August 22, 2012

ULNRC-05901

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

Ladies and Gentlemen:

**DOCKET NUMBER 50-483**
**CALLAWAY PLANT UNIT 1**
**UNION ELECTRIC CO.**
**FACILITY OPERATING LICENSE NPF-30**
**REQUEST FOR NRC**
**ENFORCEMENT DISCRETION REGARDING REQUIREMENTS OF**
**TECHNICAL SPECIFICATION 3.8.7, "INVERTERS-OPERATING"**

This letter from Ameren Missouri (Union Electric) provides a follow-up, written request for enforcement discretion based on a verbal request made to the NRC staff during a telephone conference conducted on August 20, 2012. As discussed during the telephone conference, Ameren Missouri is requesting the NRC to exercise enforcement discretion for the Callaway Plant in regard to the requirements of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.8.7, "Inverters – Operating."

At 1521 on August 19, 2012, a failure of the NN14 inverter occurred. The inverter provides power to the NN04 instrument bus which is one of the four vital 120-volt, alternating current (AC) buses at Callaway. The automatic static transfer switch associated with the inverter transferred to the alternate supply source to support the NN04 bus, as indicated by a control room annunciator. NN14 was declared inoperable, and the applicable Condition and Required Action under TS 3.8.7 was entered. Procedure OTO-NN-00001, "Loss of Safety Related Instrument Power," was entered and actions under the applicable annunciator response procedure were taken. A Field Supervisor and Secondary Operator were dispatched to investigate locally. An acrid smell was noted, but there was no evidence of fire. It was subsequently determined that the constant-voltage output transformer internal to the inverter had failed.

As indicated above, inverter NN14 (along with the other three required inverters NN11, NN12, and NN13) is subject to the requirements of Callaway TS 3.8.7. Per the LCO of this Technical Specification, all four required inverters must be Operable during plant operation, i.e., during Modes 1, 2, 3, and 4. With one required inverter inoperable, Condition A applies and associated Required

Action A.1 must be entered, which requires restoring the inoperable inverter to Operable status within the specified Completion Time of 24 hours. Otherwise, Condition B is entered, and in this Condition a controlled plant shutdown is required such that per Required Actions B.1 and B.2, the plant must be in Mode 3 in 6 hours and in Mode 5 in 36 hours, respectively.

The NN14 inverter was declared inoperable at 1521 on August 19, 2012, and accordingly, Required Action A.1 of TS 3.8.7 was entered at that time. Based on the Required Action A.1 Completion Time of 24 hours, the NN14 inverter was required to be restored to Operable status by 1521 on August 20, 2012. By mid-morning on August 20, it was realized that inverter operability could not be restored within the TS Completion Time of 24 hours. However, it was expected that it could be restored within 60 hours, i.e., by 0321 on August 22, 2012. The cause of the inverter failure was determined and a success path for restoring the inoperable inverter beyond the TS Completion Time was identified. Further, a risk assessment for extending the restoration time for the inoperable inverter determined that such an extension was acceptable from a risk perspective.

Based on those considerations, a conference call was conducted with the NRC on August 20, 2012, in which Ameren Missouri verbally requested enforcement discretion by the NRC to allow a Completion Time of up to 60 hours, i.e., 36 hours beyond the 24-hour Completion Time specified in Required Action A.1 of TS 3.8.7, for restoring the inoperable inverter to Operable status (before the plant was otherwise required to be shut down). Verbal approval of the request was granted at 1455 (CDT) on August 20, 2012, during the conclusion of the conference call. The inverter was subsequently restored to Operable status at 1205 on August 21, 2012.

This letter provides a follow-up written request for enforcement discretion in accordance with the guidance contained in Part 9900 of the NRC Inspection Manual. The details, basis, and justification for Ameren Missouri's request, which were verbally discussed during the August 20, 2012 telephone conference, are provided in the enclosure to this letter, which was drafted at the time of Ameren Missouri's verbal request. The enclosed was prepared in accordance with the noted Part 9900 guidance. Included in the enclosure is the basis for Ameren Missouri's determination that the proposed action involves no net increase in radiological risk to the public.

As discussed during the August 20, 2012 telephone conference, no license amendment request will be submitted following this request for enforcement discretion.

This letter does not contain new commitments.

Ameren Missouri appreciates the prompt attention given to this matter. For any questions or additional information regarding this request, please contact Tom Elwood at 314-225-1905.

Sincerely,

David W. Neterer
Plant Director

DRB/TBE/ nls

Enclosure

cc: Mr. Elmo E. Collins
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
1600 East Lamar Boulevard
Arlington, TX 76011-4511

Senior Resident Inspector
Callaway Resident Office
U.S. Nuclear Regulatory Commission
8201 NRC Road
Steedman, MO 65077

Mr. Fred Lyon
Senior Project Manager, Callaway Plant
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop O-8G14
Washington, DC 20555-2738

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Missouri Public Service Commission

**Request for Enforcement Discretion Regarding
Compliance with Technical Specification 3.8.7, "Inverters - Operating"**

**1. The Technical Specification (TS) or other License Conditions that will be violated.**

Onsite Class 1E Electrical Power Distribution System(s) at Callaway

The onsite Class 1E AC, DC, and AC vital bus electrical power distribution systems at Callaway are divided by train into two redundant and independent AC, DC, and AC vital bus electrical power distribution subsystems.

The AC electrical power subsystem for each train consists of an Engineered Safety Feature (ESF) 4.16-kV bus and 480-V buses, and load centers. Each 4.16-kV ESF bus has one separate and independent offsite source of power as well as a dedicated onsite emergency diesel generator (DG) source. Each 4.16-kV ESF bus is normally connected to a preferred offsite source. After a loss of the preferred offsite power source to a 4.16-kV ESF bus, the onsite emergency DG supplies power to the bus. A transfer to the alternate offsite source is accomplished by manually repositioning breakers, if required. Control power for the 4.16-kV breakers is supplied from the Class 1E batteries.

The 120-VAC vital buses are arranged in two load groups per train and are normally powered through the inverters from the 125-VDC electrical power subsystem. The 125-VDC electrical power distribution system is arranged into two buses per train.

The table below provides the overall scheme for the above-described distribution buses.

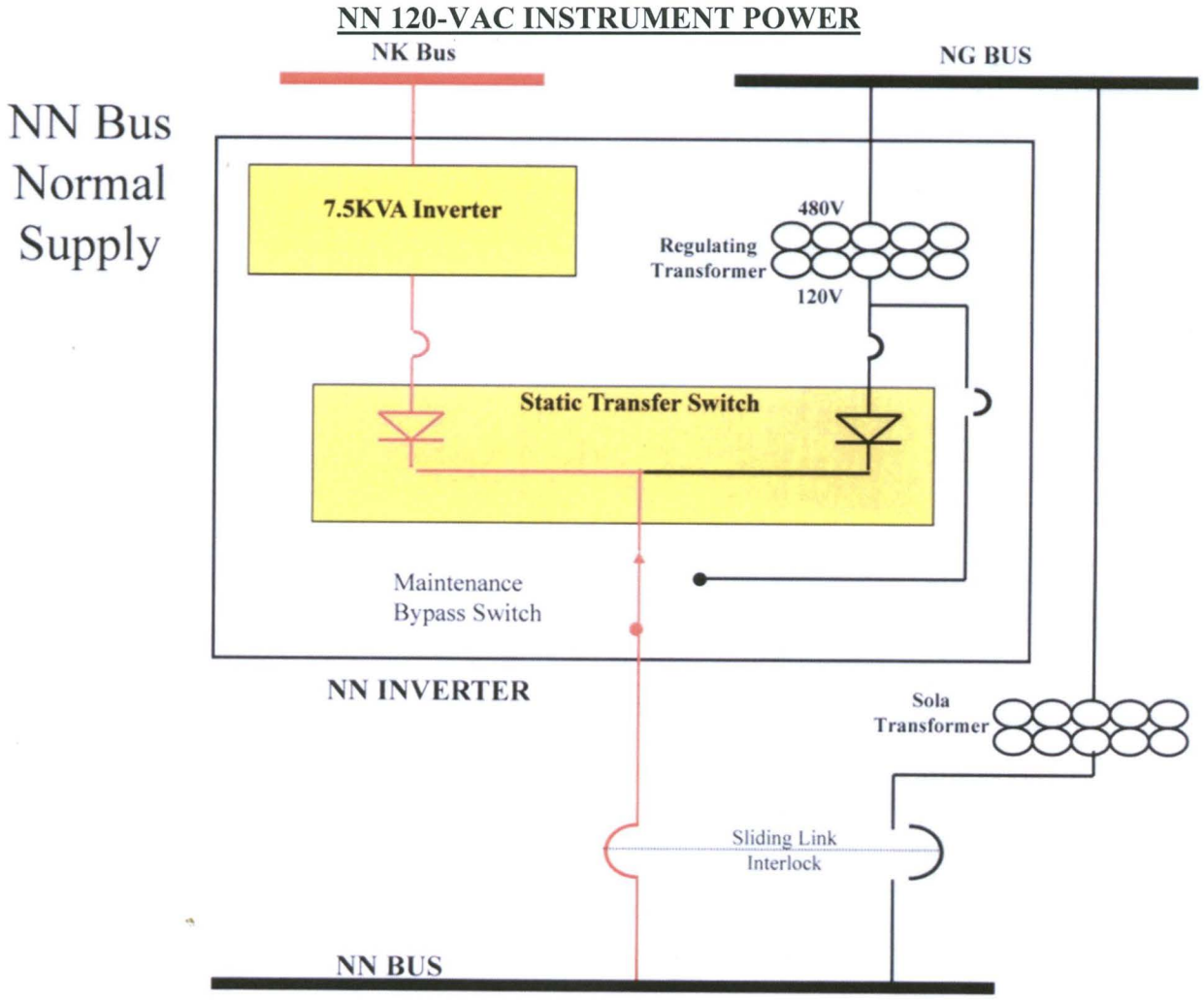
AC and DC Electrical Power Distribution Systems

| TYPE | VOLTAGE | TRAIN A | TRAIN B |
|---|---|---|---|
| AC safety buses | 4160 V<br>480 V | ESF Bus NB01<br>Load Centers<br>NG01, NG03 | ESF Bus NB02<br>Load Centers<br>NG02, NG04 |
| DC buses | 125 V | Bus NK01<br>Bus NK03 | Bus NK02<br>Bus NK04 |
| AC vital buses | 120 V | Bus NN01<br>Bus NN03 | Bus NN02<br>Bus NN04 |

Inverter/Vital Instrument AC Power Supply Design and Operation

Four independent Class 1E 120-VAC vital instrument power supplies are provided to supply the four channels of the protection systems and reactor control systems. Each vital instrument power supply consists of one inverter/uninterruptible power supply (UPS), one distribution bus (i.e., 120-VAC vital bus) which includes a manual transfer switch, and one standby regulation transformer which can be connected to the bus through the manual transfer switch.

Each inverter/UPS consists of a 7.5-KVA solid-state inverter, an integral 480-VAC to 120-VAC single-phase constant-voltage regulating transformer for use as a backup source, an automatic static transfer switch that will switch to the backup supply in the event of inverter failure, and a manual maintenance bypass switch that can be used to switch to the backup supply during maintenance activities. The normal supply for each UPS/inverter is from one of the four Class 1E DC buses.[1] The UPS/inverter backup source (i.e., the integral regulating transformer) for each unit is supplied from 480 VAC. Note: Refer to the following figure which depicts the UPS/inverter configuration for a typical NN bus.




[1] DC bus NK01 normally supports 120-VAC vital bus NN01 via inverter NN11, DC bus NK02 normally supports 120-VAC vital bus NN02 via inverter NN12, DC bus NK03 normally supports 120-VAC vital bus NN03 via inverter NN13, and DC bus NK04 normally supports 120-VAC vital bus NN04 via inverter NN14.

If an inverter/UPS along with its backup source is inoperable or is to be removed from service, the vital 120-VAC bus can be supplied from the 120-VAC standby source (i.e., the 480-VAC to 120-VAC "Sola" regulating transformer) via the manual transfer switch in the distribution panel. A key interlock is provided to ensure that only a single transfer to the inverter standby source can be made at one time using the distribution panel switches. Complete loss of the inverter and both standby/backup supplies to each vital bus is alarmed by separate main control board annunciator windows using undervoltage relays in the distribution panels.

Technical Specification Requirements

With respect to the above-described onsite electrical power distribution arrangement for Callaway and the associated Technical Specifications that apply during plant operation, the sources of offsite power (i.e., the circuits between the offsite transmission network and the onsite Class 1E AC electrical power distribution system) as well as the onsite diesel generators and the associated load shedder and emergency load sequencers, are addressed by TS 3.8.1, "AC Sources – Operating." The DC power subsystems (station batteries and chargers) are addressed by TS 3.8.4, "DC Sources – Operating." The AC, DC and AC vital bus electric power distribution subsystems are addressed by TS 3.8.9, "Distribution Systems – Operating." The inverters, in particular, are addressed in TS 3.8.7, "Inverters – Operating."

As noted in the cover letter, the Limiting Condition for Operation (LCO) requirements of TS 3.8.7 are that all four inverters (for supplying power to the 120-VAC vital buses) must be Operable during Modes 1, 2, 3 and 4. With one required inverter inoperable, Condition A under LCO 3.8.7 applies such that Required Action A.1 must be entered. Required Action A.1 requires the inoperable inverter to be restored to Operable status within a specified Completion Time of 24 hours. Otherwise (with Required Action A.1 and its associated Completion Time not met), Condition B applies such that a controlled plant shutdown is required. Specifically, Required Actions B.1 and B.2 require the plant to be in Mode 3 in 6 hours and in Mode 5 within 36 hours, respectively.

**2. The circumstances surrounding the situation: including likely causes, the need for prompt action, action taken in an attempt to avoid the need for an NOED, and identification of any relevant historical events.**

At 1521 on August 19, 2012, a failure of inverter NN14 occurred. The cause was determined to be failure of the output constant-voltage transformer (CVT) within the inverter. Specifically, the "B" windings in the secondary part of the transformer were found shorted to ground, when tested. This was evident from close inspection of the transformer and by the acrid odor that was noticed upon initial inspection just after the failure. The most probable cause of the short was determined to be degradation of the transformer windings/insulation.

Previous auto transfers of NN14 occurred on July 27 and August 13, 2012. An extensive troubleshooting effort was undertaken in response to the latter, which was supported by a fault

tree analysis. That effort included meggering of the CVT and thermography of the CVT and other components. From the troubleshooting effort it was concluded that the most likely cause for the inadvertent auto-transfer was a degraded card associated with the automatic static transfer switch. The card was replaced and the inverter was subsequently returned to service.

Although the inverter was returned to service and operated successfully for a week following the noted card replacement, and although the meggering and thermography did not show signs of a degrading transformer, the previous events and this event are believed to be related, with the degrading/degraded CVT being the primary cause.

The need for prompt action is tied to the requirement for restoring the inoperable inverter to Operable status within 24 hours (per TS LCO 3.8.7 Required Action A.1) before a plant shutdown is otherwise required (per Required Actions B.1 and B.2). As described below, operability of the inverter will be restored by replacing the CVT, but this will take longer to complete than what Required Action A.1 allows.

Since this is an emergent condition, there are no advance actions that could have been taken to avoid the need for enforcement discretion.

3. **Information to show that the cause and proposed path to resolve the situation are understood by the licensee, such that there is a high likelihood that planned actions to resolve the situation can be completed within the proposed NOED time frame.**

As noted above, the planned path for resolving the inoperability of inverter NN14 involves the replacement of the CVT. At present, replacement of the CVT is complete. However, installation of a new transformer requires post-maintenance testing as well as a heat-up ("burn-in") period for the new transformer. This heat-up time is required before the inverter can operate with a steady/stable output voltage. Based on information from the vendor, the required heat-up period can take as long as 24 hours. The plan, therefore, is to complete the post-maintenance checks/testing and operate the inverter (on a load box) for a sufficiently long heat-up period while monitoring voltage output throughout that time. When the inverter output voltage is sufficiently steady and within an acceptable range, the inverter will be placed back into service (tied to the bus) and declared operable. Experience shows that just after installation of a new CVT, inverter voltage tends to be just over or on the high side of the normal/acceptable voltage range and will then decrease during the CVT's heatup/burn-in time until a normal/steady voltage is achieved.

The exact amount of heat-up time required before placing the inverter back into service is not known, but an extension of the allowed out-of-service time by 36 hours (i.e., in addition to the 24-hour TS Completion Time which has already been consumed by the initial troubleshooting and subsequent replacement of the CVT), should allow sufficient time to fully complete restoration. Based on the vendor's experience and recommendations, it is highly likely that a heat-up time of less than 24 hours will be required.

As discussed in the next section, a risk assessment performed for the requested Completion Time extension indicates that the risk associated with the extended inverter out-of-service time is risk neutral and does not warrant subjecting the plant to a shutdown that is deemed to be unnecessary. It should be noted that throughout the temporary inverter outage, the associated vital instrument bus will be maintained energized via the Sola transformer except when performing required bus transfers.

**4. The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action.**

The safety basis for the request is based, in part, on probabilistic risk assessment (PRA) to quantitatively assess the risk associated with continued plant operation during the period of enforcement discretion, i.e., with inverter NN14 inoperable during the extended out-of-service time.

The following risk assessment was performed in accordance with NRC Inspection Manual, Part 9900, in support of the request for enforcement discretion. NOTE: The following risk evaluation was performed on the basis of a 48-hour extension (NOED period) of the inverter allowed out-of-service time since 48 hours was the extension period originally contemplated. It was subsequently determined that a 36-hour extension is all that is required to achieve NN14 operability for the present time. Since the results of the PRA indicate no increase in risk, the PRA was not re-performed for a 36-hour extension. (Essentially the same results would be obtained.)

**PRA Evaluation**

The numbering in this section follows the section numbers D.4.a to D.4.g in the NRC NOED guidance.

D.4.a. – This NOED requirement is to determine the incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP), and to compare these values to the guidance thresholds of 5E-7 and 5E-8, respectively.

ICCDP Calculation:

Per NRC NOED guidance, a zero-maintenance PRA model was used to establish the plant's baseline risk and the estimated risk increase associated with the period of enforcement discretion (NOED duration). The Callaway basic event data file, UEADD10TM.BED, has all test/maintenance basic events zeroed and thus can be used in this evaluation to represent the zero maintenance PRA model. In order to determine ICCDP, the Callaway core damage cutset equation, CALCDMIN.EQN, and UEADD10TM.BED were opened in the WinNUPRA 3.0 sensitivity module. The Callaway zero maintenance baseline core damage frequency (CDFBaseline) is 1.312E-5 yr-1.

The conditional CDF for the configuration in which the plant intends to operate during the period of enforcement discretion is calculated in the sensitivity module, using the above EQN and BED files, by making the following adjustments to PRA basic event probabilities:

1) The probability of basic event NK-BAT-LP-NK14 is set to 1.0. This represents the NK14 battery being unavailable to supply NK04/NN04 on a loss of AC power.

2) The probability of basic event NK-BAT-DF-K11-14 is set to 0.1. This represents an adjusted common cause failure probability for all 4 NK batteries to fail to supply the respective NK DC buses on the loss of AC power, given a known failure of NK14 and a generic Alpha factor of 10 percent.

3) The probability of basic event NK-BDC-LP-NK04 is set to 2.4E-5 to match the failure probability of a transformer (Sola transformer). This changes the modeling of the NK04 bus from a nominal bus fault to a nominal transformer failure (higher probability) to account for the electrical alignment to the Sola transformer during the NEOD period.

4) Each of the identified Compensatory Measures (section c below) would have the effect of reducing CDF, based upon risk insights from the Callaway PRA. In order to demonstrate this, the first and second measures below, i.e., restricting access to and not performing work in the switchyard as well as a reduction in weather related Loss of Offsite Power (LOOP) frequency, were quantitatively credited. For this evaluation a 50-percent decrease in the switchyard and weather-related LOOP frequencies is used to quantify the affect of the compensatory actions; thus the initiating event frequency for LOOP, IE-T1, is adjusted from 1.6E-2 yr-1 to 1.13E-2 yr-1. Where the LOOP frequency component (Grid, Switchyard, etc.) split fractions are derived from PRAER 11-354 with the frequency of onsite tornadoes removed from the weather related component of IE-T1 and conservatively left unchanged. As a result of the new IE-T1 value, the conditional probabilities developed in PRAER 11-354 which are based on IE-T1 are recalculated as follows:

| **Basic Event ID/Parameter** | **Nominal Value** | **Adjusted Value** |
|---|---|---|
| TORNADO-T1-EVENT | 3.125E-2 | 4.444E-2 |
| NON-TORNADO-T1 | 9.688E-1 | 9.556E-1 |
| NON-TORNADO-GRID | 3.226E-1 | 4.651E-1 |
| NON-TORNADO-NGRD | 6.774E-1 | 5.349E-1 |

The resulting conditional core damage frequency (CCDF) is 1.236E-05 yr-1. This represents a slight decrease in risk over the NOED period due to implementation of the compensatory measures. The corresponding incremental conditional core damage probability (ICCDP) reduction over the requested NOED duration of 36 hours can be calculated as follows:

$$ICCDP = (CCDF - CDF_{Baseline}) * (t / 8760)$$
$$= [(1.236E-05) - (1.312E-05)] * (48 / 8760)$$
$$= - 4.16E-9$$

Given that there is a net reduction in risk, the ICCDP is a negative value and thus meets the NOED guidance threshold of being risk neutral or reduced risk from the nominal shutdown ICDP of 5E-07.

ICLERP Calculation:

ICLERP for this NOED was not calculated based on the CDF showing a net reduction in risk given the implemented compensatory measures.

D.4.b. Dominant Risk Contributors:

Given the failure and compensatory measure credit described above, a new basic event data file (NKOOS.BED) was developed. The core damage cutset equation was then re-quantified using WinNUPRA with NKOOS.BED to derive a new core damage cutset equation for review. By reviewing the top cutsets it was found that most of the higher-frequency adjusted core damage cutsets were initiated by loss of offsite power. Thus, the compensatory measures that will be implemented during the NOED period to control access to the switchyard, disallow any work being performed in the switchyard that may cause a LOOP to occur, minimizing loose items in the switchyard and control of access to the Alternate Emergency Power System (AEPS) yard are appropriately focused. No additional compensatory measures were identified through this review. As documented above, these compensatory measures were explicitly credited in the calculation of ICCDP and ICLERP.

D.4.c. Compensatory Measures:

The following compensatory actions will be taken during the NOED period:

1. Access to the switchyard will be controlled, and no work will be performed in the switchyard that may cause a LOOP to occur. Loose materials in the switchyard will be minimized to avoid airborne hazards in high winds.
2. Although no severe weather (severe thunderstorm/tornado) is currently forecasted during the NOED period, weather will be monitored, and severe weather will be addressed via Callaway's Maintenance Rule (a)(4) program.
3. Risk-significant SSCs, as defined by the Callaway Maintenance Rule program, will not be taken out of service for test or preventive maintenance during the NOED period. In addition, access to the TDAFP, the B EDG and the AEPS components will be restricted in accordance with normal protected train practices.

D.4.d. Accounting for Compensatory Measures in the PRA:

Items 1 and 2 in the Compensatory Measures section, above, were explicitly accounted for in calculation of ICCDP and ICLERP herein. Compensatory Measure 3 was also explicitly accounted for, since ICCDP and ICLERP were determined using the "zero maintenance PRA model."

Compensatory measures 1 and 2 are directly correlated to important core damage cutsets identified in D.4.b, as these measures/information serve to reduce the likelihood of occurrence of a LOOP event.

D.4.e. Extent of Condition:

An assessment was performed by Callaway Plant personnel concluding that the maintenance activity resulting in the inability to supply the NN04 bus from its uninterruptible/normal power supply does not affect the other NN buses or their normal power supplies. Therefore, they are assumed to be capable of performing their PRA-credited functions. However, due to the nature of the condition in identification of the cause, an adjustment was conservatively made to the NK common cause probability for the ICCDP calculation.

D.4.f. External Events Risk:

The Callaway Individual Plant Examination of External Events (IPEEE) used screening approaches for the seismic and fire assessments, while finding no potential vulnerabilities from high winds and tornadoes, floods, and other external events. Specifically, a seismic margins assessment (SMA) and a Fire Induced Vulnerability Evaluation (FIVE) analysis were performed to satisfy the IPEEE requirements. Plant vulnerabilities that were uncovered during those reviews have been addressed. As such, determinations of the quantitative external events (including internal floods) risk associated with this NOED request cannot be readily quantified.

Normally, external risk contributions for internal flooding and fire have been included by using a ratio approach where the delta CDF contribution is assumed to be the same as the ratio of each of these hazards to the baseline of the internal events model. However, since the NOED results in a net reduction in risk with the compensatory measures implemented, the external risk contributions for internal flooding and fire are not quantitatively addressed. Since the ratios are assumed to remain valid for a reduction in risk as well as an increase in risk, the current NOED conditions would represent a reduction in external events risk.

D.4.g. Forecasted Weather Conditions for the NOED Period:

A review of the weather forecast for the Fulton, MO area shows that no severe weather is forecasted during any part of the NOED period. Compensatory Measure 2 will monitor weather and address unforecasted severe weather via Callaway's Maintenance Rule (a)(4) program.

Result/Conclusion

This risk assessment determined the ICCDP for a 36-hour period of enforcement discretion to support continued power operation of Callaway while restoring the normal power supply to NN14. The additional 36-hour enforcement discretion period is included in the risk metric values reported here. The calculated ICCDP is negative with implementation of the compensatory measures, which represents a net reduction in risk during the NOED period. Given that there is a net reduction in risk, the NOED guidance threshold of being risk neutral or reduced risk from the nominal shutdown ICDP of 5E-07 is met.

The NOED information required by NRC Inspection Manual, Part 9900: Technical Guidance, Operations – NOED, Section D.4.a through D.4.g was also developed and is documented in this risk assessment.

**5. The justification for the duration of the noncompliance.**

As discussed in Section 3, it is estimated that the time required to complete post-maintenance testing and complete the heat-up period for the replacement CVT in the NN14 inverter is less than 36 hours from beyond when the 24-hour Completion Time expires (for a total out-of-service time of less than 60 hours). A sufficiently long heat-up time is required to ensure stable operation of the inverter with its new CVT installed, thus to ensure the inverter, once it is placed back into service, provides a steady and proper voltage (within required limits) to the 120-VAC instrument bus it supports. As discussed in the preceding section, a 36-hour extension of the inverter allowed outage time (Completion Time) is acceptable with regard to risk.

**6. The condition and operational status of the plant (including safety-related equipment out of service or otherwise inoperable).**

The plant is currently at 100% of rated thermal power. Other out-of-service safety-related equipment includes "B" train RVLIS (Reactor Vessel Level Indication System). In addition, no surveillances are scheduled or allowed to be performed on any safety-related equipment in the plant during the NOED period.

**7. The status and potential challenges to off-site and on-site power sources.**

Other than the inoperable inverter for which enforcement discretion is being requested, there are no other known or foreseeable potential challenges to offsite or onsite power sources. Inclement weather that could adversely impact offsite power is not expected during the effective duration of the requested NOED. In addition, the grid system operator has been contacted, and there is no scheduled work on any switchyard or major grid component during the NOED period. Callaway will be notified of any unforeseen changes.

**8. The basis for the licensee's conclusion that the noncompliance will not be of potential detriment to the public health and safety.**

The conclusion that the request/noncompliance will not be of potential detriment to the public health and safety is based on the following:

a. The requested enforcement discretion would not involve a significant increase in the probability or consequences of a previously evaluated accident. Despite the inoperable NN14 inverter, alternate sources remain available for maintaining the associated 120-VAC vital bus energized. In the event of a loss of offsite power or loss of alternate AC power (such that the NN04 vital 120-VAC bus could not be maintained energized) concurrently with NN04 inoperable, the other three inverters would remain operable to provide power to the remaining 120-VAC vital buses during such conditions. This would support the continued capability of the reactor protection/control and ESF instrumentation systems to perform their required functions. With regard to the potential for any increase in the probability of a previously evaluated accident, an inoperable and isolated NN14 inverter does not constitute a condition that is associated with an accident initiator. In addition to these considerations, and is discussed in Section 4, probabilistic risk assessment of the inoperable inverter condition during the period of time that the NOED would be in effect shows that the condition is not risk-significant.

b. The requested enforcement discretion would not create the possibility of a new or different accident from any previously evaluated. The inoperability of an inverter, even for a longer than normally allowed outage time, does not constitute or create a precursor for a new or different type of accident. No new failure modes or modes of operation are introduced by such a condition and no physical modifications to the plant are to be made or required.

c. The requested enforcement discretion would not involve a significant reduction in the margin of safety. No changes to instrument setpoints are involved, and there would be no impact to fuel safety limits or reactor operating margins. Sufficient redundant or alternate power supplies remain available such that all required safety functions remain capable of being effected on demand (assuming no additional, limiting failures).

**9. The basis for the licensee's conclusion that the noncompliance will not involve adverse consequences to the environment.**

Inoperability of the NN14 inverter for the period of time that would be allowed per the requested NOED does not involve any change to the design or operation of the facility such there would be any significant change in the types or a significant increase in the amounts of any effluent that may be released offsite. The inverter condition does not affect the generation of any radioactive effluent, nor does it affect any permitted release or discharge paths. Further, and as explained in Section 8, the inverter condition does not involve a significant increase in the probability or consequences of any accident previously evaluated, nor does it create the possibility of a new or different accident from any previously evaluated.

Based on the above, the requested enforcement discretion would not involve adverse consequences to the environment.

**10. A statement that the request has been approved by the facility organization that normally reviews safety issues (Plant On-site Review Committee, or its equivalent).**

The Callaway Plant Onsite Review Committee approved this request for enforcement discretion on August 20, 2012.

**11. The request must specifically address which of the NOED criteria for appropriate plant conditions specified in Section B of Part 9900, "Operations – Notices of Enforcement Discretion," is satisfied and how it is satisfied.**

This request is made under the criteria in Section B, Paragraph 2.1, Situations Affecting Radiological Safety - Regular NOEDs, Item 1.a in Part 9900: Technical Guidance, "Operations – Notices of Enforcement Discretion." Callaway Plant is in power operation at this time and this NOED is needed to avoid the unnecessary transient on the plant associated with a shutdown required per Condition B of Technical Specification 3.8.7, thereby minimizing potential safety consequences and operational risks.

**12. Unless otherwise agreed as discussed in Section B of Part 9900, a commitment is required from the licensee that the written NOED request will be submitted within 2 working days and the follow-up amendment will be submitted within 4 working days of verbally granting the NOED.**

This written NOED request is being submitted within 2 working days of the NRC verbally granting enforcement discretion. As discussed with the NRC staff on August 20, 2012, this is a one-time request for extending the period of time that an inverter (i.e., inverter NN14) is allowed to be inoperable relative to the requirements of TS 3.8.7. No follow-up license amendment will be submitted. The requirements that must be satisfied to permanently increase

the allowed outage time for an inverter (i.e., the Completion Time of Required Action A.1 under TS 3.8.7) via the license amendment process would require a long-term application of resources that will not be pursued at the present time.