and Safeguards, using an appropriate method listed in 10 CFR 70.5(a) with a copy to the appropriate NRC Regional Office.

### PRINCIPAL CONTRIBUTOR

Merritt N. Baker