

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-259, 50-260, 50-296, and 72-052; NRC-2024-0114]

Tennessee Valley Authority;

Browns Ferry Nuclear Plant, Units 1, 2, and 3;

Exemption

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) has issued an exemption in response to a request dated September 28, 2023, as supplemented by letter dated March 14, 2024, from Tennessee Valley Authority related to the use of a locked door or gate with a monitored alarm at the access control point to radioactive waste that contains category 1 or category 2 quantities of radioactive material at the Browns Ferry Nuclear Plant, Units 1, 2, and 3, site.

DATES: The exemption was issued on July 15, 2024.

ADDRESSES: Please refer to Docket ID **NRC-2024-0114** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2024-0114**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the "For Further Information Contact" section of this document.

- **NRC's Agencywide Documents Access and Management System**

(ADAMS): You may obtain publicly available documents online in the ADAMS Public

Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- **NRC's PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Kimberly Green, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-1627; email: Kimberly.Green@nrc.gov.

SUPPLEMENTARY INFORMATION: The text of the exemption is attached.

Dated: July 16, 2024.

For the Nuclear Regulatory Commission.

/RA/

Kimberly Green, Senior Project Manager
Licensing Plant Branch II-2,
Division of Operating Reactor Licensing,
Office of Nuclear Reactor Regulation.

Attachment – Exemption.

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Exemption

I. Background

The Tennessee Valley Authority (TVA) is the holder of Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68, and General License No. 72-052, which authorize the operation of the Browns Ferry Nuclear Plant, Units 1, 2, and 3, and an independent spent fuel storage installation (Browns Ferry or Browns Ferry site), respectively, located in Limestone County, Alabama. The renewed operating licenses are subject to all applicable provisions of the Atomic Energy Act, and to the rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC or Commission) now or hereafter in effect.

II. Request/Action

By letter dated September 28, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23271A063), as supplemented on March 14, 2024 (ML24074A457), TVA requested an exemption from the requirement in Title 10 of the *Code of Federal Regulations* (10 CFR), part 37, paragraph 37.11(c)(2) to

use a locked door or gate at the access control point to where radioactive waste that contains category 1 or category 2 quantities of radioactive material is stored.

The provisions of 10 CFR part 37 establish physical security requirements to prevent the theft or diversion of risk-significant radioactive materials (i.e., category 1 and category 2 quantities of radioactive material). As stated in NUREG-2155, Rev. 2, "Implementation Guidance for 10 CFR Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material"" (ML22083A141), 10 CFR 37.11 exempts radioactive wastes that contain category 2 quantities or greater of radioactive material from the security requirements in subparts B, C, and D of 10 CFR part 37. Instead, the radioactive waste is subject to the requirements in 10 CFR 37.11(c)(1) through (c)(4). The regulation at 10 CFR 37.11(c)(2) requires that the licensee secure the radioactive waste by a locked door or gate with monitored alarm at the access control point.

The Browns Ferry site includes a low-level radioactive waste storage facility (LLRWSF) that is used to store the original steam dryers for Browns Ferry, which were removed during the extended power uprate outages. The steam dryers exceed the threshold for a category 2 quantity of radioactivity, as defined in 10 CFR 37.5, but do not contain discrete radioactive sources, ion-exchange resins, or activated materials that weigh less than 2,000 kilograms (4,409 pounds), as described in 10 CFR 37.11(c). As such, the licensee is required by 10 CFR 37.11(c)(2) to have a monitored alarm at the access control point to the LLRWSF vaults where the steam dryers are stored.

TVA describes the LLRWSF as a robust structure consisting of a group of rectangular box-type concrete storage modules that are located outside the Browns Ferry protected area, but inside the owner-controlled area and exclusion zone. Each LLRWSF storage module is closed by five precast concrete caps, weighing approximately 45,813 kilograms (101,000 pounds) each. Removal of the caps is the only

access point to the stored steam dryers and requires heavy lifting and rigging equipment that cannot be staged or utilized quickly. Removal of the caps is an evolution that is easily observable over an extended period of time.

TVA has requested a permanent exemption from the requirement in 10 CFR 37.11(c)(2) to address a regulatory noncompliance that has resulted in the issuance of minor violations at the Browns Ferry site.

III. Discussion

Pursuant to 10 CFR 37.11(a), the Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in 10 CFR part 37 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.

A. The Exemption is Authorized by Law.

The exemption would exempt the licensee from the requirement to have a monitored alarm at the access control point to the LLRWSF vaults where the steam dryers are stored. As stated previously, 10 CFR 37.11(a) allows the NRC to grant exemptions from the requirements of 10 CFR part 37. The NRC staff has determined that granting of the exemption is permissible under the Atomic Energy Act of 1954, as amended, and other regulatory requirements. Therefore, the exemption is authorized by law.

B. The Exemption Will Not Endanger Life or Property or the Common Defense and Security.

The purpose of 10 CFR part 37 is to provide reasonable assurance of the security of category 1 or category 2 quantities of radioactive material by protecting these materials from theft or diversion. As required by 10 CFR 37.11, each licensee that possesses radioactive waste that contains category 1 or category 2 quantity of radioactive material shall implement the following requirements to secure the radioactive waste: (1) use continuous physical barriers that allow access to the radioactive waste only through established access control points; (2) use a locked door or gate with monitored alarm at the access control point; (3) assess and respond to each actual or attempted unauthorized access to determine whether an actual or attempted theft, sabotage, or diversion occurred; and (4) immediately notify the local law enforcement agency (LLEA) and request an armed response from the LLEA upon determination that there was an actual or attempted theft, sabotage, or diversion of the radioactive waste that contains category 1 or category 2 quantities of radioactive material.

After issuance of the final part 37 rule, the NRC issued Enforcement Guidance Memorandum (EGM) 2014-001, "Interim Guidance for Dispositioning 10 CFR Part 37 Violations with Respect to Large Components or Robust Structures Containing Category 1 or Category 2 Quantities of Material at Power Reactor Facilities Licensed Under 10 CFR Parts 50 and 52" (ML14056A151), on March 13, 2014, to provide guidance to NRC staff for dispositioning violations associated with 10 CFR part 37 with respect to large components containing category 1 and category 2 quantities of radioactive material stored in robust structures at power reactor facilities licensed under 10 CFR parts 50 and 52. The EGM acknowledges that due to their size and weight, these large components are not easily moved without cranes, rigging, and heavy equipment. In addition, these

large components are not easily concealed during loading or when they are in motion, and the amount of time required to steal or divert these large components is such that it is reasonable to expect that the licensee would detect these activities.

TVA has a written 10 CFR part 37 security plan for Browns Ferry that identifies the original steam dryers as large components and the LLRWSF as a robust structure containing category 1 or category 2 quantities of radioactive material. The plan also identifies the security measures that are adequate to detect, assess, and respond to actual or attempted theft or diversion of stored materials from the LLRWSF. TVA provided a written analysis that considers the time needed to accomplish these activities given the proximity and mobility of the equipment available for the large components and robust structures supporting the 10 CFR part 37 security plan. TVA also provided a written analysis documenting that the measures for the protection of large components or robust structures containing category 1 or category 2 quantities of material do not decrease the effectiveness of the 10 CFR part 73 security plan.

Because TVA has a security plan that contains measures to control access to the radioactive waste, assess and respond to unauthorized access, and notify and request an armed response by the LLEA, the NRC finds that the exemption will not endanger life or property or the common defense and security.

C. The Exemption is in the Public Interest

TVA stated that the exemption would preclude the expenditure of resources that provide no additional security and protection for the stored steam dryers. Granting of the exemption would also allow TVA to address a regulatory noncompliance and avoid future violations.

As noted previously, the original steam dryers are large components that are

stored in robust structures that would require the use of heavy lifting and rigging equipment that cannot be staged or utilized quickly. Requiring the use of a locked door or gate with monitored alarm at the access control point is supplanted by the licensee's security plan which utilizes other means to detect unauthorized access, while the exemption would reduce the regulatory burden on the licensee and the NRC staff. Therefore, the NRC staff concludes that the exemption is in the public interest.

IV. Environmental Considerations

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact regarding this exemption request was published in the Federal Register on June 27, 2024 (89 FR 53663). Based upon the environmental assessment, the Commission has determined that issuance of this exemption will not have a significant effect on the quality of the human environment.

V. Conclusions

Accordingly, the Commission has determined that, pursuant to 10 CFR 37.11(a), the exemption is authorized by law, will not endanger life or property or the common defense and security, and is in the public interest.

Dated: July 15, 2024.

For the Nuclear Regulatory Commission.

/RA/

Bo Pham, Director,
Division of Operating Reactor Licensing,
Office of Nuclear Reactor Regulation.