

Enclosure 1
Request for Exemption from
Requirements of 10 CFR 26.205
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Request for Exemption from Requirements of 10 CFR 26.205

I. SUMMARY

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 26.9, "Specific exemptions," Union Electric Company (dba Ameren Missouri) hereby requests a one-time exemption with respect to requirements specified in 10 CFR 26.205(d), "Work Hour Controls." The exemption is needed to allow additional use of the less restrictive work-hour limitations described in 10 CFR 26.205(d)(4), as needed to support the ongoing, extended refueling outage (Refuel 27) at Callaway Plant Unit 1 (Callaway). Use of less restrictive work-hour limitations would support timely completion of the emergent repair activities described in section IV of this enclosure.

II. APPLICABLE REGULATIONS AND GUIDANCE

The applicable regulations pertaining to the proposed exemption are identified below.

26.9, *Specific exemptions*, states:

Upon application of any interested person or on its own initiative, the Commission may 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.

10 CFR 26.4(a) defines the categories of individuals that are subject to the work-hour controls specified in 10 CFR 26.205. These categories are for persons performing the following activities:

- (1) *Operating or onsite directing of the operation of systems and components that a risk-informed evaluation process has shown to be significant to public health and safety;*
- (2) *Performing health physics or chemistry duties required as a member of the onsite emergency response organization minimum shift complement;*
- (3) *Performing the duties of a fire brigade member who is responsible for understanding the effects of fire and fire suppressants on safe shutdown capability;*
- (4) *Performing maintenance or onsite directing of the maintenance of SSCs that a risk-informed evaluation process has shown to be significant to public health and safety; and*
- (5) *Performing security duties as an armed security force officer, alarm station operator, response team leader, or watchman, hereinafter referred to as security personnel.*

The exemption to 10 CFR 26.205(d)(4) proposed for Callaway applies to individuals in categories (2) and (4) above.

10 CFR 26.205(d)(1) through (3) specifies work hour controls:

(d) Work hour controls. Licensees shall control the work hours of individuals who are subject to this section.

(1) Except as permitted in § 26.207, licensees shall ensure that any individual's work hours do not exceed the following limits:

- (i) 16 work hours in any 24-hour period;*
- (ii) 26 work hours in any 48-hour period; and*
- (iii) 72 work hours in any 7-day period.*

(2) Licensees shall ensure that individuals have, at a minimum, the rest breaks specified in this paragraph. For the purposes of this subpart, a break is defined as an interval of time that falls between successive work periods, during which the individual does not perform any duties for the licensee other than one period of shift turnover at either the beginning or end of a shift but not both. Except as permitted in § 26.207, licensees shall ensure that individuals have, at a minimum—

(i) A 10-hour break between successive work periods or an 8-hour break between successive work periods when a break of less than 10 hours is necessary to accommodate a crew's scheduled transition between work schedules or shifts; and

(ii) A 34-hour break in any 9-day period.

(3) Licensees shall either ensure that individuals have, at a minimum, the number of days off specified in this paragraph, or comply with the requirements for maximum average workhours in § 26.205(d)(7). For the purposes of this section, a day off is defined as a calendar day during which an individual does not start a work shift. For the purposes of calculating the average number of days off required in this paragraph, the duration of the shift cycle may not exceed 6 weeks.

(i) Individuals who are working 8-hour shift schedules shall have at least 1 day off per week, averaged over the shift cycle;

(ii) Individuals who are working 10-hour shift schedules shall have at least 2 days off per week, averaged over the shift cycle;

(iii) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(1) through (a)(3) shall have at least 2.5 days off per week, averaged over the shift cycle;

(iv) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(4) shall have at least 2 days off per week, averaged over the shift cycle; and

(v) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(5) shall have at least 3 days off per week, averaged over the shift cycle.

10 CFR 26.205(d)(4) provides the following requirements:

During the first 60 days of a unit outage, licensees need not meet the requirements of § 26.205(d)(3) or (d)(7) for individuals specified in § 26.4(a)(1) through (a)(4), while those individuals are working on outage activities. However, the licensee shall ensure that the individuals specified in § 26.4(a)(1) through (a)(3) have at least 3 days off in each successive (i.e., non-rolling) 15-day period and that the individuals specified in § 26.4(a)(4) have at least 1 day off in any 7-day period.

III. PROPOSED EXEMPTION

Refuel 27 at Callaway has already been extended due to the activities described in section IV below. Thus, the initial 60-day outage provisions (for relaxed work-hour limitations) of 10 CFR 26.205(d)(4) have already been utilized. Specifically, the 60-day period allowed for outage work-hour rules expired on May 27, 2025.

Ameren Missouri is requesting a one-time exemption pursuant to 10 CFR 26.9, for Callaway, to allow

additional use of the less restrictive work hour limitations described in 10 CFR 26.205(d)(4) for workers in categories (a)(2) and (a)(4) of 10 CFR 26.4 to support emergent repair activities during the extended outage.

The period of the proposed exemption would commence on June 25, 2025 and be applicable for a period of 60 days.

IV. BASIS FOR PROPOSED EXEMPTION

On March 29, 2025, Callaway commenced a planned refuel outage (i.e., Refuel 27). While performing a visual inspection of the bottom of the reactor pressure vessel (RPV) on May 6, 2025, with the plant in Mode 3 ascending, a dry white residue resembling boric acid was identified in the annulus area of bottom-mounted instrument (BMI) nozzle #48. The leak was determined to constitute reactor coolant pressure boundary leakage, and in response to that determination, the plant was taken to cold shutdown (Mode 5) in accordance with Technical Specification 3.4.13, "RCS Operational Leakage." (The plant was subsequently taken to "No Mode" and has remained in that condition to date.)

NDE examination of the #48 nozzle weld penetration identified a leak pattern consistent with water flowing through the annulus between the outer diameter of the BMI nozzle tube and the inside surface of the reactor vessel bottom head (RVBH) bore hole. It was determined that the leakage path begins at the location of a fabrication flaw in the J-groove weld on the vessel interior side of the nozzle penetration. Additional extent-of-condition inspections found weld indications in the annulus area of three BMI nozzles, i.e., #30, #35 and #57. No leakage was observed for these additional BMI nozzles.

Ameren Missouri is performing a half-nozzle repair modification for each of the noted BMI nozzles using ASME Section XI, Code Case N-638-11, and ASME Section III. The modifications consist of removing the lower portion of the existing Alloy 600 nozzle applying an Alloy 52M partial penetration weld pad on the outer surface of the RVBH and installing a replacement Alloy 690 nozzle, with an Alloy 52M partial penetration J-groove weld. The new weld pad is being welded to the outer surface of the RVBH, using machine Gas Tungsten Arc Welding (GTAW) Ambient Temperature Temper Bead (ATTB) welding with inert shielding gas. The new Alloy 690 half nozzle is being inserted into the bore and welded to the Alloy 52M weld pad with an Alloy 52M partial penetration J-groove weld using a manual GTAW welding technique.

Implementation of the undervessel repairs requires special processes that can only be performed by qualified welders/experts, of which there are only a limited number available. A significant effort has been made to bring these limited/specialized resources to the Callaway site.

To provide for timely completion of RPV nozzle repair activities, and to allow for the discovery and resolution of any further discovery items, Ameren Missouri requests a one-time exemption to allow use of the less restrictive work hour limitations specified in 10 CFR 26.205(d)(4) for a period starting on June 25 and continuing for an additional 60 days, in support of the ongoing, extended Refuel 27 outage at Callaway.

Callaway's extended Refuel 27 outage is currently scheduled to be completed in July 2025. Approval of this exemption request would enable Ameren Missouri to fully utilize the specialized and limited resources needed to complete the noted repairs (and thus the outage) as currently scheduled, avoiding unnecessary impacts to Ameren Missouri's ability to provide safe and reliable power.

Without the exemption approval, the availability of Callaway could be delayed as the Ameren Missouri

service territory moves into warmer weather with the higher loads typically seen in July and August 2025.

Without the exemption approval, Ameren Missouri's reserve capacity position may not meet planning targets for July and August 2025. To replace this energy, Ameren Missouri may be required to purchase replacement power from the market on a non-firm basis, which increases reliability risk.

Without the exemption approval, national security may be impacted by the lack of availability of sufficient electric power reserve capacity during potential demand spikes that may occur during the summer months.

V. MITIGATING ACTIONS

ADEQUATE REST INTERVAL

A mitigating action for the affected workers is that following expiration of the 60-day provisional period that began at the start of Refuel 27 (as allowed per 10 CFR 26.205(d)(4)), the work-hour limitations of 10 CFR.205(d)(1) through (3) were resumed (as of May 27, 2025) such that the affected personnel have been working under "normal" work-hour limitations since that time. The resumption of 10 CFR 26.206(d)(4) outage work-hour limitations would not go into effect until June 25, 2025, per the requested 10 CFR 26.9 exemption. This would provide a rest period (with normal work-hour limitations imposed) of approximately one month in between the initial and requested 60-day periods.

ASSESSMENT FOR FATIGUE

In accordance with Callaway procedures, during the period of the proposed exemption, the cognizant supervisors will assess each assigned supervised employee for fatigue and mental alertness during the exemption period with the less restrictive work-hour limitations described in 10 CFR 26.205(d)(4) in place.

VI. COMPLIANCE WITH 10 CFR 26.9

In accordance with 10 CFR 26.9, "Specific exemptions," the NRC may grant exemptions from the regulations that are determined to be authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. This exemption request satisfies these requirements, and since the provisions of 10 CFR 26.9 allow the NRC to grant exemptions from the requirements of 10 CFR 26, the proposed exemption is authorized by law.

As described in Federal Register (FR) Notice 73 FR 16966, 10 CFR 26, Subpart I provides assurance that cumulative fatigue does not compromise the abilities of individuals to safely and competently perform their duties. The maximum average work hour requirements of 10 CFR 26.205(d)(7) address the long-term control of work hours while permitting the occasional use of extended work hours for short duration circumstances such as equipment failure, personnel illness, or attrition. The provisions of 10 CFR 26.205(d)(4) allow a 60-day period in which the maximum average work hour requirements of 10 CFR 26.205(d)(7) are replaced by less restrictive requirements. The limitations in 10 CFR 26.205(d)(4) address the control of work hours for unique plant conditions, such as unit outages, which require extended work hours for a more sustained period of time. The less restrictive limitations of 10 CFR 26.205(d)(4) provide licensees flexibility in scheduling required days off while accommodating the more intensive work schedules that accompany a unit outage. Limiting the time period in which the less restrictive limitations may be applied provides assurance that cumulative fatigue does not compromise the ability of individuals to safely and competently perform their duties.

As described above, this exemption request is consistent with the intent of the fatigue rule. As such, it is within the authority of the NRC to grant this request since changing the timeframe when outage hours can be worked will not endanger life or property or the common defense and security.

The proposed exemption will not endanger life or property or the common defense and security and is otherwise in the public interest.

VII. PRECEDENT

1. On March 20, 2025, the NRC approved an exemption request for the Sequoyah Nuclear Plant, Unit 2 (Sequoyah) which applied the requirements of 10 CFR 26.205(d)(4) for a specific period (not to exceed 21 days) during startup from an extended outage (ML25070A295 and ML25070A296). Sequoyah exemption is relevant because it also sought an exemption due to an extended outage.
2. On April 29, 2022, the NRC approved an exemption request from 10 CFR 26.205 for the Watts Bar Nuclear Plant, Unit 2 (ML22117A185 and ML22117A186). Watts Bar is cited as precedent because it sought an exemption due to an extended outage. The exemption allowed the use of the less restrictive working hour limitations described in 10 CFR 26.205(d)(4) to support activities for a period not to exceed 60 days.
3. On June 11, 2013, the NRC approved an exemption request for the Fort Calhoun Station, Unit 1 from 10 CFR 26.205 (ML13157A135 and ML13157A139). Fort Calhoun is cited as precedent because it also sought an exemption due to an extended outage. The exemption allowed the use of the less restrictive working hour limitations described in 10 CFR 26.205(d)(4) to support activities for a period not to exceed 60 days.
4. On June 24, 2010, the NRC approved an exemption request for the Davis Besse Nuclear Power Station (DBNPS), Unit 1 which applied the requirements of 10 CFR 26.205(d)(4) to support the restart from an extended outage (ML101730457 and ML101730482). DBNPS Unit 1 is cited as precedent because it sought an exemption due to an extended outage.
5. On November 10, 2009, the NRC approved an exemption request for the Donald C. Cook Nuclear Plant, Unit 1 (D.C. Cook) which applied the requirements of 10 CFR 26.205(d)(4) for a 60-day period or until completion of the forced outage, whichever was shorter (ML092630003 and ML09263004). The D.C. Cook exemption is relevant in that the provisions of 10 CFR 26.205(d)(4) were approved for application during an extended outage.