

September 26, 2006

Mr. Charles D. Naslund
Senior Vice President and Chief Nuclear Officer
Union Electric Company
Post Office Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 - ISSUANCE OF AMENDMENT
RE: CHANGES TO THE REACTOR COOLANT SYSTEM (RCS) LEAKAGE
DETECTION INSTRUMENTATION METHODOLOGY (TAC NO. MC8220)

Dear Mr. Naslund:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 175 to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1 (Callaway). The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated June 29, 2006 (ULNRC-05307). This application superseded the license amendment request in your application dated August 26, 2005 (ULNRC-05197), as supplemented by letter dated December 16, 2005 (ULNRC-05242).

The amendment revises Technical Specification (TS) 3.4.15, "RCS [Reactor Coolant System] Leakage Detection Instrumentation." The TS changes delete the containment atmosphere gaseous radioactivity monitor from TS 3.4.15 and revise the existing conditions, required actions, completion times, and surveillance requirements in TS 3.4.15 to account for the monitor being deleted.

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

Sincerely,

/RA/

Jack Donohew, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosures: 1. Amendment No. 175 to NPF-30
2. Safety Evaluation

cc w/encls: See next page

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*No legal objection with comments

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UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 175
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 June 29, 2006, 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, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-30 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 175 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective as of its date of issuance, and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

David Terao, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: September 26, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 175

RENEWED FACILITY OPERATING LICENSE NO. NPF-30

DOCKET NO. 50-483

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.4-36
3.4-37
3.4-38
3.4-39

INSERT

3.4-36
3.4-37
3.4-38
3.4-39

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 175 TO FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 INTRODUCTION

By application dated June 29, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML061920563), Union Electric Company (the licensee) requested changes to the facility operating license for the Callaway Plant, Unit 1 (Callaway). The proposed amendment would revise Technical Specification (TS) 3.4.15, "RCS [Reactor Coolant System] Leakage Detection Instrumentation," to delete the containment atmosphere gaseous radioactivity monitor from TS 3.4.15 and revise the existing conditions, required actions, completion times, and surveillance requirements in TS 3.4.15 to account for the monitor being deleted.

This application superceded the license amendment request dated August 26, 2005, and its supplemental letter dated December 16, 2005 (ADAMS Accession nos. ML052520103 and ML053620303, respectively), which provided information on the containment atmosphere gaseous radioactivity monitor. The license amendment request in the letter dated August 26, 2005, requested changes to Appendix 3A, Section 5.2.5.2.3, and Table 5.2-6 of the Final Safety Analysis Report (FSAR) for Callaway that would revise the methodology for the reactor coolant system (RCS) leak detection instrumentation to clarify the design of the containment atmosphere gaseous radioactivity monitor with regard to the required RCS leak detection capability in TS 3.4.15.

2.0 REGULATORY EVALUATION

In 10 CFR 50.36, the NRC issued a rule and established its regulatory requirements related to the content of TSs. In doing so, the NRC emphasized those matters related to the prevention of accidents and mitigation of consequences of such accidents. As recorded in the Statements of Consideration, Technical Specifications for Facility Licenses: Safety Analysis Reports (33 FR 18610, December 17, 1968), the NRC noted that licensees are expected to incorporate into their plant TSs those items that are directly related to maintaining the integrity of the physical barriers designed to contain radioactivity. Pursuant to 10 CFR 50.36, TSs are required to include items in five specific categories related to station operation. Specifically, those categories include: (1) safety limits, limiting safety system settings (LSSSs), and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs);

(4) design features; and (5) administrative controls. However, the rule does not specify the specific requirements to be included in a plant's TSs.

Additionally, 10 CFR 50.36(c)(2)(ii) sets forth four criteria to be used in determining whether a LCO is required to be included in the TS for a certain item. These criteria are as follows:

1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary (RCPB).
2. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
3. A structure, system, or component (SSC) that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
4. A SSC which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

As stated in 10 CFR 50.36(c)(2)(i), LCOs "are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a [LCO] of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications ..." The remedial actions in the TSs are specified in terms of LCO conditions, required actions, and completion times (CTs) to complete the required actions. When an LCO is not being met, the CTs specified in the TSs are the time allowed in the TSs for completing the specified required actions. The conditions and required actions specified in the TSs must be acceptable remedial actions for the LCO not being met, and the CTs must be a reasonable time for completing the required actions.

General Design Criterion (GDC) 4, "Environmental and dynamic effects design bases," of Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, requires, in part, that "dynamic effects associated with postulated pipe ruptures in nuclear power units may be excluded from the design basis when analyses reviewed and approved by the Commission demonstrate that the probability of fluid system piping rupture is extremely low under conditions consistent with the design basis for the piping." The Nuclear Regulatory Commission (NRC) allows the application of leak-before-break (LBB) technology on the primary piping systems under the broad-scope revision to 10 CFR Part 50, Appendix A, GDC 4 (Volume 52 of the *Federal Register* pages 41288-41295, October 27, 1987). Specific guidance on LBB evaluation is discussed in draft Standard Review Plan (SRP) 3.6.3, "Leak-Before-Break Evaluation Procedures." Additional guidance can be found in NUREG-1061, "Report of the U.S. Nuclear Regulatory Commission Piping Review Committee," Volume 3, "Evaluation of Potential for Pipe Breaks," dated November 1984. In the statements of considerations for SRP 3.6.3 (Volume 52 of the *Federal Register* pages 32626-32633, August 28, 1987), the NRC stated that (1) "Leakage detection systems are evaluated to determine that they are sufficiently reliable, redundant, and sensitive so that margin on detection of unidentified leakage exists for the throughwall flaws used in the deterministic fracture mechanics evaluation" and (2) "Leak

detection systems equivalent to Regulatory Guide [RG] 1.45, 'Reactor Coolant Pressure Boundary Leakage Detection Systems,' Revision 0, dated May 1973, are required for the piping under evaluation inside the containment."

GDC 30, "Quality of reactor coolant pressure boundary," requires, in part, that means be provided for detecting and, to the extent practical, identifying the location of the source of RCS leakage. RG 1.45 describes acceptable methods of implementing this requirement with regard to the selection of leakage detection systems for the RCPB. The position of RG 1.45 is that at least three different detection methods should be employed. Two of these methods should be: (1) sump level and flow monitoring, and (2) airborne particulate radioactivity monitoring. The third method may involve either monitoring of a condensate flow rate from air coolers or monitoring of gaseous radioactivity. The RG recommends that the sensitivity and response time of each leakage detection system employed for unidentified leakage should be adequate to detect a leakage rate, or its equivalent, of 1 gallon per minute (gpm) in less than 1 hour. The GDC 30 requirement for systems to detect RCS leaks to maintain the quality of the RCPB is the same requirement in GDC 4 to detect RCS leakage for LBB; therefore, the requirements on RCS leakage detection systems to meet GDC 30 are the same as those to meet LBB of GDC 4, which is redundant RCS leak detection systems that are equivalent to the systems listed in RG 1.45.

The licensee states, in Appendix 3A of the FSAR, that the recommendations of RG 1.45 are met as described in FSAR Table 5.2-6. In FSAR Table 5.2-6, the licensee states that it complies with RG 1.45 regulatory position C.5 on sensitivity and response time of each leakage detection system as described in FSAR Section 5.2.5.2.3 and as shown on FSAR Figure 5.2-2.

3.0 TECHNICAL EVALUATION

3.1 Current RCS Leak Detection Requirements

The current RCS leakage detection requirements for Callaway are given in TS 3.4.15. It requires the following RCS leakage detection instrumentation shall be operable.

5. The containment sump level and flow monitoring system,
6. One containment atmosphere particulate radioactivity monitor, and
7. One containment air cooler condensate monitoring system or one containment atmosphere gaseous radioactivity monitor.

LCO 3.4.15 and Surveillance Requirements (SRs) 3.4.15.1 through 3.4.15.5 do not specify the RCS leak detection criteria. TS 3.4.15 only requires that the specified equipment is operable and SRs 3.4.15.1 through 3.4.15.5 specify the surveillances that are required to determine if the detection instrumentation is operable (i.e., a channel check, channel operational test, and channel calibration, as applicable) and the frequency for conducting the surveillances. The required RCS leak detection capability of the equipment given in TS 3.4.15 is the capability given in Position C.5 of RG 1.45 as modified by the licensee's commitment to RG 1.45 in Table 5.2-6 of the Callaway FSAR.

3.2 Superceded Application Dated August 26, 2005

In its application dated August 26, 2005, the licensee stated that the containment gaseous radioactivity monitor listed in LCO 3.4.15 cannot detect a 1 gpm RCS leak in 1 hour at the current RCS radioactivity levels; however, the licensee only proposed to revise the FSAR description of the monitor. In not proposing to delete the monitor from LCO 3.4.15, where the other systems and instrumentation listed in LCO 3.4.15 are currently capable of detecting such RCS leakage in 1 hour, the licensee was requested to explain why the containment gaseous radioactivity monitor should remain in the TSs. In the amendments No. 140 (both units), for Byron Station, Units 1 and 2, and No. 133 (both units), for Braidwood Station, Units 1 and 2, dated January 14, 2005 (ADAMS Accession No. ML043550025), addressing the containment gaseous radioactivity monitor at these plants not being capable of detecting a 1 gpm RCS leak in 1 hour, the licensee for the Byron and Braidwood Stations had proposed to remove the monitor from the Byron and Braidwood LCO 3.4.15, "RCS Leakage Detection Instrumentation," and the NRC approved the change in the amendments. Therefore, the NRC staff questioned the licensee about why the containment gaseous radioactivity monitor met the criteria in 10 CFR 50.36(c)(2)(ii) to remain in LCO 3.4.15.

In its application dated August 26, 2005, and supplemental letter dated December 16, 2005, the licensee addressed the staff's question on why the containment gaseous radioactivity monitor should remain in the LCO 3.4.15. The licensee stated that, if the containment gaseous radioactivity monitor was removed from LCO 3.4.15.c, the remaining detection methods in LCO 3.4.15 would be three methods that meet the 1 RCS leak rate in 1 hour, which meet RG 1.45 Position C.3 that requires at least three separate detection methods, and maintaining three methods in LCO 3.4.15 would provide a basis for deleting the monitor from LCO 3.4.15. The licensee also stated that TS 3.4.15 has the objective of supporting GDC 30 on the quality of the RCS pressure boundary by requiring a diverse set of RCS leakage detection methods to ensure there are effective means under varying plant conditions of detecting leakage through the pressure boundary. Therefore, the licensee concluded that it is prudent to have methods that include sufficient systems and instrumentation to assure effective monitoring during all periods of operation which would include periods when some detection methods are in fact ineffective. The licensee also discussed plant conditions in addition to low RCS activity whereby the containment atmosphere has a radioactivity level that would mask the change in radioactivity that would correspond to the containment gaseous radioactivity monitor being able to detect 1 gpm RCS leak rate in 1 hour. In conclusion, in addressing the criteria in 10 CFR 50.36(c)(2)(ii) for SSCs to be in LCOs, in Section 5.2 of Attachment 1 to its August 26, 2005, application, the licensee stated that paragraph 50.36(c)(2)(ii)(A) specifies that an LCO must be established for "installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary." The licensee stated that the instrumentation listed in TS 3.4.15, including the containment gaseous radioactivity monitor when the RCS radioactivity is high enough, meets this criterion.

In its review of the licensee's application, the NRC staff considered the licensee's argument that the containment gaseous radioactivity monitor is not capable of detecting a 1 gpm leak rate in 1 hour at all times. It is true that the RCS radioactivity levels where the containment gaseous radioactivity monitor will detect 1 gpm leak rate in 1 hour are within the limits allowed by TS 3.4.16 where plant operation is allowed and that these monitors provide diversity in detecting RCS leakage; however, the RCS radioactivity levels where these monitors will meet

this criteria are plant conditions that are not currently normally expected to be present in the RCS coolant at Callaway. In its letter of May 16, 2006, to the licensee, the NRC staff stated the following:

RG 1.45 states that "in analyzing the sensitivity of leak detection systems using airborne particulate or gaseous radioactivity, a realistic primary coolant radioactivity concentration assumption should be used" and a realistic concentration would be that which is currently normally expected to be present in the RCS coolant. Although RG 1.45 also states that the coolant radioactivity concentration values in the plant environmental report would be acceptable as the realistic primary coolant radioactivity concentration, this statement would no longer be correct if the values in the plant environmental report are significantly higher than the values that would be currently expected in the RCS coolant.

and requested the following:

Because TS 3.4.15 defines the RCS leakage detection instrumentation being relied upon to meet the criterion of detecting a 1 gpm RCS leakrate in 1 hour for normal plant conditions, we are requesting that you either provide justification that the containment gaseous radioactivity monitor can meet this criterion or revise your amendment request dated August 26, 2005, to remove the containment gaseous radioactivity monitor from TS 3.4.15.

The licensee responded in its superceding application dated June 29, 2006. This letter submitted changes to TS 3.4.15 and withdrew the license amendment request to authorize changes to the FSAR.

3.3 Proposed Change to TS 3.4.15

By letter dated June 29, 2006, the licensee proposed to remove the containment gaseous radioactivity monitor from LCO 3.4.15 by proposing the following changes to TS 3.4.15:

1. Delete the phrase "or one containment atmosphere (gaseous) radioactivity monitor" from LCO 3.4.15.c. Therefore, only the containment air cooler condensate monitoring system remains in LCO 3.4.15.c.
2. Re-number existing Required Action B.2 such that it is B.2.1 and add the Required Action B.2.2 to "verify containment air cooler condensate monitoring system is OPERABLE" with a completion time (CT) of 30 days. For Condition B, the licensee would do either the re-number Required Action B.2.1, which it or its CT is not being changed in this amendment, or the new Required Action B.2.2.
3. The existing Condition C is re-numbered as Condition D and a new Condition C for the required containment cooler condensate monitoring system being inoperable is added with the following required actions: (1) Required Action C.1 to perform SR 3.4.5.1 once per 8 hours and (2) Required Action C.2 to perform SR 3.4.13.1 once per 24 hours.

4. The existing Condition C is revised to replace the reference to an inoperable containment atmosphere **gaseous** radioactivity monitor by a reference to an inoperable containment atmosphere **particulate** radioactivity monitor. The reference to an inoperable containment cooler condensate monitoring system is not being changed. This condition is re-numbered Condition D.
5. The required actions for existing Condition C are revised by (a) deleting Required Actions C.1.1 and C.1.2, (b) re-numbering Required Actions C.2.1 and C.2.2 as Required Actions D.1 and D.2, and (c) replacing the reference to an inoperable containment atmosphere **gaseous** radioactivity monitor by a reference to an inoperable containment atmosphere **particulate** radioactivity monitor.
6. Existing Conditions D and E, and the associated required actions, are re-numbered as Conditions E and F.
7. Remove references to the containment atmosphere gaseous radioactivity monitor from SRs 3.4.15.1, 3.4.15.2, and 3.4.15.4.

3.3.1 Removal of a RCS Leakage Detection Instrument from LCO 3.4.15

As stated in the NRC letter of May 16, 2006, to the licensee, the RG 1.45 criteria in regulatory position C.5, for the sensitivity and response time of the leakage detection systems, of detecting a 1 gpm RCS leak in 1 hour would be met for normal plant conditions. This criterion is required for the RCS detection instrumentation listed in TS 3.4.15, which includes the containment atmosphere gaseous radioactivity monitor. In its applications dated August 26, 2005, and June 29, 2006, the licensee stated that the other instrumentation listed in LCO 3.4.15 meet this criterion.

The reference to normally expected plant conditions in the NRC letter of May 16, 2006, for Callaway for radioactivity in the RCS is the current level of radioactivity in the core at Callaway with no or minor fuel cladding defects. The licensee stated that its evaluation of the sensitivity and response time of the containment atmosphere gaseous radioactivity monitor, using the current level of radioactivity in the reactor coolant at Callaway with no or minor fuel cladding defects and a realistic nominal detector background level, has shown that this monitor would not promptly detect a 1 gpm RCS leak in 1 hour. Because the containment atmosphere gaseous radioactivity monitor can not meet this criteria for normally expected plant conditions, the licensee has proposed to remove this instrument from LCO 3.4.15 and, therefore, LCO 3.4.15.c would only list the containment cooler condensate monitoring system. The licensee stated that the remaining RCS leakage detection instruments in LCO 3.4.15 provide adequate capability to promptly detect RCS leakage.

Because the licensee stated that the containment atmosphere gaseous radioactivity monitor is unable to meet the RG 1.45 criteria for normally expected plant conditions, the NRC staff concludes that this RCS leakage detection instrument does not meet any of the four criteria in 10 CFR 50.36(c)(2)(ii), see Section 2.0 of this SE, for an instrument being included in an LCO in the TSs. Based on this, the NRC staff further concludes that the proposed removal of this instrument from LCO 3.4.15 is acceptable because the amended TS 3.4.15 meets the criteria

set by RG 1.45 for leak detection and diversity of instruments, and, therefore, the remaining RCS leakage detection instruments in LCO 3.4.15 provide adequate capability to promptly detect RCS leakage.

3.3.2 Changes to the Remedial Actions for Not Meeting LCO 3.4.15

In the existing TS 3.4.15.c, the containment cooler condensate monitoring system or the containment atmosphere gaseous radioactivity monitor is required to be operable and, as a remedial action when existing LCO 3.4.15.c is not being met, there is existing Condition C for the condition where both the required monitor and monitoring are inoperable. In removing the containment atmosphere gaseous radioactivity monitor from LCO 3.4.15.c, the licensee has also proposed to revise the conditions and required actions for the LCO. This is to (1) propose a new condition for only the containment cooler condensate monitoring system being inoperable and (2) remove the references to the containment atmosphere gaseous radioactivity monitor in the conditions and required actions.

For the condition when the containment cooler condensate monitoring system is inoperable, the licensee has proposed required actions to perform (1) a channel check of the required containment atmosphere particulate radioactivity monitor once every 8 hours (per SR 3.4.15.1) or (2) a water inventory balance (per SR 3.4.13.1) once every 24 hours. For the water inventory balance, there is the note that states SR 3.4.13.1 is not required to be performed until 12 hours after establishment of steady state operation. Twelve hours after steady state operation, the water inventory balance would then be performed once every 24 hours. This is the same note that is stated in the existing SR 3.4.13.1.

The licensee has also revised the existing remedial actions in existing Condition B (the required containment atmosphere particulate radioactivity monitor inoperable) and existing Condition C (the required containment atmosphere gaseous radioactivity monitor and cooler condensate monitoring system inoperable) to join or tie together the containment atmosphere particulate radioactivity monitor with the containment air cooler condensate monitoring system. For existing Condition B, the Required Action B.2.2 would be added so that the existing Required Action B.2 (re-numbered B.2.1), which requires that the containment atmosphere particulate radioactivity monitor is restored to operable status is met within 30 days or the licensee would verify that the containment air cooler condensate monitoring system is operable within that 30 days.

For existing Condition C (the required containment atmosphere gaseous radioactivity monitor and cooler condensate monitoring system inoperable), the licensee has proposed to (1) replace the reference to the containment atmosphere gaseous radioactivity monitor by the reference to the atmosphere particulate radioactivity monitor, (2) delete Required Actions C.1.1 and C.1.2 to analyze samples of the containment atmosphere or verify RCS operational leakage is within limits by performance of a RCS water inventory balance (SR 3.4.13.1) once per 24 hours, and (3) re-number the existing Required Actions C.2.1 and C.2.2 to restore the containment atmosphere particulate radioactivity monitor, which replaces the reference to the atmosphere gaseous radioactivity monitor in the existing required action, or the containment air cooler condensate monitoring system within 30 days.

For the new Condition C, which is for the containment air cooler condensate monitoring system inoperable by itself, the licensee proposed the new Required Actions C.1 and C.2 to perform a channel check of the required containment atmosphere particulate radioactivity monitor (SR 3.4.15.1) once per 8 hours or to verify RCS operational leakage is within limits by performance of a RCS water inventory balance (SR 3.4.13.1) once per 24 hours.

The licensee stated that the proposed changes to remove the containment atmosphere gaseous radioactivity monitor from the remedial actions for LCO 3.4.15 (i.e., the changes to existing Conditions B and C, and the addition of the new Condition C) are acceptable because of the availability of the two other diverse methods required by LCOs 3.4.15.a (containment sump level and flow monitoring system) and 3.4.15.b (containment atmosphere particulate radioactivity monitor) to detect RCS leakage and the impracticality of containment entries at power to repair the containment air cooler condensate monitoring system.

The NRC staff has reviewed the above changes to the remedial actions for LCO 3.4.15 and has determined that the 24-hour interval provides periodic information that is adequate to detect leakage. The 12-hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established. The 30-day CT recognizes that other forms of RCS leakage detection are available. Based on this determination, the NRC staff concludes that the proposed changes are acceptable.

Due to the addition of new condition C, the licensee re-numbered existing Conditions D and E. These changes are considered editorial in nature. Therefore, based on this, the NRC staff concludes that the proposed renumbering of Conditions D and E is acceptable.

3.3.3 Changes to the SRs for LCO 3.4.15

To remove the containment atmosphere gaseous radioactivity monitor from TS 3.4.15, the licensee has also proposed to delete the reference to this monitor in SRs 3.4.15.1, 3.4.15.2, and 3.4.15.4. These changes only remove this monitor from the SRs in TS 3.4.15. The existing SR 3.4.15.5 on the containment air cooler condensate monitoring system is not being changed by this amendment.

Because the containment atmosphere gaseous radioactivity monitor is being removed from TS 3.4.15 and the proposed changes to SRs 3.4.15.1, 3.4.15.2, and 3.4.15.4 are only to remove the reference to the monitor from the SRs for TS 3.4.15, the NRC staff concludes that the proposed changes are editorial in nature and are, therefore, acceptable.

3.4 LBB

The licensee also addressed LBB at Callaway in its applications dated August 26, 2005, and June 29, 2006, because NRC approval of LBB for RCS piping is based on the licensee's ability to detect RCS leakage by the methods listed in LCO 3.4.15. The NRC LBB guidance is provided in NUREG-1061, Volume 3. In that document, the criteria for LBB being approved for piping includes that the leakage flaw size should be large enough so that the RCS leakage is assured of detection using the minimum installed leak detection capability. This "minimum installed leak detection capability" is the instrumentation specified in the plant TSs to detect

RCS leakage, which for Callaway are the methods listed in LCO 3.4.15. Therefore, the NRC staff reviewed the application dated June 29, 2006, to determine if the proposed change to the design and operability requirements of the containment atmosphere gaseous radioactivity monitor and the proposed removal of the monitor from TS 3.4.15 would affect the previous NRC approvals of LBB for Callaway.

The licensee stated that the change to the design and operability requirements for the containment gaseous radioactivity monitor does not affect the basis by which NRC approved LBB for Callaway. The licensee stated that the basis for NRC's approval of previous LBB analysis for Callaway continues to be supported by TS 3.4.15, and, thus, supported by the monitor being removed from LCO 3.4.15. Discounting the containment gaseous radioactivity monitor, LCO 3.4.15 still requires at least two RCS leakage detection instrumentation which are specified in RG 1.45; therefore, without the containment gaseous radioactivity monitor, LCO 3.4.15 meets the requirement for LBB of there being redundant leakage detection systems in the TSs that are equivalent to the RCS leak detection systems in RG 1.45. TS 3.4.15 requires three means of RCS leak detection that are listed in RG 1.45. Based on this, the NRC concludes that the proposed change to remove the containment atmosphere gaseous radioactivity monitor from TS 3.4.15 and keep the remaining detection methods in TS 3.4.15 meets the GDC 4 requirements for LBB and is, therefore, acceptable.

3.5 Conclusions

The NRC staff has reviewed the licensee's proposal to delete the containment atmosphere gaseous radioactivity monitor from TS 3.4.15. The licensee has explained that the monitor does not detect RCS leakage to the criteria in RG 1.45 for the RCS leakage detection systems for normal plant conditions. Based on this, the licensee proposed to remove the monitor from TS 3.4.15. As discussed in Sections 3.3 and 3.4 of this SE, the NRC staff concludes that the proposed changes to remove the monitor from TS 3.4.15 are acceptable and, therefore, meet 10 CFR 50.36.

As discussed in Section 3.4 of this SE, the NRC staff has concluded that the removal of the containment atmosphere gaseous radioactivity monitor from TS 3.4.15 also meets GDC 4 requirements for LBB. Based on this conclusion, the NRC staff also concludes that the proposed change also meets GDC 30 in that adequate means remain in TS 3.4.15 for detecting RCS leakage and, to the extent practical, identifying the location of the source of RCS leakage.

Because the proposed removal of the monitor from TS 3.4.15 meets GDC 4 and 30, and 10 CFR 50.36, the NRC staff concludes that the proposed amendment is acceptable.

The NRC staff has also reviewed the licensee's identified changes to the TS Bases for this amendment in Attachment 4 to the licensee's application dated June 29, 2006. The NRC staff had no disagreement with the changes for the TS Bases.

In Attachment 5 to its application, the licensee stated the following regulatory commitment: "The license amendment will be implemented within 90 days of issuance. Final TS Bases changes will be implemented pursuant to TS 5.5.14 at the time the amendment is implemented." The 90 days referred to in this commitment is the same 90 days stated in the

license condition for this amendment whereby the licensee is required to implement the amendment within 90 days. TS 5.5.14 is the program in the TSs for the licensee to make changes to the TS Bases. The NRC staff concludes that this is acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Missouri State official was notified of the proposed issuance of the amendment. 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. 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 and there has been no public comment on such a finding (71 FR 41843, July 24, 2006). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). 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) 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.

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