



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 10, 2025

ANO Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
N-ADM-8
1448 S.R. 333
Russellville, AR 72802

SUBJECT: ARKANSAS NUCLEAR ONE, UNITS 1 AND 2 – EXEMPTIONS FROM THE
REQUIREMENTS OF 10 CFR 50.82(a)(8)(i) and (ii) (EPID L-2024-LLE-0030)

Dear ANO Site Vice President:

The U.S. Nuclear Regulatory Commission (NRC) has approved the enclosed exemptions from specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.82(a)(8)(i) and (ii) related to Arkansas Nuclear One (ANO), Units 1 and 2. This action is in response to your application dated November 13, 2024, which requested the exemptions to allow Entergy Operations, Inc. to withdraw funds from the ANO, Units 1 and 2 nuclear decommissioning trust funds, not to exceed \$20 million per Unit, to facilitate the prompt disposal (i.e., during operations) of certain retired major radioactive components. Specifically, the funds would be used to dispose of two ANO, Unit 1 steam generators and one ANO, Unit 1 reactor vessel closure head that were removed from service in 2005 and two ANO, Unit 2 steam generators that were removed from service in 2000.

Related to this proposed action and pursuant to the National Environmental Policy Act of 1969, as amended, the NRC published an environmental assessment and finding of no significant impact in the *Federal Register* (FR) on July 10, 2025 (90 FR 30708). As discussed in that *Federal Register* notice, the NRC determined that issuance of the exemptions will not have significant effects on the quality of the human environment.

A copy of the exemptions is enclosed. The exemptions have been forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Hannah McLatchie, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-313 and 50-368

Enclosure:
Exemptions

cc: Listserv

ENCLOSURE

EXEMPTIONS

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNITS 1 AND 2

DOCKET NOS. 50-313 and 50-368

NUCLEAR REGULATORY COMMISSION

Docket Nos. 50-313 and 50-368

Entergy Operations, Inc.

Arkansas Nuclear One, Units 1 and 2

Exemptions

I. Background

Entergy Operations, Inc. (Entergy, the licensee) is the holder of Renewed Facility Operating License Nos. DPR-51 and NPF-6 for Arkansas Nuclear One (ANO), Units 1 and 2, respectively. The licenses provide, among other things, that the facilities are subject to all rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect. ANO, Units 1 and 2 consists of two pressurized-water reactors located in Pope County, Arkansas, licensed under title 10 of the *Code of Federal Regulations* (10 CFR) part 50, "Domestic Licensing of Production and Utilization Facilities."

II. Request/Action

By letter dated November 13, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24318C273), and pursuant to 10 CFR 50.12, "Specific exemptions," the licensee submitted to the NRC a request for exemptions from 10 CFR 50.82(a)(8)(i) and (ii) related to ANO, Units 1 and 2. The licensee requested these exemptions to allow the licensee to withdraw funds from the ANO, Units 1 and 2 nuclear decommissioning trust funds (DTFs), not to exceed \$20 million per unit, to facilitate the prompt disposal of certain retired major radioactive components (MRCs). Specifically, the licensee is seeking to use funds from the Unit 1 DTF to dispose of two steam generators and one reactor vessel closure head

(RVCH) that were removed from service in 2005, and to use funds from the Unit 2 DTF to dispose of two steam generators that were removed from service in 2000.

The Commission's regulation in 10 CFR 50.82(a)(8)(i) restricts withdrawals from DTFs, in part, to expenses for legitimate decommissioning activities consistent with the definition of decommissioning in 10 CFR 50.2, "Definitions." The definition of decommissioning in 10 CFR 50.2 addresses removing a facility or site from service and reducing residual radioactivity and does not include activities associated with the disposal of MRCs during plant operations. The regulation in 10 CFR 50.82(a)(8)(ii) discusses timing requirements associated with DTF withdrawals, allowing 3 percent of the generic amount specified in 10 CFR 50.75 to be used for decommissioning planning and restricting further withdrawals until licensees have submitted the certifications required under 10 CFR 50.82(a)(1) regarding permanent cessation of operations and the post-shutdown decommissioning activities report. Therefore, exemptions from 10 CFR 50.82(a)(8)(i) and (ii) are needed to allow the licensee to use funds from the ANO, Units 1 and 2 DTFs for the disposal of MRCs during plant operations. In its submittal, the licensee stated that due to limited long-term onsite storage facility capacity at ANO, Units 1 and 2, it is desirable to dispose of the specified MRCs while plant operations are ongoing, rather than waiting until the permanent cessation of operations to dispose of them. Additionally, the licensee identified that the disposal of these MRCs would be considered a legitimate decommissioning activity for which DTF funds may be used once a reactor has permanently ceased operations and the timing requirements of 10 CFR 50.82(a)(8)(ii) have been met; therefore, the exemption request is essentially seeking an acceleration of otherwise permissible DTF withdrawals.

III. Discussion

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR part 50

when (1) the exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; and (2) any of the special circumstances listed in 10 CFR 50.12(a)(2) are present. These special circumstances include, among other things, (1) application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule and (2) compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.

The licensee requested that the NRC grant exemptions from the requirements of 10 CFR 50.82(a)(8)(i) and (ii) to allow the licensee to withdraw a small portion of the funds from the ANO, Units 1 and 2 DTFs to facilitate the prompt (i.e., during plant operations) disposal of certain retired MRCs. Per the exemption request, the licensee currently stores these retired MRCs onsite at ANO in two mausoleums, which have reached their capacity. The licensee plans to replace the existing ANO, Unit 2 RVCH during the ANO, Unit 2 refueling outage in spring 2026, which would then require the storage of that RVCH onsite after it is removed from service. The licensee does not consider the prompt disposal of the ANO, Unit 2 RVCH feasible due to the anticipated level of radioactivity. However, there is insufficient space in the existing mausoleums to store the ANO, Unit 2 RVCH. Accordingly, the licensee would need to construct a new storage facility. Alternatively, if the licensee were to first dispose of the specified retired MRCs currently stored in the mausoleums (i.e., two ANO, Unit 1 steam generators, one ANO, Unit 1 RVCH, and two ANO, Unit 2 two steam generators), it could gain sufficient storage space for the ANO, Unit 2 RVCH, while avoiding the costs of constructing a new storage facility, as well as the ongoing maintenance costs and the eventual decommissioning costs for that new storage facility. According to the licensee, this exemption request is essentially seeking an

acceleration of DTF withdrawals that would be permissible after the permanent cessation of operations and meeting the timing requirements of 10 CFR 50.82(a)(8)(ii).

Applicable Regulations and Background

The NRC's reactor licensing regulations in 10 CFR part 50 establish requirements for providing assurance that funding will be available to radiologically decommission a reactor facility and terminate its 10 CFR part 50 license. Specifically, these requirements address the amount of decommissioning funding to be provided, the methods to be used for assuring sufficient funding, and provisions restricting the use of the DTF during operations.

On February 22, 2019 (ML19079A293), a petition for rulemaking (PRM-50-119) was filed with the NRC requesting that the NRC revise the definition of decommissioning in 10 CFR 50.2 and amend 10 CFR 50.82, "Termination of license," to allow licensees to access the DTF to pay for the cost of the disposal of MRCs before the permanent cessation of operations at nuclear power plants. Subsequently, on February 4, 2022 (87 FR 6434), the Commission denied the petition, stating that the petition does not raise a significant safety or security concern and that the subject area is adequately covered by existing regulations.

On August 5, 2024 (ML24114A263), the NRC issued interim staff guidance (ISG) to provide clarifying guidance to facilitate stakeholder understanding of the NRC's position on the use of the DTF during operations for MRC disposal, including what information would assist the NRC staff in assessing a licensee's request for exemption from the regulations related to the activity. Per the regulation in 10 CFR 50.2, MRC means, "for a nuclear power reactor facility, the reactor vessel and internals, steam generators, pressurizers, large bore reactor coolant system piping, and other large components that are radioactive to a comparable degree."

Compliance with NRC decommissioning funding regulations in 10 CFR part 50 provides reasonable assurance that sufficient funding will be available for the radiological

decommissioning of a reactor facility upon its permanent cessation of operations. The withdrawal of funds from the DTF during operations, for purposes other than those allowed by NRC regulations, could undermine the primary objective of the decommissioning funding regulations. Therefore, only under extraordinary circumstances would a withdrawal from the DTF prior to permanent cessation of operations be permissible.

As stated in the August 5, 2024, ISG:

The NRC staff determined that the removal and replacement of MRCs during the operational phase of a reactor facility to ensure ongoing safe operation of a reactor is a cost of doing business. Once the MRC is removed from service during reactor operations, a licensee has the option to (1) either immediately dispose of the MRC at a designated off-site facility or (2) store the MRC onsite until disposal is performed. Neither of these options constitute legitimate decommissioning activities as contemplated by the NRC's regulations. The removal and disposal of the MRC or removal of and storage of the [MRC] until decommissioning when performed during the operational phase of the reactor facility is a business decision and should be funded by a licensee as a business activity. The NRC recognizes that after a reactor facility permanently ceases operations and is in the decommissioning phase, the off-site disposal of MRCs is a legitimate decommissioning expense and therefore, the use of funds from the DTF is permissible, either directly or as a reimbursement for a prior expense. Accordingly, a licensee has two options on when to undertake MRC disposal: (1) during operations when the funds for MRC disposal come from operational funds or (2) once decommissioning is initiated and the costs of disposal may be taken from the DTF.

The NRC has recognized an exemption from its regulations as a mechanism for using funds in the DTF for the disposal of MRCs during operations at a reactor facility. A licensee may request an exemption in accordance with 10 CFR 50.12 to permit the withdrawal of funds from the DTF for the removal and disposal of MRCs prior to the cessation of operations and initiation of decommissioning. The withdrawal of funds from the DTF may only be used to pay for the offsite disposal of MRCs during operations when the NRC has determined that the total DTF contains funds in excess of cost estimates to complete all required radiological decommissioning. In addition, licensees may use economic projections for future years in calculating the amount of excess funds in the DTF. However, significant changes in the

economic conditions of a licensee, combined with withdrawals from the DTF, have the potential to result in future shortfalls in the DTF. The Commission has stated that DTF withdrawals for the disposal of MRCs during operations would be granted only in “extraordinary circumstances” (73 FR 62221, 62222, and 62224; October 20, 2008). For these reasons, the NRC evaluates each exemption request for such a withdrawal based on the totality of the facts in determining whether to grant or deny the request. The NRC’s regulations at 10 CFR 50.12(a)(2) state, in part: “The Commission will not consider granting an exemption unless special circumstances are present.” Special circumstances are present wherever at least one of the criteria in 10 CFR 50.12(a)(2)(i)–(vi) is met. The NRC staff review of the licensee’s exemption request was informed by the ISG.

A. The Exemptions are Authorized by Law

The requested exemptions from 10 CFR 50.82(a)(8)(i) and (ii) would allow the licensee to withdraw funds from the ANO, Units 1 and 2 DTFs, not to exceed \$20 million per unit, to facilitate the prompt disposal (i.e., during operations) of certain retired MRCs.

As stated previously, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR part 50 when the exemptions are authorized by law. The NRC staff has determined, as explained below, that there would continue to be reasonable assurance of adequate funding for radiological decommissioning of ANO, Units 1 and 2 because the licensee’s use of the DTFs for the disposal of certain retired MRCs would not negatively impact the availability of funding for radiological decommissioning. Accordingly, granting the requested exemptions will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission’s regulations. Therefore, the exemptions are authorized by law.

B. The Exemptions will not Present an Undue Risk to the Public Health and Safety

The requested exemptions from 10 CFR 50.82(a)(8)(i) and (ii) would allow the licensee to withdraw funds from the ANO, Units 1 and 2 DTFs, not to exceed \$20 million per unit, to facilitate the prompt disposal (i.e., during operations) of certain retired MRCs.

As explained further in section D of this document, based on the NRC staff's review of the exemption request, there would continue to be reasonable assurance of adequate funding for radiological decommissioning of ANO, Units 1 and 2 because the licensee's use of the DTFs for the disposal of certain retired MRCs, not to exceed \$20 million per unit, would not negatively impact the availability of funding for radiological decommissioning. Therefore, the exemptions would not present an undue risk to the public health and safety. Granting the requested exemptions would also not present an undue risk to the public health and safety because it would not alter the operation of any plant equipment or systems. The exemptions do not introduce any new industrial, radiological, or chemical hazards that would present a health and safety risk, nor would granting the exemptions result in modifying or removing design or operation controls or safeguards that are intended to mitigate onsite hazards. The exemptions do not diminish the effectiveness of other regulations that ensure the availability of funding for decommissioning, including 10 CFR 50.82(a)(6), which prohibits licensees from performing any decommissioning activities that could foreclose release of the site for possible unrestricted use, result in significant environmental impacts not previously reviewed, or result in there no longer being reasonable assurance that adequate funds will be available for decommissioning. Therefore, the exemptions will not present an undue risk to the public health and safety.

C. The Exemptions are Consistent with the Common Defense and Security

The requested exemptions from 10 CFR 50.82(a)(8)(i) and (ii) would allow the licensee to withdraw funds from the ANO, Units 1 and 2 DTFs, not to exceed \$20 million per unit, to facilitate the prompt disposal (i.e., during operations) of certain retired MRCs. The exemptions

would not alter the design, function, or operation of any structure or plant equipment that is necessary to maintain the safe and secure status of the plant and would not adversely affect the licensee's ability to physically secure its site or protect special nuclear material. Furthermore, the exemptions have no relation to physical security issues. Therefore, the exemptions are consistent with the common defense and security.

D. Special Circumstances

The requested exemptions from 10 CFR 50.82(a)(8)(i) and (ii) would allow the licensee to withdraw funds from the ANO, Units 1 and 2 DTFs, not to exceed \$20 million per unit, to facilitate the prompt disposal (i.e., during operations) of certain retired MRCs.

In accordance with 10 CFR 50.12(a)(2)(ii), special circumstances are present whenever application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule. The underlying purpose of 10 CFR 50.82(a)(8)(i) and (ii) is to ensure that there is reasonable assurance that adequate funds will be available for the radiological decommissioning of power reactors within 60 years of their permanent cessation of operations. The strict application of 10 CFR 50.82(a)(8)(i) and (ii) would prohibit the use of funds from DTFs for the disposal of MRCs during operations.

In addition to the exemption request dated November 13, 2024, the NRC staff reviewed the licensee's decommissioning funding status report for ANO, Units 1 and 2, dated March 26, 2025 (ML25085A211), submitted in accordance with 10 CFR 50.75(f)(1). The estimated minimum DTF values reported therein were determined using the NRC's methodology in NUREG-1307, Revision 20, "Report on Waste Burial Charges, Changes in Decommissioning Waste Disposal Costs at Low-Level Waste Burial Facilities," dated February 2025 (ML25037A226). The DTF amounts reported therein for each facility represent the market value of the DTFs as of December 31, 2024, net of any material current income tax liability on realized

gains, interest, dividends and other income of the DTFs. Per the licensee's submittal for ANO, Unit 1 (for the year ending December 31, 2024), the minimum required financial assurance estimated per 10 CFR 50.75(b) and (c) in 2024 dollars was \$510.8 million. In comparison, the total amount of the ANO, Unit 1 DTF was \$878.5 million. Per the licensee's submittal for ANO, Unit 2 (for the year ending December 31, 2024), the minimum required financial assurance estimated per 10 CFR 50.75(b) and (c) in 2024 dollars was \$531.9 million. In comparison, the total amount of the ANO, Unit 2 DTF was \$726 million.

The NRC staff reviewed the site-specific decommissioning cost estimate and the cash flow analyses provided in the November 13, 2024, exemption request as well as the March 26, 2025, decommissioning funding status report. Based on its independent analysis, the staff determined that using a small portion of the ANO, Units 1 and 2 DTFs, not to exceed \$20 million per unit, to facilitate the prompt disposal of certain retired MRCs will not adversely impact the licensee's ability to terminate the ANO, Units 1 or 2 licenses within the required decommissioning timeframe. Therefore, application of the regulations in 10 CFR 50.82(a)(8)(i) and (ii) to prevent this withdrawal is not necessary to achieve their underlying purpose.

In accordance with 10 CFR 50.12(a)(2)(iii), special circumstances are also present whenever compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated. The NRC staff determined that the strict application of 10 CFR 50.82(a)(8)(i) and (ii) to prohibit the use of funds from the ANO, Units 1 and 2 DTFs for the disposal of certain retired MRCs during operations would result in undue hardship to the licensee in light of the imminent need to store the ANO, Unit 2 RVCH onsite. Specifically, if the licensee is unable to remove the retired MRCs from the two existing mausoleums and dispose of them promptly, then the licensee would need to construct an additional storage facility to house the ANO, Unit 2 RVCH, which will be removed from service

in 2026. Compliance with 10 CFR 50.82(a)(8)(i) and (ii) would result in an undue hardship in that it would cause the licensee to use operating revenues to build and maintain an additional storage facility, monitor any releases, and eventually decommission the facility, rather than allowing the licensee to use decommissioning funds that were collected, in part, to cover the costs of disposing of these MRCs. The licensee estimated the construction costs alone for the facility to be \$2.2 million, plus additional maintenance costs over the lifetime of the facility and eventual decommissioning costs. Additionally, requiring the licensee to use operating revenues to fund the prompt disposal of the retired MRCs would result in a similar undue hardship, in that the ANO, Units 1 and 2 DTFs already include funds that were collected to cover the disposal costs for the very same MRCs at issue.

The underlying purpose of 10 CFR 50.82(a)(8)(i) and (ii) would continue to be achieved despite allowing the licensee to use a small portion of the DTFs to dispose of certain retired MRCs during operations. Furthermore, requiring compliance with the regulations would otherwise result in undue hardship or other costs that are significantly in excess of those contemplated when the regulations were adopted. Therefore, the special circumstances of 10 CFR 50.12(a)(2)(ii) and 10 CFR 50.12(a)(2)(iii) are present.

E. Environmental Considerations

The NRC considered whether there would be any significant environmental impacts associated with the proposed exemptions. For the proposed action, the NRC prepared an environmental assessment (EA) in accordance with 10 CFR 51.30. The NRC determined that a finding of no significant impact (FONSI) is appropriate, and an environmental impact statement is not warranted. The EA and the FONSI were published in the *Federal Register* on July 10, 2025 (90 FR 30708).

IV. Conclusions

The Commission has determined that, pursuant to 10 CFR Part 50.12(a), the exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants Entergy exemptions from 10 CFR 50.82(a)(8)(i) and (ii) related to ANO, Units 1 and 2 to allow the licensee to withdraw funds from the ANO, Units 1 and 2 DTFs, not to exceed \$20 million per unit, to facilitate the prompt disposal of the specified retired MRCs. The exemptions are effective upon issuance.

Dated: July 10, 2025

For the Nuclear Regulatory Commission.

/RA/

Jamie Pelton, Acting Director,
Division of Operating Reactor Licensing,
Office of Nuclear Reactor Regulation.

SUBJECT: ARKANSAS NUCLEAR ONE, UNITS 1 AND 2 – EXEMPTIONS FROM THE
REQUIREMENTS OF 10 CFR 50.82(a)(8)(i) and (ii) (EPID L-2024-LLE-0030)
JULY 10, 2025

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