



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

July 30, 2019

Mr. Fadi Diya
Senior Vice President and
Chief Nuclear Officer
Ameren Missouri
Callaway Energy Center
8315 County Road 459
Steedman, MO 65077

SUBJECT: CALLAWAY PLANT, UNIT NO. 1 - ISSUANCE OF AMENDMENT NO. 220
REGARDING EMERGENCY ACTION LEVEL SCHEME CHANGES
(EPID L-2018-LLA-0239)

Dear Mr. Diya:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 220 to Renewed Facility Operating License No. NPF-30 for the Callaway Plant, Unit No. 1 (Callaway). The amendment consists of changes to the emergency action level (EAL) scheme of the Callaway Radiological Emergency Response Plan (RERP) in response to your application dated September 4, 2018, as supplemented by letter dated February 20, 2019.

The amendment revises the Callaway RERP by changing EAL CA6.1, "Cold Shutdown/Refueling System Malfunction — Hazardous event affecting a SAFETY SYSTEM needed for the current operating MODE: Alert," and EAL SA9.1, "System Malfunction — Hazardous event affecting a SAFETY SYSTEM needed for the current operating MODE: Alert." Also, the amendment adds a new definition for the term "Loss of Safety Function (LOSF)," and a redefinition of the term "Visible Damage," along with the deletion of Initiating Condition HG1 and associated EAL HG1.1, "Hazard — HOSTILE ACTION resulting in loss of physical control of the facility: General Emergency," within Callaway's RERP.

F. Diya

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A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

L. John Klos, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-483 and 72-1045

Enclosures:

1. Amendment No. 220 to NPF-30
2. Safety Evaluation

cc: Listserv

SUBJECT: CALLAWAY PLANT, UNIT NO. 1 - ISSUANCE OF AMENDMENT NO. 220
REGARDING EMERGENCY ACTION LEVEL SCHEME CHANGES
(EPID L-2018-LLA-0239) DATED JULY 30, 2019

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ADAMS Accession No. ML19158A290

***by email**

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NSIR/DPR/RLB/BC	OGC* NLO
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DATE	5/12/2019	6/26/2019	4/12/2019	7/12/2019
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DATE	7/19/2019	7/23/2019	7/26/2019	7/30/2019

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

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT NO. 1

DOCKET NO. 50-483

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 221
License No. NPF-30

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Union Electric Company (UE, the licensee), dated September 4, 2018, as supplemented by letter dated February 20, 2019, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, by Amendment No. 221, Renewed Facility Operating License No. NPF-30 is hereby amended to authorize revision to Emergency Action Level Technical Basis Document of the Callaway Plant Radiological Emergency Response Plan as set forth in licensee's application dated September 4, 2018, as supplemented by letter dated February 20, 2019, and evaluated in the NRC staff's evaluation enclosed with this Amendment.
3. This amendment is effective as of its date of issuance and shall be implemented within 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by M. Evans for/

Ho K. Nieh, Director
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License No. NPF-30

Date of Issuance: July 30, 2019



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 220 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO 50-483

1.0 INTRODUCTION

By application dated September 4, 2018 (Reference 1), as supplemented by letter dated February 20, 2019 (Reference 2), Union Electric Company, dba Ameren Missouri (the licensee) requested U.S. Nuclear Regulatory Commission (NRC or the Commission) approval of changes to revise the Radiological Emergency Response Plan (RERP) for Callaway Plant, Unit No. 1 (Callaway).

The proposed amendment would revise the current Callaway emergency action level (EAL) scheme by changing EAL CA6.1, "Cold Shutdown/Refueling System Malfunction — Hazardous event affecting a SAFETY SYSTEM needed for the current operating MODE: Alert," and EAL SA9.1, "System Malfunction — Hazardous event affecting a SAFETY SYSTEM needed for the current operating MODE: Alert." Also, the amendment would add a new definition for the term "Loss of Safety Function (LOSF)" and a redefinition of the term "Visible Damage," along with the deletion of Initiating Condition HG1 and associated EAL HG1.1, "Hazard — HOSTILE ACTION resulting in loss of physical control of the facility: General Emergency," within Callaway's RERP.

The supplemental letter dated February 20, 2019, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on December 4, 2018 (83 FR 62621).

2.0 REGULATORY EVALUATION

2.1 Description of Emergency Action Levels

This amendment request concerns EALs. EALs are the plant-specific indications, conditions or instrument readings that are utilized to classify emergency conditions defined in the Callaway RERP. These conditions are used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the

EALs that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The EALs are based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. These action levels include hostile action that may adversely affect the nuclear power plant.

The EALs are described as "Notification of Unusual Event," "Alert," "Site Area Emergency," and "General Emergency."

2.2 Description of Proposed Changes

In 2015, the NRC approved use of an EAL scheme for Callaway that was developed in accordance with Nuclear Energy Institute (NEI) 99-06, Revision 6, "Methodology for the Development of Emergency Action Levels for Non-Passive Reactors" (Reference 3).

In the amendment request, the licensee proposes to make changes that would, among other things, reduce the potential of declaring an Alert when events are in progress that do not involve an actual or potential substantial degradation of the level of safety of the plant (i.e., does not cause significant concern with shutting down or cooling down the plant). The licensee also proposes to make changes that would address questions that had arisen regarding certain wording used in the EAL scheme. Lastly, the requested changes would better address hostile actions.

2.3 Regulatory Requirements and Guidance Documents

Section IV.B. "Assessment Actions," of Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, states, in part:

2. A licensee desiring to change its entire emergency action level scheme shall submit an application for an amendment to its license and receive NRC approval before implementing the change. Licensees shall follow the change process in § 50.54(q) for all other emergency action level changes.

Per 10 CFR 50.54(q)(3)-(4):

- (3) The licensee may make changes to its emergency plan without NRC approval only if the licensee performs and retains an analysis demonstrating that the changes do not reduce the effectiveness of the plan and the plan, as changed, continues to meet the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b).
- (4) The changes to a licensee's emergency plan that reduce the effectiveness of the plan as defined in paragraph (q)(1)(iv) of this section may not be implemented without prior approval by the NRC. A licensee desiring to make such a change after February 21, 2012 shall submit an application for an amendment to its license. In addition to the filing requirements of §§ 50.90 and 50.91, the request must include all emergency plan pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for

the change, and the basis for concluding that the licensee's emergency plan, as revised, will continue to meet the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b).

Section 50.47, "Emergency plans," of 10 CFR sets forth emergency plan requirements for nuclear power reactors. Section 50.47(b) of 10 CFR establishes the planning standards that the onsite and offsite emergency response plans must meet for NRC staff to make a finding that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Planning Standard (4) of this section requires that onsite and offsite emergency response plans meet the following standard:

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

Section 50.47(b)(4) of 10 CFR requires the use of a standard emergency classification and action level scheme, ensuring that implementation methods are relatively consistent throughout the industry for a given reactor and containment design, but permits site-specific design considerations and preferences.

The EAL development guidance was initially established in Generic Letter (GL) 79-50, dated October 10, 1979 (Reference 4). This guidance was subsequently revised in NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, dated November 1980 (Reference 5), which was endorsed by NRC Regulatory Guide (RG) 1.101, Revision 2, "Emergency Planning and Preparedness for Nuclear Power Reactors," dated October 1981 (Reference 6), as an approach acceptable to the NRC for the development of an EAL scheme.

As industry and regulatory experience was gained with the implementation and use of EAL schemes, the industry issued revised EAL scheme development guidance to reflect lessons learned, numerous of which have been provided to the NRC for review and endorsement as generic (i.e., non-plant-specific) EAL development guidance. Most recently, the industry developed NEI 99-01, Revision 6, which was endorsed by the NRC in a letter dated March 28, 2013 (Reference 7), as acceptable generic EAL scheme development guidance.

Although the EAL development guidance contained in NEI 99-01, Revision 6, is generic and may not be entirely applicable for some reactor designs, it bounds the most typical accident/event scenarios for which emergency response is necessary, in a format that allows for industry standardization and consistent regulatory oversight. Licensees may choose to develop plant-specific EAL schemes using NEI 99-01, Revision 6, with appropriate plant-specific alterations as applicable.

Regulatory Issue Summary (RIS) 2003-18, Revision 4, "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels'" dated October 8, 2003, including Supplements 1 and 2 (Reference 8), also provides guidance for developing or changing a standard EAL scheme. In addition, this RIS and its supplements provide recommendations to assist

licensees, consistent with Section IV.B.2 of Appendix E to 10 CFR Part 50, in determining whether to seek prior NRC approval of deviations from the guidance.

The NRC's Office of Nuclear Security and Incident Response Office Procedure EP-100, "Emergency Preparedness Program Frequently Asked Question (EPFAQ) Process" (Reference 9), was established to enable licensees, NRC staff, and interested stakeholders to obtain answers to generic questions about guidance documents related to the development and maintenance of emergency preparedness program elements.

3.0 TECHNICAL EVALUATION

In its application dated September 4, 2018, as supplemented by letter dated February 20, 2019, the licensee proposed to revise the current Callaway EAL scheme to incorporate clarifications provided by EPFAQ 2015-013 (Reference 10) and EPFAQ 2016-002 (Reference 11). Additionally, the licensee submitted the proposed EAL scheme, the technical basis containing an evaluation and rationale for each proposed EAL change, and a comparison with the EAL wording to that found in NEI 99-01, Revision 6. The comparison also included a justification for any differences or deviations from the current Callaway EAL Scheme. The application states that the licensee used the terms "difference" and "deviation" as defined in RIS 2003-18, as supplemented.

The NRC staff reviewed the application, as supplemented, and verified that the proposed EAL scheme is consistent with the guidance provided in NEI 99-01, Revision 6, to ensure that the proposed EAL scheme meets the requirements of Section IV.B.1 of Appendix E to 10 CFR Part 50 and 10 CFR 50.47(b)(4). The NRC staff reviewed the proposed site-specific EAL scheme, technical basis, and all additional information provided in the licensee's application and supplemental letters.

The NRC staff reviewed the application, as supplemented, and verified that the instrumentation and setpoints derived for this proposed EAL scheme are consistent with the overall EAL scheme development guidance, address the plant-specific implementation strategies provided, and are also consistent with a standard EAL scheme.

Although the EALs must be plant-specific, the NRC staff reviewed the proposed EALs for the following key characteristics of an effective EAL scheme to ensure:

- Consistency, including standardization of intent, if not in actual wording (i.e., the EALs would lead to similar decisions under similar circumstances at different plants);
- Human factors engineering and user friendliness;
- Potential for emergency classification level upgrade only when there is an increasing threat to public health and safety;
- Ease of upgrading and downgrading the emergency classification level;
- Thoroughness in addressing issues regarding the completeness and accuracy raised in Appendix 1 to NUREG-0654 (i.e., the EALs are unambiguous and are based on site-specific indicators);

- Technical completeness for each classification level;
- Logical progression in classification for multiple events; and
- The use of objective and observable values.

The NRC staff verified that the proposed EAL scheme uses objective and observable values, is worded in a manner that addresses human factors engineering and user friendliness concerns, follows logical progressions for escalating events, and allows for event downgrading and upgrading based upon the potential risk to the public health and safety. The NRC staff verified that risk assessments were appropriately used to set the boundaries of the emergency classification levels and ensure that all EALs that trigger the declaration of an emergency classification are in the same range of relative risk. In addition, the NRC staff verified that the proposed EAL scheme is technically complete for each classification level, accurate, and consistent with EAL schemes implemented at similarly designed plants.

3.1 Callaway EAL CA6

The intent of this EAL is to ensure that an emergency classification is declared when hazardous events lead to potential damage to safety systems. The hazardous events of interest include, but are not limited to, an earthquake, flooding, high winds, tornado strike, explosion, fire, or any other hazard applicable for the site. This EAL is primarily intended to ensure that the plant emergency response organization is activated to support the control room in understanding the event impacts and restoring affected safety system equipment to service. Indications of hazard-induced damage to components containing radioactive materials are bounded by EALs CS1, CG1, RS1 and RG1.

As described in NUREG-0654/FEMA-REP-1, Revision 1, and the NRC-endorsed guidance in NEI 99-01, Revision 6, an Alert classification exists when “[e]vents are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the EPA [U.S. Environmental Protection Agency] Protective Action Guideline [PAG] [Reference 12] exposure levels.” The NRC-endorsed guidance in NEI 99-01, Revision 6, is intended to ensure that an Alert classification level should be declared only when an actual or potential substantial degradation of the level of safety of the plant has occurred as a result of a hazardous event. However, there may be cases where a hazardous event only causes damage to a single safety system component or a single safety system train. Additionally, an Alert classification level should not be declared if the damage from the hazardous event is limited to a safety system component or a safety system train that was inoperable or out of service prior to the event occurring.

The licensee proposed to modify EAL CA6 such that an Alert classification level will be declared when a hazardous event results in indications of degraded performance to one train of a safety system with either indications of degraded performance on a second safety system train or visible damage to a second safety system train, such that the operability or reliability of the second safety system train is a concern. Although different from the NRC-endorsed guidance in NEI 99-01, Revision 6, this change is acceptable considering that the NRC-endorsed guidance in NEI 99-01, Revision 6, is intended to ensure that an Alert classification level should be declared only when an actual or potential substantial degradation of the level of safety of the plant has occurred as a result of a hazardous event.

The NRC staff verified that the numbering, sequencing, formatting, and logical progression for this EAL is consistent with the overall EAL scheme development guidance, and address the plant-specific implementation strategies provided, and are, therefore, consistent with a standard EAL scheme, as required by 10 CFR 50.47(b)(4). The NRC staff also verified that the EAL is worded in an unambiguous manner that addresses human factors engineering and user-friendliness concerns, is technically complete for this emergency classification level, addresses issues regarding completeness and accuracy raised in Appendix 1 to NUREG-0654, and uses objective and observable values based on site-specific indications.

Based on the above, the NRC staff concludes that the proposed change to EAL CA6 is consistent with the key characteristics of an effective EAL scheme (identified in Section 2.3 above) and meets the requirements of 10 CFR 50.47(b)(4) and Section IV.B.1 of Appendix E to 10 CFR Part 50. Therefore, the NRC staff finds this EAL acceptable.

3.2 Callaway EAL Set HU1/HA1/HS1

The intent of EAL Set HU1/HA1/HS1 is to ensure that an emergency classification is declared based upon a security-related event.

This EAL set was developed in accordance with the guidance from NRC Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events" (Reference 13), and RIS 2006-12, "Endorsement of Nuclear Energy Institute Guidance 'Enhancements to Emergency Preparedness Programs for Hostile Action,'" dated July 19, 2006 (Reference 14), for licensees to implement, regardless of the specific version of the generic EAL scheme development guidance used, or if the particular licensee developed its EAL scheme using an alternative approach. Based upon lessons learned from the implementation and use of this EAL set, particularly the insights gained from combined security and emergency preparedness drills, the licensee is proposing to remove EAL HG1 from the currently approved Callaway EAL scheme.

A hostile action resulting in physical loss of physical control of the facility, such that, releases can reasonably be expected to exceed EPA early phase PAG exposure levels offsite for more than the immediate site area, will be bound by the HG7 criteria. Additionally, any event that could result in a radiological release in excess of EPA early phase PAGs would be bound by EALs RG1 or RG2. The NRC staff verified that the Callaway EALs RG1, RG2, and HG7 are developed as endorsed and, therefore, bound the events of concern for EAL HG1.

The NRC staff also verified that the progression from a Notification of an Unusual Event to a Site Area Emergency classification level is appropriate and consistent with EAL scheme development guidance.

- HU1 – This EAL addresses events that pose a threat to plant personnel or safety system equipment.
- HA1 – This EAL addresses the occurrence of a hostile action within the Owner Controlled Area or notification of an aircraft attack threat.
- HS1 – This EAL addresses the occurrence of a hostile action within the Protected Area.

The NRC staff verified that this EAL set is consistent with the guidance provided in NRC Bulletin 2005-02 and RIS 2006-12, as further enhanced by the lessons learned from implementation and drills, and revised in NEI 99-01, Revision 6.

The NRC staff verified that the numbering, sequencing, formatting, logical progression, ease of upgrading/downgrading for this EAL set are consistent with the overall EAL scheme development guidance and address the plant-specific implementation strategies provided, and are, therefore, consistent with a standard EAL scheme, as required by 10 CFR 50.47(b)(4). The NRC staff also verified that the EAL set is worded in an unambiguous manner that addresses human factors engineering and user-friendliness concerns, is technically complete for each classification level, addresses issues regarding completeness and accuracy of Appendix 1 to NUREG-0654, and uses objective and observable values based on site-specific indications.

Based on the above, the NRC staff concludes that the proposed change for this EAL set is consistent with the key characteristics of an effective EAL scheme (identified in Section 2.3 above) and meets the requirements of 10 CFR 50.47(b)(4) and Section IV.B.1 of Appendix E to 10 CFR Part 50. Therefore, the NRC staff finds this EAL set acceptable.

3.3 Callaway EAL SA9

The intent of EAL SA9 is to ensure that an emergency classification is declared when a hazardous event leads to potential damage to safety systems needed for the current operating mode. The hazardous events of interest include, but are not limited to, an earthquake, flooding, high winds, tornado strike, explosion, fire, or any other hazard applicable for Callaway. This EAL is primarily intended to ensure that the plant emergency response organization is activated to support the control room in understanding the event impacts and restoring affected safety system equipment to service. Indications of hazard-induced damage to components containing radioactive materials are bounded by Recognition Category 'F,' as well as EALs RS1 and RG1.

As described in NUREG-0654/FEMA-REP-1, Revision 1, and the NRC-endorsed guidance in NEI 99-01, Revision 6, an Alert classification level exists when "[e]vents are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels." The NRC-endorsed guidance in NEI 99-01, Revision 6, is intended to ensure that an Alert classification level should be declared only when an actual or potential substantial degradation of the level of safety of the plant has occurred as a result of a hazardous event. However, there may be cases where a hazardous event only causes damage to a single safety system component or a single safety system train. Additionally, an Alert classification level should not be made if the damage from the hazardous event is limited to a safety system component or a safety system train that was inoperable or out of service prior to the event occurring.

The licensee proposed to modify EAL SA9 such that an Alert classification level will be declared when a hazardous event results in indications of degraded performance to one train of a safety system with either indications of degraded performance on a second safety system train or visible damage to a second safety system train, such that, the operability or reliability of the second safety system train is a concern. Although different from the NRC-endorsed guidance in NEI 99-01, Revision 6, this change is acceptable considering that the NRC-endorsed guidance in NEI 99-01, Revision 6, is intended to ensure that an Alert classification level should be declared only when an actual or potential substantial degradation of the level of safety of the plant has occurred as a result of a hazardous event.

The NRC staff verified that the numbering, sequencing, formatting, logical progression and instrumentation and setpoints for this EAL are consistent with the overall EAL scheme development guidance and address the plant-specific implementation strategies provided, and are, therefore, consistent with a standard EAL scheme, as required by 10 CFR 50.47(b)(4). The NRC staff also verified that the EAL is worded in an unambiguous manner that addresses human factors engineering and user-friendliness concerns, is technically complete for this classification level, addresses issues regarding completeness and accuracy raised in Appendix 1 to NUREG-0654/FEMA-REP-1, and uses objective and observable values based on site-specific indications.

Based on the above, the NRC staff concludes that the proposed change to EAL SA9 is consistent with the key characteristics of an effective EAL scheme (identified in Section 2.3 above) and meets the requirements of 10 CFR 50.47(b)(4) and Section IV.B.1 of Appendix E to 10 CFR Part 50. Therefore, the NRC staff finds this EAL acceptable.

3.4 Review Summary

The NRC staff has reviewed the technical bases for the proposed EAL scheme, the modifications from the currently approved Callaway EAL scheme, which is based on NEI 99-01, Revision 6, and the licensee's evaluation of the proposed changes. The NRC staff verified that these modifications do not alter the intent of any specific EAL within a set, recognition category, or within the entire EAL scheme described in NEI 99-01, Revision 6. Thus, the proposed changes meet the requirements in Section IV.B.1 of Appendix E to 10 CFR Part 50 and planning standard in 10 CFR 50.47(b).

The NRC staff determined that the proposed EAL scheme uses objective and observable values, is worded in a manner that addresses human factors engineering and user-friendliness concerns, follows logical progressions for escalating events, and allows for event downgrading and upgrading based upon the potential risk to the public health and safety. Risk assessments were appropriately used to set the boundaries of the emergency classification levels and ensure that all EALs that trigger an emergency classification are in the same range of relative risk. In addition, the NRC staff determined that the proposed EAL scheme is technically complete and consistent with EAL schemes implemented at similarly designed plants.

Based on its review, the NRC staff finds that the licensee's proposed EAL scheme is acceptable and provides reasonable assurance that the licensee can and will take adequate protective measures in the event of a radiological emergency. Specifically, the staff concludes that the licensee's proposed EAL scheme and site-specific EAL technical basis document provided by letter dated September 4, 2018, as supplemented by letter dated February 20, 2019, is acceptable for implementation.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Missouri State official was notified of the proposed issuance of the amendment on May 22, 2019. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 because the

amendment approves an acceptable EAL scheme which is required for operation of the facility. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, published in *Federal Register* on December 4, 2018 (83 FR 62621), and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Wink, R. C., Union Electric Company dba Ameren Missouri, letter to U.S. Nuclear Regulatory Commission, "Docket Numbers 50-483 and 72-1045, Callaway Plant, Unit 1, Union Electric Co., Renewed Facility Operating License NPF-30, License Amendment Request for Emergency Action Level (EAL) changes," dated September 4, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18247A467).
2. Wink, R. C., Union Electric Company dba Ameren Missouri, letter to U.S. Nuclear Regulatory Commission, "Docket Numbers 50-483 and 72-1045, Callaway Plant, Unit 1, Union Electric Co., Renewed Facility Operating License NPF-30, Supplement and Response to Request for Additional Information Regarding License Amendment Request for Emergency Action Level (EAL) Changes," dated February 20, 2019 (ADAMS Package Accession No. ML19051A135).
3. Nuclear Energy Institute, "Development of Emergency Action Levels for Non-Passive Reactors," NEI 99-01, Revision 6, dated November 2012 (ADAMS Package Accession No. ML13091A209).
4. U.S. Nuclear Regulatory Commission, Generic Letter 79-50, dated October 10, 1979 (ADAMS Accession No. ML031320278).
5. U.S. Nuclear Regulatory Commission and Federal Emergency Management Agency, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," NUREG-0654/FEMA-REP-1, Revision 1, dated November 1980 (ADAMS Accession No. ML040420012).

6. U.S. Nuclear Regulatory Commission, "Emergency Planning and Preparedness for Nuclear Power Reactors," Regulatory Guide 1.101, Revision 2, dated October 1981 (ADAMS Accession No. ML090440294).
7. Thaggard, M., U.S. Nuclear Regulatory Commission, letter to Ms. Susan Perkins-Grew, Nuclear Energy Institute, "U.S. Nuclear Regulatory Commission Review and Endorsement of NEI 99-01, Revision 6, dated November 2012 (TAC No. D92368)," dated March 28, 2013 (ADAMS Accession No. ML12346A463).
8. U.S. Nuclear Regulatory Commission, Regulatory Issue Summary 2003-18, "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, dated January 2003," dated October 8, 2003, including Supplement 1 dated July 13, 2004, and Supplement 2 dated December 12, 2005 (ADAMS Accession Nos. ML032580518, ML041550395, and ML051450482, respectively).
9. U.S. Nuclear Regulatory Commission, "Emergency Preparedness Program Frequently Asked Question (EPFAQ) Process," Revision 1, Office of Nuclear Security and Incident Response Office Procedure EP-100, dated June 2016 (ADAMS Accession No. ML15301A796).
10. Emergency Preparedness Frequently Asked Question (EPFAQ) 2015-013, "EAL HG1" (ADAMS Accession No. ML16166A366).
11. Emergency Preparedness Frequently Asked Question (EPFAQ) 2016-002, "Clarification of Equipment Damage as a Result of a Hazardous Event" (ADAMS Accession No. ML17195A299).
12. U.S. Environmental Protection Agency, PAG Manual, "Protective Action Guides and Planning Guidance for Radiological Incidents," dated January 2017 (ADAMS Accession No. ML17044A073).
13. U.S. Nuclear Regulatory Commission, Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," dated July 18, 2005 (ADAMS Accession No. ML051740058).
14. U.S. Nuclear Regulatory Commission, Regulatory Issue Summary 2006-12, "Endorsement of Nuclear Energy Institute Guidance 'Enhancements to Emergency Preparedness Programs for Hostile Action,'" dated July 19, 2006 (ADAMS Accession No. ML061530290).

Principal Contributor: R. Hoffman

Date: July 30, 2019