

SAFETY EVALUATION REPORT

DOCKET: 70-27

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

SUBJECT: EXEMPTION FROM REPORTING REQUIREMENT FOR UNPLANNED
CONTAMINATION EVENTS (ENTERPRISE PROJECT IDENTIFICATION
L-2019-LLA-0103)

BACKGROUND

In a letter dated April 24, 2019, BWXT Nuclear Operations Group, Inc. – Lynchburg (BWXT NOG-L), submitted a request for exemption from the reporting requirement for unplanned contamination events in Title 10 of the *Code of Federal Regulations* (10 CFR), Paragraph 70.50(b)(1). The letter is available in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML19120A285. Additional information was submitted in a letter dated May 6, 2020 (ADAMS Accession No. ML20149K657).

DISCUSSION

The application requested an exemption from the 24-hour reporting requirement in 10 CFR 70.50(b)(1) for situations that require the imposition of additional radiological controls for greater than 24 hours due to an unplanned contamination event inside an established contamination-radiologically controlled area (C-RCA). The relevant provisions of 10 CFR 70.50(b)(1) state that a licensee shall notify the U.S. Nuclear Regulatory Commission (NRC) within 24 hours after the discovery of an unplanned contamination event that requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls, or by prohibiting entry into the area.

The exemption would not alter reporting requirements for an unplanned contamination event outside an established contamination-controlled area. The licensee would continue to notify the NRC of unplanned contamination events in non-controlled areas such as adjacent hallways, rooms, rooftops and outdoor areas. In addition, the exemption would not change reporting of unplanned contamination events under other NRC requirements such as 10 CFR 20.2202 “Notification of incidents,” 10 CFR 20.2203 “Reports of exposures, radiation levels and concentrations of radioactive material exceeding the constraints or limits” and Appendix A to Part 70 “Reportable Safety Events” that result in a failure to meet the performance criteria of 10 CFR 70.61 (i.e., high or intermediate consequence event).

The licensee provided the following technical justification:

1. The C-RCAs are clearly posted and reside within areas where access is restricted to individuals that have completed site-specific training requirements or individuals that are formally escorted.
2. Controls are imposed as necessary to keep radiation exposures and releases as low as reasonably achievable (ALARA).

3. Safety and Radiation Protection personnel at the facility are trained and qualified in contamination control and response and are readily available.
4. Equipment and facilities that may be needed for contamination control are readily available.
5. Radiation surveys of unplanned contamination events in controlled areas are performed and are available for NRC inspection upon request.
6. Unescorted workers in controlled areas are trained on methods to reduce radiation exposures including contamination controls and response actions for abnormal or upset conditions.

The licensee estimated the cost of reporting an unplanned contamination event is \$8,800 for the 24-hour report and \$60,500 for the 30-day follow-up report. The total cost to the licensee is estimated to be \$69,300 for each reportable event. In addition, the licensee estimated that there are 16 unplanned contamination events each year that are evaluated and determined not to be reportable. It estimated a cost of \$14,500 per event for an additional evaluation cost of \$232,000 each year.

Regulatory Requirements

Section 70.17 of 10 CFR states that the Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

The exemption is authorized by law

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, or other laws and therefore is authorized by law.

The exemption will not endanger life or property or the common defense and security

During its independent evaluation of the exemption, the NRC staff considered the justification provided by the licensee and reviewed the requirements in the radiation safety program required under the license. The radiation safety program requires: (a) written radiation protection procedures and radiation work permits; (b) the use of ventilation systems, containment systems, and respirators to control exposure to airborne radioactive material; (c) the use of protective clothing to prevent the spread of surface contamination; (d) the use of surveys and monitoring programs to document contamination levels and exposures to workers; and (e) identification of items relied on for safety and management measures to maintain those items available and reliable. In addition, the NRC staff determined that the licensee has personnel adequately trained and qualified in contamination control who would be readily available, as needed. The staff also determined that the licensee has readily available equipment and facilities to control contamination.

While the proposed exemption would be limited to areas controlled for contamination where multiple controls are in place to limit access to qualified individuals, the NRC staff determined

that additional limitations were necessary to ensure protection of the public health and safety. Specifically, the NRC staff determined that exemption should be limited to contamination events where the release of radioactive material is under control and no contamination has spread outside the controlled area. Further, the NRC determined that, in order to ensure access to operational data and information related to contaminated events, the exemption should be limited to contamination events that are documented in the licensee's Corrective Action Program. Accordingly, the exemption is limited to the following conditions:

- S-16 Notwithstanding the requirements of 10 CFR 70.50(b)(1), the licensee is exempted from the requirement to report unplanned contamination events when the following conditions are met:
1. The event occurs in a restricted area in a building which is maintained inaccessible to the public by multiple access controls,
 2. The area was controlled for contamination before the event occurred, the release of radioactive material is under control, and no contamination has spread outside the area,
 3. Radiation safety personnel trained in contamination control are readily available,
 4. Equipment and facilities that may be needed for contamination control are readily available, and
 5. The otherwise reportable unplanned contamination event is documented in the licensee's Corrective Action Program.

Based on the limited scope of the exemption, and the access and contamination controls, training, radiation surveys and other ALARA measures described in the application, the NRC staff has determined that granting the exemption as stated above will not endanger life or property. In addition, the NRC staff has determined that the exemption does not involve information or activities that could impact the common defense and security.

The exemption is otherwise in the public interest

The NRC staff has determined that granting this exemption request is otherwise in the public interest because it promotes regulatory efficiency. The exemption relieves BWXT NOG-L from a reporting requirement for unplanned contamination events that do not present a risk to public health and safety given the site-specific conditions and programs described above. Specifically, the exemption would relieve the licensee from generating reports of contamination events in controlled areas where the release of radioactive material is under control and no contamination has spread outside the controlled area. Granting the exemption will allow the licensee to focus the resources required to fulfill the reporting requirement on other activities. In addition, it would relieve the NRC staff from receiving and processing reports which do not present a risk to public health and safety.

ENVIRONMENTAL REVIEW

NRC approval of this exemption request is categorically excluded under 10 CFR 51.22(c)(25)(vi)(B). The NRC staff has determined that the exemption involves reporting requirements and satisfies the following criteria:

- a. There is no significant hazards consideration.
- b. There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

- c. There is no significant increase in individual or cumulative public or occupational radiation exposure.
- d. There is no significant construction impact, and
- e. There is no significant increase in the potential for, or consequences from, radiological accidents.

There is no significant hazards consideration because the proposed exemption involves contamination events in areas controlled for contamination. There is no significant change in effluents or public radiation exposure because the exemption is limited to events where contamination has not spread outside of controlled areas. There is no significant increase in occupational radiation exposure because the licensee will continue to monitor and control worker exposures. There is no significant construction impact because the exemption does not relate to construction. Nor is there any significant increase in the potential for or consequences from radiological accidents because the exemption will not alter any of the assumptions or limits in the facility licensee's safety analysis. Therefore, in accordance with 10 CFR 51.22(c)(25), neither an environment assessment nor an environmental impact statement need be prepared in connection with the approval of this exemption request.

Conclusions

Based on its review above, the NRC staff concludes 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 recommends approving the exemption.

Principal Contributor:

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