

SAFETY EVALUATION REPORT

DOCKET NO.: 70-27

LICENSEE: BWXT Nuclear Operations Group, Inc.
Lynchburg, Virginia

SUBJECT: REQUEST FOR EXEMPTION FROM TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* PARAGRAPH 70.50(b)(3)

REQUEST

By cover letter dated March 16, 2017, BWXT Nuclear Operations Group, Inc. (BWXT), submitted a request for an exemption from certain requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Paragraph 70.50(b)(3) (Agencywide Documents Access and Management System [ADAMS] Accession Number ML17080A168). In particular, 10 CFR 70.50(b)(3) requires that the licensee notify the U.S. Nuclear Regulatory Commission (NRC), within 24 hours after the discovery of an event involving licensed material that requires unplanned medical treatment at a medical facility of an individual with spreadable contamination on the individual's clothing or body. BWXT requested an exemption from the twenty-four hour reporting requirement in situations where an individual is treated at its onsite medical facility.

BACKGROUND

In a letter dated December 2, 2014 (ADAMS ML14337A174) the Nuclear Energy Institute (NEI) submitted NEI 14-14, "Regulatory Issue Protocol" for endorsement by the NRC. This protocol recommended a phased approach for identifying, evaluating, and resolving regulatory issues with generic implications for operating or future fuel cycle facilities. This protocol was endorsed by the NRC staff in a letter dated December 16, 2014 (ADAMS ML14342A172).

On July 27, 2015, NEI requested clarification of the 10 CFR 40.60(b)(3) and 70.50(b)(3) provisions for reporting the unplanned medical treatment of personnel with spreadable radioactive contamination on their clothing or body, and the provisions of 10 CFR 40.60(b)(1) and 70.50(b)(1) for reporting certain unplanned events involving the contamination of radiologically controlled areas occurring within a facility. During 2015 and 2016, NEI and NRC met on 6 occasions: October 15, 2015; December 1, 2015; March 23, 2016; May 25, 2016; August 30, 2016; and October 12, 2016 utilizing the NEI protocol 14-14 process to resolve issues regarding medical event reporting requirements under 10 CFR 40.60(b)(3) and 70.50(b)(3). In a letter dated October 27, 2016 (ADAMS ML16330A146) NEI provided potential criteria that could be used in reviewing requests for exemption from the requirements of 10 CFR 40.60(b)(3) and 70.50(b)(3).

The NRC staff provided a response on January 27, 2017 (ADAMS package Accession Number ML16333A297). The NRC staff concluded that issues raised in the public meetings and in NEI's July 27, 2015 letter could be resolved via an alternate approach that is within the NRC's existing regulatory framework. That is, in accordance with the exemption provisions contained in 10 CFR 40.14 and 70.17 the NRC staff would consider, on a case-by-case basis, requests seeking relief from the requirements of 10 CFR 40.60(b)(3) and 70.50(b)(3) in situations involving the treatment of contaminated workers at onsite medical facilities. The January 27, 2017, letter stated that the NRC staff would review such requests using the following guidance:

1. The onsite medical facility is in a restricted area and not accessible to members of the public;
2. An injured worker can reach the onsite medical facility without traversing any areas accessible to the public;
3. Radiation safety personnel, who have been trained and qualified in contamination control, are readily available;
4. Equipment and facilities that may be needed for contamination control are readily available; and
5. The licensee commits to establish and maintain a log of contaminated workers treated at the onsite medical facility, and provides this information for NRC inspection upon request.

DISCUSSION

a. NRC Staff Review Using Guidance in NRC's January 27, 2017 Letter

The NRC staff reviewed the exemption request and its supporting justification using the guidance contained in the NRC staff's January 27, 2017, letter. Below is a summary of the application and NRC staff's conclusions related to the guidance.

1. *The onsite medical facility is in a restricted area and not accessible to members of the public.*

BWXT stated in their request that the onsite medical facility is located within the site's "protected area" (PA). As defined in 10 CFR 73.2, a PA is one that is "encompassed by physical barriers and to which access is controlled." BWXT further stated that its PA is controlled as a "restricted area" (RA) as defined in 10 CFR 20.1003. Additionally, the RA is entirely within BWXT's owner controlled area (OCA) which is also isolated from the public. BWXT stated in their request that at no time can visitors access the general site (OCA) without being escorted or being provided training and dosimetry, and that all visitors are escorted in the PA/RA. In addition, BWXT stated in their request that the PA/RA is surrounded on all sides by the OCA, which is isolated from the public. Based on its review of this information, the staff finds that BWXT's onsite medical facility is in a restricted area and not accessible to members of the public.

2. *An injured worker can reach the onsite medical facility without traversing any areas accessible to the public.*

At the BWXT site, the primary manufacturing areas and their ancillary areas (such as the Lynchburg Technology Center, Waste Treatment facility, and Security support facilities) are located within the Owner Controlled Area, and these areas are not accessible to the public. BWXT also stated in their request that if a worker is injured anywhere within the OCA, he or she can reach the onsite medical facility without traversing areas accessible to the public. Based on its review of this information, the NRC staff finds that an injured

worker at BWXT can reach the onsite medical facility without traversing areas accessible to the public.

3. *Radiation safety personnel, who have been trained and qualified in contamination control, are readily available.*

BWXT stated in their request that it has a mature radiation protection program where radiation safety personnel, who have been trained and qualified in contamination control, are readily available. BWXT also stated in their request that all shifts are staffed with a sufficient number of radiation control technicians (RCTs), and that the RCTs must complete a formal training and qualification program on the contamination control procedures required when responding to injured workers with spreadable contamination. The RCTs are supported by BWXT health physicists who provide technical expertise to the RCTs when needed. BWXT's onsite medical staff is trained on radiological fundamentals and site hazards. BWXT stated in their request that, as documented in section 4.2.2 of its Emergency Plan, staff at the Lynchburg General Hospital who may be called upon for medical treatment of a contaminated BWXT worker receive the same training on radiological fundamentals and site hazards as BWXT's onsite medical staff. In addition, BWXT requires that its site emergency response organization members maintain current radiation worker training and other medical training as required by the Commonwealth of Virginia. Based on its review of this information, the NRC staff finds that BWXT's trained and qualified radiation safety personnel are readily available in the event that a worker is treated on site.

4. *Equipment and facilities that may be needed for contamination control are readily available.*

In its exemption request, BWXT stated that the onsite medical clinic has a room dedicated to trauma response. BWXT stated in their request that the site emergency response team, accompanied by an RCT, would transport the individual to the trauma room. The trauma room is located adjacent to the Radiological Control office. BWXT also stated in their request that all of the necessary instruments, survey materials, laydown plastic, protective clothing, and decontamination supplies are contained in the Radiological Control office. Based on its review of this information, the NRC staff finds that BWXT's equipment and facilities that may be needed for contamination control are readily available.

5. *The licensee commits to establish and maintain a log of contaminated workers treated at the onsite medical facility, and provides this information for NRC inspection upon request.*

BWXT stated in its exemption request that it currently logs all instances of contaminated workers treated at the onsite medical facility, and committed to continue to do so. The log is maintained by the Radiation Protection organization and is available for inspection by the NRC. Based on its review of this information, the NRC staff finds that BWXT maintains a log of contaminated workers treated at its onsite medical facility that is available for NRC inspection upon request.

- b. NRC Staff Review Pursuant to 10 CFR 70.17(a)

Pursuant to 10 CFR 70.17(a), the NRC may grant an exemption from the requirements of 10 CFR Part 70 if the staff determines that the exemption is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest.

The NRC staff has determined that granting the licensee's proposed exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, other laws, or the Commission's regulations. Therefore, the requested exemption is authorized by law.

The NRC staff has also determined that an exemption from the requirement to report within 24 hours any unplanned medical treatments at the onsite facility will not endanger life or property or the common defense and security. As described above, BWXT conforms with the guidance in the NRC staff's January 27, 2017, letter. Specifically, BWXT has established radiological or contamination controlled areas that are designed to safely contain radioactive material contamination that may occur as a result of operations or maintenance activities within a restricted area with no public access. The onsite medical facility and routes an injured worker would take to get to the facility are not in areas that are accessible to the public. In addition, BWXT uses trained and qualified radiation safety personnel who have appropriate equipment readily available. And while the exemption request would eliminate the 24 hour reporting requirement for events requiring onsite treatment, BWXT will continue to maintain its log of contaminated workers treated at the onsite medical facility and would provide this information to NRC for inspection upon request. The elimination of the 24-hour reporting requirement also does not involve information or activities that could potentially impact the common defense and security of the United States. Rather, the exemption requested is administrative in nature and would reduce the number of licensee actions triggered by an event that requires unplanned medical treatment of an individual with spreadable radioactive contamination at the onsite medical facility. Based on its review of this information, the NRC staff concludes that granting this exemption request would not endanger life or property or the common defense and security.

Finally, granting this exemption request is otherwise in the public interest because it promotes regulatory efficiency by relieving BWXT from a reporting requirement that the staff has determined is not needed given the site specific conditions and programs described above. The exemption would relieve BWXT from generating reports within 24 hours of certain medical events and the NRC staff from receiving and processing these reports, thereby allowing resources to be focused on other activities.

ENVIRONMENTAL REVIEW

Pursuant to 10 CFR 51.22(b) and 10 CFR 51.22(c)(25), the granting of an exemption from the requirements of any regulation in Chapter I of 10 CFR is a categorical exclusion, provided that (i) there is no significant hazards consideration; (ii) there is no significant increase in the amounts of any effluents that may be released offsite; (iii) there is no significant increase in individual or cumulative public or occupational radiation exposure; (iv) there is no significant construction impact; (v) there is no significant increase in the potential for or consequences from radiological accidents; and (vi) the requirements from which an exemption is sought involve, as relevant here, reporting requirements.

For the reasons described below, BWXT's request meets the criteria for a 10 CFR 51.22(c)(25) categorical exclusion. BWXT is not a reactor, so there are no significant hazards considerations. Because BWXT requests an exemption from a reporting requirement only, there are no effluents or offsite releases or significant increase in radiation exposure to workers

or members of the public associated with this request. There are no construction activities associated with this request, so there is no significant construction impact. There is no significant increase in the potential for any radiological accidents associated with this request, because the request for exemption from reporting requirements does not affect the facility's operations. Therefore, pursuant to 10 CFR 51.22(b) and 10 CFR 51.22(c)(25), no environmental impact statement or environmental assessment need be prepared in connection with the approval of this exemption request.

CONCLUSION

Based on its review above, the NRC staff concludes that the activities to be authorized by the issuance of this exemption are in compliance with law, and will not endanger life or property or the common defense and security. The staff also concludes that granting the exemption is in the public interest. Accordingly, the NRC staff hereby grants BWXT an exemption from the 10 CFR 70.50(b)(3) requirement that it report to the NRC, within 24 hours after discovery of any event involving licensed material that requires unplanned medical treatment at BWXT's onsite medical facility of an individual with spreadable contamination on the individual's clothing or body.

A new Safety License Condition S-15 has been issued to reflect the exemption from reporting as follows:

- S-15 Notwithstanding the requirements of 10 CFR 70.50(b)(3), the licensee is exempt from the requirement to notify the NRC within 24 hours of unplanned medical treatment of an individual with spreadable radioactive contamination at the onsite medical facility. The licensee commits to continuing to maintain a log of contaminated workers treated at the onsite medical facility, and provide the information for NRC inspection upon request.

PRINCIPAL CONTRIBUTOR

Merritt N. Baker