

SAFETY EVALUATION REPORT

DOCKET: 70-27

LICENSE: SNM-42

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

SUBJECT: Safety Evaluation Report: BWXT Nuclear Operations Group, Inc. – Lynchburg
Request for Regulatory Relief from Specific Radiation Protection Commitments in
Chapter 4 of the SNM-42 License Application

1.0 INTRODUCTION AND BACKGROUND

By letter 20-042 dated May 22, 2020 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML20147A564), which included an enclosure describing details of the site-specific radiation protection program (not publicly available due to proprietary of the information contained within), BWXT Nuclear Operations Group, Inc. – Lynchburg (BWXT NOG-L) requested U.S. Nuclear Regulatory Commission (NRC) approval of regulatory relief from three radiation protection commitments should a shutdown of normal operations in certain facility areas become necessary due to the potential impacts on staffing levels from the Coronavirus Disease 2019 (COVID-19) public health emergency (PHE). The three radiation protection commitments in the BWXT NOG-L license application are specified in the current version of Chapter 4, Radiation Safety, dated September 12, 2019 (ADAMS Accession No. ML19260E145). The requested relief applies to the Filler, Uranium Recovery, and Research and Test Reactor (RTR) material access areas of the facility. To ensure preparedness if radiation protection staff are impacted by the COVID-19 PHE, BWXT NOG-L requested relief from sections 4.2.7, 4.3.1.1.3, and 4.3.2 of the Radiation Protection Chapter of the SNM-42 license application until December 31, 2020, if staffing levels cause the shutdown of operations and cessation of special nuclear material movements in the Filler, Uranium Recovery, or RTR material access areas.

This safety evaluation report documents the NRC staff's review of the BWXT NOG-L relief request. The relief from specific commitments in Chapter 4 of the BWXT NOG-L license application will be documented in new Safety Condition S-1(a) within SNM-42.

The U.S. Secretary of Health and Human Services declared a PHE on January 31, 2020, which was renewed on April 26, 2020, under Section 319 of the Public Health Service Act (Title 42 of the U.S. Code Section 247d). On March 12, 2020, the Governor of the Commonwealth of Virginia declared that a state of emergency exists to prepare and coordinate the response to the potential spread of COVID-19 and has since issued several executive orders to reinforce the Commonwealth's response to COVID-19.

2.0 REGULATORY EVALUATION

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 70.22(a), each application for a license must contain a description of equipment and facilities which will be used

to protect health and minimize danger to life or property and proposed procedures to protect health and minimize danger to life or property.

The NRC may grant a licensee's request to amend its license if the staff determines that the application meets the requirements of 10 CFR 70.23, "Requirements for the approval of applications," and 70.34, "Amendment of licenses." For changes to license application commitments, the NRC may amend a license if the staff determines that requested changes will maintain adequate protection of health and safety and the environment and not be inimical to the common defense and security.

3.0 TECHNICAL EVALUATION

The following evaluates the licensee's proposed regulatory relief request from the specified commitments in Chapter 4 of the BWXT NOG-L license application.

Daily radiation safety inspection in material access areas of the Filler, Uranium Recovery, or RTR

Section 4.2.7, Evaluation of Training. This section of the license application describes daily inspections of the training program and commits to daily inspection of the entire facility, discussion of job requirements, employees' understanding of safety requirements, and training of those employees that not aware of violations and understanding the safety controls. Additionally, Section 11.5.1.3, Radiation Protection Inspections, of the BWXT NOG-L license application states that radiation protection inspections are performed each working day by the Radiation Control and Health Physics technicians in each on-site controlled area. The purpose of these inspections is to ensure those radiation protection procedures and postings are being followed. Upon terminating the operation of the Filler, Uranium Recovery, or RTR, there would be no inspections required in these areas, other than security inspections.

Therefore, if staffing levels cause the shutdown of the Filler, Uranium Recovery, or RTR material access areas, adequate protection would be maintained if daily inspections are suspended until the end of the year 2020. These daily inspections are in-process evaluations of ongoing work. These daily inspections should be rescheduled prior to the resumption of operations.

The monthly airflow velocity reading for ventilation systems for Filler, Uranium Recovery, or RTR

Section 4.3.1.1, Protection from Internal Exposure to Radioactive Materials and Section 4.3.1.1.3, Internal Exposure Limitation. Local exhaust systems are used where practical to prevent the release of radioactive material into the workplace. Exposure limits for external and internal doses are described and are adequate. BWXT NOG-L is committed to the use of engineered controls which are commensurate with the scope of licensed activities.

To prevent the release of radioactive materials into the workplace, monthly airflow velocity measurements are performed to verify that the air flows into the enclosures are adequate. The exhaust system prevents a release into the workspace while radioactive materials are being used and upon terminating operation in the Filler, Uranium Recovery, or RTR material access areas, the use of radioactive materials in those areas would be suspended.

Therefore, if staffing levels cause the shutdown of the Filler, Uranium Recovery, or RTR material access areas, adequate protection would be maintained if monitoring is suspended until the end of the year 2020. For equipment maintained by BWXT NOG-L with prescribed requirements for airflow velocity, differential pressure requirements, or other calibrations in support of internal dose limitations, BWXT NOG-L shall ensure these commitments are met before resuming material processing.

Semiannual and annual instrumentation calibrations on survey instruments and dosimetry for Filler, Uranium Recovery, or RTR

Section 4.3.2, Instrumentation. A variety of detection equipment is used by BWXT NOG-L in carrying out material processing activities, with calibration frequencies described in this section.

Therefore, if staffing levels cause the shutdown of the Filler, Uranium Recovery, or RTR material access areas, adequate protection would be maintained if calibrations are suspended until the end of the year. Planning for a shutdown will include: (1) ensuring there is adequate calibrated equipment on hand to support emergent conditions that could arise during a shutdown; and (2) recalibrating instruments whose calibrations have lapsed during a shutdown prior to use in support of normal operations.

4.0 ENVIRONMENTAL REVIEW

The NRC staff determined that the proposed temporary change to the BWXT NOG-L Emergency Plan is administrative, organizational, or procedural in nature. The temporary change to the plan will not impact any effluents, will not result in any changes to radiation exposures, does not have construction impacts, and does not increase the potential for radiological accidents. Therefore, the amendment to temporarily revise the BWXT NOG-L Emergency Plan is categorically excluded from the requirements to prepare a site-specific environmental assessment consistent with 10 CFR 51.22(c)(11). In accordance with 10 CFR 51.22(b), neither an environmental assessment nor an environmental impact statement is warranted for this action.

5.0 CONCLUSION

The NRC staff finds that, if the COVID-19 PHE impacts staffing levels and causes the shutdown of the Filler, Uranium Recovery, or RTR material access areas, reasonable assurance of adequate protection of health and safety will be maintained if the referenced radiation protection commitments are suspended until the end of the year 2020. These commitments must be resumed prior to the startup of normal operations. Furthermore, the staff finds that adequate protection of the environment would also be maintained, and suspension of the commitments is not inimical to the common defense and security. Pursuant to 10 CFR 70.23(a)(3) and (a)(4), the staff finds the applicant's proposed equipment and facilities, and the applicant's proposed procedures, are adequate to protect health and minimize danger to life or property. The proposed relief is also consistent with staff guidance in Section 4E of the "Temporary Staff Guidance – Fuel Facility Requests for Regulatory Relief Related to COVID-19," dated April 21, 2020 (ADAMS Accession No. ML20108E911).

General condition of approval

As such, a new license condition, S-2(a), should be added to SNM-42 to document the regulatory relief:

S-1(a) As requested by the licensee in letter 20-042 dated May 22, 2020, which included a proprietary enclosure, the regulatory relief documented below is granted in anticipation of the potential impacts to radiation protection staffing levels from the Coronavirus Disease 2019 public health emergency. The licensee shall notify the assigned NRC Resident Inspector and Project Manager within 48 hours of the determination to invoke the approved relief for an area of the facility. All actions associated with the site-specific commitments for which relief has been granted shall resume after December 31, 2020, and the NRC will notify the licensee in writing that SNM-42 is amended to delete this condition (a) of Safety Condition S-1.

If radiation protection staffing levels cause the shutdown of operations and cessation of special nuclear material movements in the Filler, Uranium Recovery, or Research and Test Reactor areas of the facility, then the licensee is not required to comply with the daily radiation safety inspection, monthly airflow velocity reading for ventilation systems, and semiannual and annual instrumentation calibrations on survey instruments and dosimetry, as described in Chapter 4 of its application for that area. Prior to entering shutdown of a specified area, the licensee shall ensure there is adequately calibrated equipment on hand to support emergent conditions that could arise during a shutdown. Prior to exiting shutdown of a specified area, the licensee shall resume the radiation safety inspections, airflow velocity reading for ventilation systems, and semiannual and annual instrumentation calibrations on survey instruments and dosimetry, as described in Chapter 4 of its application. Prior to resuming normal operations, instruments whose calibrations have lapsed during a shutdown shall be recalibrated and the prescribed requirements for airflow velocity, differential pressure requirements, or other calibrations in support of internal dose limitations must be met.

PRINCIPAL CONTRIBUTORS:

Eli Goldfeiz, NMSS/DFM/NARAB

Ty Naquin, NMSS/DFM/FFLB

James Downs, NMSS/DFM/FFLB