

August 12, 2010

ULNRC-05719

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001



10 CFR 50.90
10 CFR 73.54

Ladies and Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
FACILITY OPERATING LICENSE NPF-30
REQUEST FOR APPROVAL OF THE CALLAWAY PLANT
CYBER SECURITY PLAN
(LICENSE AMENDMENT REQUEST LDCN 10-0022)**

- References:
1. AmerenUE Letter ULNRC-05663, "Request for Approval of the Callaway Plant Cyber Security Plan (License Amendment Request LDCN 09-0041)," dated November 19, 2009
 2. AmerenUE Letter ULNRC-05674, "Supplement to License Amendment Request LDCN 09-0041 for Approval of the Cyber Security Plan (TAC No. ME2663)," dated January 21, 2010
 3. AmerenUE Letter ULNRC-05711, "Request for Approval of the Callaway Plant Cyber Security Plan (TAC No. ME2663) (License Amendment Request LDCN 09-0041)," dated June 9, 2010
 4. Letter to Mr. A. Heflin, Union Electric Company, from Mr. M. Thadani, NRC; "Callaway Plant, Unit 1 – License Amendment Request For Approval Of The Cyber Security Plan (TAC No. ME2663)," dated June 16, 2010.

By letter dated November 19, 2009 (Reference 1), Union Electric Company (dba AmerenUE) submitted a request to amend the Facility Operating License (No. NPF-30) for Callaway Plant Unit 1. Per the proposed license amendment, AmerenUE requested Nuclear Regulatory Commission approval of Callaway's Cyber Security

Enclosures 2, 3, and 4 to this letter contains sensitive information.
Withhold from public disclosure under 10 CFR 2.390.
Upon removal of Enclosures 2, 3, and 4, this letter is uncontrolled.

Plan, provided a proposed Cyber Security Plan Implementation Schedule, and included a proposed revision to the Facility Operating License to incorporate the provisions for implementing and maintaining in effect the provisions of the approved Cyber Security Plan. AmerenUE's amendment application was based on a model application developed by the Nuclear Energy Institute (NEI) in concert with the industry.

As a result of subsequent discussions between the NRC Staff and NEI on December 9, 2009 concerning information in the evaluation for No Significant Hazards Consideration, AmerenUE provided on January 21, 2010 a revised Significant Hazards Consideration evaluation (Reference 2). In addition, in response to discussions with the NRC Staff regarding the classification of AmerenUE's entire license amendment request as "Security-Related Information – Withhold Under 10 CFR 2.390," AmerenUE submitted on June 9, 2010 a supplement which clarified that only Enclosure 3 of the original submittal contained security related/sensitive information (Reference 3).

By letter to AmerenUE, dated June 16, 2010 (Reference 4) the NRC noted that it had significant concerns (listed in an e-mail sent to licensees on March 9, 2010) with regard to the generic guidance on which licensees' proposed cyber security plans were based, including AmerenUE's proposed Cyber Security Plan. (Similar letters were sent to other licensees.) The NRC noted in its letter that Revision 6 of NEI 08-09, "Cyber Security Plan for Nuclear Power Reactors," contains changes that address the NRC staff's concerns associated with previous versions of that document, and that submission of a cyber security plan using the template provided in Revision 6 would be acceptable. In its letter to AmerenUE, the NRC requested that the list of concerns be reviewed and that a revised submittal be provided such that the previous submittal or portions of the previous submittal would be superseded. As an alternative to addressing the individual issues, it was noted that a revised Cyber Security Plan altogether could be submitted (i.e., one that is consistent with NEI 08-09, Revision 6) such that the existing amendment application (as originally submitted on November 19, 2009 and supplemented via the letters dated January 21 and June 9, 2010) would be withdrawn.

In accordance with the Staff's request, AmerenUE is hereby withdrawing its entire amendment application dated November 19, 2009 (Reference 1) as supplemented by letters dated January 21 and June 9, 2010. In accordance with the provisions of 10 CFR 50.4 and 10 CFR 50.90, AmerenUE is submitting a new request for amendment of the Facility Operating License (OL) for Callaway Plant Unit 1, including a revised Cyber Security Plan that supersedes the previously provided, proposed plan.

Per this amendment request, AmerenUE requests NRC approval of the enclosed Callaway Plant Unit 1 Cyber Security Plan, provides an Implementation Schedule, and proposes to add a sentence to the existing OL Physical Protection license

condition to require AmerenUE to fully implement and maintain in effect all provisions of the Commission-approved Cyber Security Plan. The new amendment request is derived from the model application provided in NEI 08-09, "Cyber Security Plan for Nuclear Power Reactors," Revision 6, dated April 2010.

Essential information for the new amendment request is provided in the enclosures to this letter:

- ◆ Enclosure 1 provides an evaluation of the proposed change. Enclosure 1 also contains an attachment that provides a markup of the affected OL page and the retyped OL page to show the proposed change.
- ◆ Enclosure 2 provides a copy of the Callaway Plant Unit 1 Cyber Security Plan Implementation Schedule. The final program implementation Milestone and associated Completion Date of January 31, 2015 (identified in Enclosure 2) is considered to be a regulatory commitment, and is identified as such in the enclosure. Any commitment change will be managed in accordance with NEI 99-04, "Guidelines for Managing NRC Commitment Changes." AmerenUE requests that Enclosure 2, which contains sensitive information, be withheld from public disclosure in accordance with 10 CFR 2.390.
- ◆ Enclosure 3 provides a copy of the Callaway Plant Unit 1 Cyber Security Plan which is a stand-alone document that will be incorporated by reference into the Callaway Plant Physical Security Plan upon approval. AmerenUE requests that Enclosure 3, which contains sensitive information, be withheld from public disclosure in accordance with 10 CFR 2.390.
- ◆ Enclosure 4 provides a summary of deviations between the Callaway Plant Unit 1 Cyber Security Plan and the cyber security plan template presented in NEI 08-09, Revision 6. This summary is provided solely as information to aid the Staff reviewers. AmerenUE requests that Enclosure 4, which contains sensitive information, be withheld from public disclosure in accordance with 10 CFR 2.390.

It has been determined that this amendment application does not involve a significant hazard consideration as determined per 10 CFR 50.92. Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

The Callaway Plant Onsite Review Committee and a subcommittee of the Nuclear Safety Review Board have reviewed and approved the attached licensing evaluations and have approved the submittal of this amendment application.

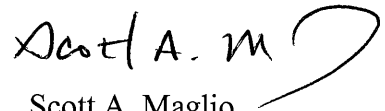
In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Missouri State Official.

UE requests an implementation period of 90 days (for implementation of the Operating License amendment itself) following NRC approval of the license amendment.

If there are any questions regarding this matter, please contact me at 573-676-8719.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott A. Maglio", with a large, stylized flourish at the end.

Scott A. Maglio
Regulatory Affairs Manager

Executed on: 8/12/2010

DER/EMF/nls

Enclosures:

Enclosure 1 – Evaluation of Proposed Change

Enclosure 2 – Callaway Plant Unit 1 Cyber Security Plan Implementation Schedule /
Identification of Commitments

Enclosure 3 – Callaway Plant Unit 1 Cyber Security Plan

Enclosure 4 – Summary of Deviations from NEI 08-09, Revision 6

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cc:

(copy w/out Enclosures 2, 3 and 4 except as noted with asterisk*)

U.S. Nuclear Regulatory Commission (Original and 1 copy)*

Attn: Document Control Desk

Washington, DC 20555-0001

Mr. Elmo E. Collins, Jr.*

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Senior Project Manager, Callaway Plant

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U. S. Nuclear Regulatory Commission

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Index and send hardcopy to QA File A160.0761

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Mr. John O'Neill (Pillsbury Winthrop Shaw Pittman LLP)
Missouri Public Service Commission
Mr. Dru Buntin (DNR)

Evaluation of Proposed Change

- 1.0 Summary Description
 - 2.0 Detailed Description
 - 3.0 Technical Evaluation
 - 4.0 Regulatory Evaluation
 - 4.1 Applicable Regulatory Requirements / Criteria
 - 4.2 Significant Hazards Consideration
 - 4.3 Summary
 - 5.0 Environmental Consideration
 - 6.0 References
-

ATTACHMENTS

Attachment 1 – Proposed Operating License Change (Marked-up)

Attachment 2 – Proposed Operating License Change (Retyped)

1.0 SUMMARY DESCRIPTION

The proposed license amendment request (LAR) includes the proposed Callaway Plant Unit 1 Cyber Security Plan (Plan), an Implementation Schedule, and a proposed sentence to be added to the existing Physical Protection Operating License (OL) Condition.

2.0 DETAILED DESCRIPTION

The proposed LAR includes three parts: the proposed Plan, an Implementation Schedule, and a proposed sentence to be added to the existing Physical Protection OL Condition i.e., paragraph 2.E of the Callaway OL. The modified OL Condition will require AmerenUE to fully implement and maintain in effect all provisions of the Commission-approved Cyber Security Plan required by 10 CFR 73.54.

The regulations in 10 CFR 73.54, "Protection of digital computer and communication systems and networks," establish the requirements for a cyber security program. This regulation specifically requires each licensee currently licensed to operate a nuclear power plant under Part 50 of this chapter to submit a cyber security plan that satisfies the requirements of the Rule. Each submittal must include a proposed implementation schedule, and implementation of the licensee's cyber security program must be consistent with the approved schedule. The background for this application is addressed by the NRC Notice of Availability published on March 27, 2009, 74 FR 13926 (Reference 1).

3.0 TECHNICAL EVALUATION

Federal Register Notice 74 FR 13926 issued the final rule that amended 10 CFR Part 73. Cyber security requirements are codified as 10 CFR 73.54 and are designed to provide high assurance that digital computer and communication systems and networks are adequately protected against cyber attacks up to and including the design basis threat established by 10 CFR 73.1(a)(1)(v). These requirements are substantial improvements upon the requirements imposed by Order EA-02-026 (Reference 2).

This LAR contains the proposed Implementation Schedule (Enclosure 2) required by 10 CFR 73.54. The LAR includes the proposed Plan (Enclosure 3) that is derived from the template provided in NEI 08-09, "Cyber Security Plan for Nuclear Power Reactors," Revision 6 (Reference 3). For the benefit of the Staff reviewers, a summary of deviations from the template provided in NEI 08-09, Revision 6 is provided as Enclosure 4. The proposed change to the existing OL Condition for "Physical Protection" is presented in Attachments 1 and 2.

In response to the letter from Mr. Richard Correia, NRC, to Mr. Christopher Earls, NEI, dated June 7, 2010 (Reference 4), AmerenUE will adopt the definition of "Cyber Attack" discussed in the letter. The definition of Cyber Attack will read as "Any event in which there is reason to believe that an adversary has committed or caused, or attempted to commit or cause, or has made a credible threat to commit or cause malicious exploitation of a CDA [critical digital asset]." This change is captured as a deviation from NEI 08-09, Revision 6, and is presented in Enclosure 4.

4.0 REGULATORY EVALUATION

4.1 APPLICABLE REGULATORY REQUIREMENTS / CRITERIA

This LAR is submitted pursuant to 10 CFR 73.54 which requires licensees currently licensed to operate a nuclear power plant under 10 CFR Part 50 to submit a Cyber Security Plan in accordance with 10 CFR 50.4 and 10 CFR 50.90.

4.2 SIGNIFICANT HAZARDS CONSIDERATION

AmerenUE has evaluated the proposed changes using the criteria in 10 CFR 50.92 and has determined that the proposed changes do not involve a significant hazards consideration. An analysis of the issue of no significant hazards consideration is presented below:

Criterion 1: The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change incorporates a new requirement in the Facility Operating License to implement and maintain the Cyber Security Plan as part of the facility's overall program for physical protection. Inclusion of the Cyber Security Plan in the Facility Operating License itself does not involve any modifications to the safety-related structures, systems or components (SSCs). Rather, the Cyber Security Plan describes how the requirements of 10 CFR 73.54 are to be implemented to identify, evaluate, and mitigate cyber attacks up to and including the design basis cyber attack threat, thereby achieving high assurance that the facility's digital computer and communications systems and networks are protected from cyber attacks. The implementation and incorporation of the Cyber Security Plan into the Facility Operating License will not alter previously evaluated Final Safety Analysis Report (FSAR) design basis accident analysis assumptions, add any accident initiators, or affect the function of the plant safety-related SSCs as to how they are operated, maintained, modified, tested, or inspected.

Therefore, it is concluded that this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Criterion 2: The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

This proposed amendment provides assurance that safety-related SSCs are protected from cyber attacks. Implementation of 10 CFR 73.54 and the inclusion of the Cyber Security Plan in the Facility Operating License do not result in the need of any new or different FSAR design basis accident analysis. It does not introduce new equipment that could create a new or different kind of accident, and no new equipment failure modes are created. As a result, no new accident scenarios, failure mechanisms, or limiting single failures are introduced as a result of this proposed amendment.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Criterion 3: The proposed change does not involve a significant reduction in a margin of safety.

The margin of safety is associated with the confidence in the ability of the fission product barriers (i.e., fuel cladding, reactor coolant pressure boundary, and containment structure) to limit the level of radiation to the public. The proposed amendment would not alter the way any safety-related SSC functions and would not alter the way the plant is operated. The amendment provides assurance that safety-related SSCs are protected from cyber attacks. The proposed amendment would not introduce any new uncertainties or change any existing uncertainties associated with any safety limit. The proposed amendment would have no impact on the structural integrity of the fuel cladding, reactor coolant pressure boundary, or containment structure. Based on the above considerations, the proposed amendment would not degrade the confidence in the ability of the fission product barriers to limit the level of radiation to the public.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, AmerenUE concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of no significant hazards consideration is justified.

4.3 CONCLUSION

In conclusion, based on the considerations discussed above: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; (2) 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.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed amendment is confined to (i) organizational and procedural matters; (ii) modifications to systems used for security and/or materials accountability; (iii) administrative changes; and (iv) review and approval of transportation routes pursuant to 10 CFR 73.37.

Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(12). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. *Federal Register* Notice, Final Rule 10 CFR 73, "Power Reactor Security Requirements," published on March 27, 2009, 74 FR 13926.
2. EA-02-026, "Order Modifying Licenses, Safeguards and Security Plan Requirements," issued February 25, 2002.
3. NEI 08-09, "Cyber Security Plan for Nuclear Power Reactors," Revision 6, April 2010.
4. Letter from Mr. Richard Correia, NRC, to Mr. Christopher Earls, NEI, titled "Nuclear Energy Institute 08-09, "Cyber Security Plan Template, Rev. 6," dated June 7, 2010. ADAMS Accession Number ML101550052.

Attachment 1

Proposed Operating License Change (Marked-up)

The following text is to be inserted at the end of the Callaway Plant Unit 1 OL Condition 2.E. for Physical Protection:

UE shall fully implement and maintain in effect all provisions of the Commission-approved Callaway Plant Unit 1 Cyber Security Plan submitted by letter dated August 12, 2010 and implemented in accordance with the implementation schedule provided therein (as approved by the NRC).

This marked-up OL change is provided on the next page.

Operating License
Revision 066

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license. UE shall operate the facility in accordance with the Additional Conditions.

- D. An Exemption from certain requirements of Appendix J to 10 CFR Part 50, are described in the October 9, 1984 staff letter. This exemption is authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, this exemption is hereby granted pursuant to 10 CFR 50.12. With the granting of this exemption the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- E. UE shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 10 CFR 73.21, are entitled: "Callaway Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 0" submitted by letter dated October 20, 2004, as supplemented by the letter May 11, 2006.
- F. Deleted per Amendment No. 169.

- G. UE shall have and maintain financial protection of such type and in such amount as shall be determined by the Commission in accordance with Section 170 of the Act, to cover public liability.

Insert

UE shall fully implement and maintain in effect all provisions of the Commission-approved Callaway Plant Unit 1 Cyber Security Plan submitted by letter dated August 12, 2010 and implemented in accordance with the implementation schedule provided therein (as approved by the NRC).

shall expire at

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY H. R. DENTON

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Attachments/Appendices:

1. Attachment 1 (Deleted per Amendment No. 169)
2. Attachment 2 (Deleted per Amendment No. 169)
3. Appendix A - Technical Specifications (NUREG-1058, Revision 1)
4. Appendix B - Environmental Protection Plan
5. Appendix C - Additional Conditions

Date of Issuance: October 18, 1984

Revised by letter dated June 26, 2007

Attachment 2

Proposed Operating License Change (Retyped)

The following text is to be inserted at the end of the Callaway Plant Unit 1 OL Condition 2.E. for Physical Protection:

UE shall fully implement and maintain in effect all provisions of the Commission-approved Callaway Plant Unit 1 Cyber Security Plan submitted by letter dated August 12, 2010 and implemented in accordance with the implementation schedule provided therein (as approved by the NRC).

This retyped OL change is provided on the next page.

license. UE shall operate the facility in accordance with the Additional Conditions.

- D. An Exemption from certain requirements of Appendix J to 10 CFR Part 50, are described in the October 9, 1984 staff letter. This exemption is authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, this exemption is hereby granted pursuant to 10 CFR 50.12. With the granting of this exemption the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- E. UE shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 10 CFR 73.21, are entitled: "Callaway Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 0" submitted by letter dated October 20, 2004, as supplemented by the letter May 11, 2006. UE shall fully implement and maintain in effect all provisions of the Commission-approved Callaway Plant Unit 1 Cyber Security Plan submitted by letter dated August 12, 2010 and implemented in accordance with the implementation schedule provided therein (as approved by the NRC).
- F. Deleted per Amendment No. 169.
- G. UE shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- H. This license is effective as of the date of issuance and shall expire at Midnight on October 18, 2024.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY H. R. DENTON

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

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Date of Issuance: October 18, 1984

- 8 -
ATTACHMENT 1

Deleted per Amendment No. 169.

ATTACHMENT 2

Deleted per Amendment No. 169.