

July 24, 2003

Mr. Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Secretary,  
Office of the Secretary of the Commission  
U. S. Nuclear Regulatory Commission  
ATTN: Rulemakings and Adjudications Staff  
Washington, DC 20555-0001



Ladies and Gentlemen:

ULNRC-04878

**DOCKET NUMBER 50-483  
CALLAWAY PLANT UNIT 1  
UNION ELECTRIC CO.  
FACILITY OPERATING LICENSE NPF-30  
SUPPLEMENTAL ANSWER TO APRIL 29, 2003,  
ORDER FOR COMPENSATORY MEASURES RELATED TO  
FITNESS-FOR-DUTY ENHANCEMENTS APPLICABLE TO  
NUCLEAR FACILITY SECURITY FORCE PERSONNEL (EA-03-038)**

By letter dated July 10, 2003, *Relaxation of the Order, Exercising Enforcement Discretion, and Extension of the Time to Submit an Answer or Request a Hearing Regarding Order EA-03-038, Fitness-For-Duty Enhancements for Nuclear Security Force Personnel*, for Callaway Plant ("NRC letter"), the NRC responded to the June 2, 2003, submittal of Union Electric Company (AmerenUE or UE) to the NRC's April 29, 2003, *Order for Compensatory Measures Related to Fitness-For-Duty Enhancements Applicable to Nuclear Facility Security Force Personnel (EA-03-038)* ("Order").

Pursuant to the NRC Letter, this letter constitutes AmerenUE's supplemental answer (pursuant to 10 CFR § 2.202 and Section IV of the Order) and response (pursuant to 10 CFR § 50.4 and Sections III.A, B.1 and 2, and C.1 of the Order). This letter also contains requests for relief pursuant to Section III of the Order and confirms AmerenUE's understanding with respect to the Commission's intent to exercise enforcement discretion associated with the implementation of the Order. The July 10, 2003 NRC letter indicated that the request was not received by the due date and subsequently NRC denied the extension request. However, AmerenUE wishes to note that we had submitted our response containing an extension request by the required due date.

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### **Answer and Response**

AmerenUE hereby consents to the Order and does not request a hearing. AmerenUE has started implementing the requirements of Attachment 2 to the Order and will complete implementation by October 29, 2003, as required by Section III.A of the Order. At this time, AmerenUE knows of no matters about which the Commission must be notified pursuant to Section III.B.1 or B.2 of the Order, but will promptly notify the Commission if any such matters arise in the course of AmerenUE's further implementation of the Order. Enclosure 1 to this letter provides AmerenUE's schedule for achieving compliance with the requirements described in Attachment 2 to the Order as required by Section III.C.1 of the Order.

### **Basis for the Order**

AmerenUE appreciates the NRC providing its basis for the Order as requested in our submittal of June 2, 2003, to enable us to more fully understand the NRC's intent in promulgating the Order. However, after reviewing the basis provided in Enclosure 1 to the NRC Letter, AmerenUE does not believe that the rationale appropriately supports some of the requirements established by the Order. Working through NEI, we intend to continue discussions with the NRC to bring greater clarity to those matters to ensure that the implications of the Order and related issues are fully addressed, including how they might apply in the broader context of potential revisions to 10 CFR Part 26 rule.

### **Requests for Relief Pursuant to the Order**

Section 4 of Enclosure 1 to the NRC Letter states that licensees must include shift turnover time in the calculation of group work-hour controls. We believe that this interpretation of the Order's requirements does not promote safety or prevent fatigue, deviates from the precedent established in Generic Letter 82-12, and, in the context of implementing the other requirements of the Order, will be unnecessarily burdensome. Therefore, pursuant to the provisions of Section III of the Order, and consistent with the Staff Requirements Memorandum to William D. Travers dated March 31, 2003, AmerenUE hereby requests that the Director, Office of Nuclear Reactor Regulation, rescind the interpretation provided in the NRC Letter that shift turnover time must be included in the calculation of group work-hour controls. Enclosure 2 to this submittal provides the good cause basis upon which the requested relief should be granted.

Further, AmerenUE also requests that, pursuant to Section III of the Order, the Director, Office of Nuclear Reactor Regulation, relax the application of the group work-hour controls during the preparation for and conduct of force-on-force exercises. The pilot force-on-force exercises conducted to date demonstrate that an extraordinary amount of effort is involved in preparing for and conducting those exercises and will be required for the mandated annual licensee force-on-force exercises. The goal of the group work-hour controls is not advanced by requiring their application to the preparations for and conduct of force-on-force exercises.

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Enclosure 3 to this submittal provides the good cause basis for relaxing the group work-hour control requirements in those circumstances.

Unless and until the NRC grants the requested rescission and/or relaxation, AmerenUE will continue to implement those portions of the Order on the schedule provided and will complete implementation of all provisions of the Order by October 29, 2003. AmerenUE also commits that it will promptly bring to the NRC's attention any matters that AmerenUE determines justify any further request for rescission or relaxation of any provision of the Order or the NRC Letter.

**Exercise of Enforcement Discretion**

Finally, AmerenUE hereby confirms its understanding that the Commission intends to exercise enforcement discretion to accommodate issues which may arise as licensees, in good faith, take reasonable actions to implement the specific requirements of this Order. We further understand that the Commission will exercise enforcement discretion for the period necessary to resolve such issues and to integrate the requirements of the Order with the other Orders issued April 29, 2003, and February 25, 2002, as well as with other pertinent regulatory requirements, and our safeguards contingency plans, security plans and security officer training and qualification plans.

This letter identifies actions committed to by AmerenUE and Callaway Plant in answer and response to your letter dated July 10, 2003. Other statements are provided for information purposes and are not considered to be commitments.

Please direct any questions regarding this letter to David Shafer at (314) 554-3104.

Sincerely,

  
Garry L. Randolph

DJW/DS/mlo

Attachment: Affidavit

- Enclosures:
- 1) Schedule for achieving compliance with April 29, 2003, Order EA-03-038
  - 2) Rationale for not including turnover time in group work-hour limits
  - 3) Rationale for not including the preparation for and conduct of pilot force-on-force exercise and annual licensee force-on-force exercises in group work-hour limits

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cc: U. S. Nuclear Regulatory Commission (Original and 1 copy)  
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STATE OF MISSOURI     )  
                                  )  
CITY OF ST. LOUIS     )           S S

Garry L. Randolph, of lawful age, being first duly sworn upon oath says that he is Senior Vice President Generation and Chief Nuclear Officer and an officer of Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Garry L. Randolph  
Garry L. Randolph  
Sr. Vice President Generation  
and Chief Nuclear Officer

SUBSCRIBED and sworn to before me this 24<sup>th</sup> day of July, 2003.

Debby Anzalone

DEBBY ANZALONE  
Notary Public - Notary Seal  
STATE OF MISSOURI  
St. Louis County  
My Commission Expires: April 18, 2006

**Schedule for Achieving Compliance with April 29, 2003, Order EA-03-038**

<b>Implementation Schedule for NRC Order on Compensatory Measures (CM) Regarding Security Force Personnel Work Hours</b>			
<b>CM</b>	<b>Title</b>	<b>Required Compliance Date</b>	<b>Planned Implementation Date</b>
C.1.a.1	Individual Work Hour Controls (24-hour, 48-hour, 7-day periods)	October 29, 2003	October 29, 2003
C.1.a.2	Individual Work Hour Controls – Minimum 10-hour Break Period	October 29, 2003	October 29, 2003
C.1.a.3	Program for Authorization to Deviate from C.1.a.1/ C.1.a.2	October 29, 2003	October 29, 2003
C.2.a	Group Work Hour Controls – Normal Plant Conditions	October 29, 2003	October 29, 2003 (See Note 1)
C.2.b	Group Work Hour Controls – Planned Outages	October 29, 2003	October 29, 2003 (See Note 1)
C.2.c	Group Work Hour Controls – Unplanned Outages or Increase Threat Condition	October 29, 2003	October 29, 2003 (See Note 1)
C.3	Exemption from C.1 & C.2 during declared Emergencies	October 29, 2003	October 29, 2003
C.4.a	Develop Procedures for Work Hour Controls (C.1, C.2, & C.3)	October 29, 2003	October 29, 2003
C.4.b	Develop Procedures for Self-Declaration due to Fatigue	October 29, 2003	October 29, 2003
C.4.c	Develop Procedures for Evaluation Process if Self-Declarations Returned to Duty	October 29, 2003	October 29, 2003

Note 1: Enclosures 2 and 3 request relief from certain requirements.

**Rationale for not including turnover time in group work-hour limits**

1. **Including shift turnover time in group work-hour limits can have negative safety implications:** As discussed in Section 3 of Enclosure 1 to the NRC letter of July 10, 2003, the Order appropriately excluded shift turnover time in the calculation of individual work-hour limits to avoid a potential unintended consequence with safety implications (i.e., an individual might rush the turnover process to ensure that he or she complied with the individual work-hour limits). Issues related to management of shift turnover were extensively discussed in public meetings held as part of the 10 CFR Part 26 revision process, and there was broad agreement that such a possibility could have potential safety implications that should be avoided. Including shift turnover time in the calculation of group work-hour controls also creates the potential that the turnovers will be rushed. To avoid the potential negative safety consequences that could result from rushing the turnover process, shift turnover time should be excluded from the calculation of the group work-hour controls.
2. **Including shift turnover time in group work-hour limits undercuts the intent of the Order:** The content of an appropriate mechanism for monitoring total hours worked to meet the group work-hour conditions was also discussed extensively in the public meetings conducted as part of the 10 CFR Part 26 revision process. The goal is to provide licensee management, and the NRC, with an indicator that would provide an early indication if an inadequate staffing situation were to occur. To be effective, such a metric should be straightforward in its implementation, provide meaningful results, and not be unnecessarily burdensome. Including shift turnover time in group work-hour controls achieves none of these objectives.

First, including shift turnover times in the group work-hour calculations would add significant and unnecessary complications to the metric, even though turnover time would represent a numerically insignificant amount of the total group work-hours worked. There has been broad agreement, in the public meetings discussed above, that some simplifications are necessary to establish an efficient and effective metric. Appropriate simplifications include the exclusion of individuals who work less than 75% of their scheduled time during a six-week monitoring period, the inclusion of meal time and breaks that occur during a shift, and the exclusion of transit time to and from the plant. Consistent with the goal of developing a simple, but effective, metric, excluding turnover time would simplify the necessary calculations and improve the precision of the data collected.

Second, the inclusion of shift turnover time in the group work-hour limit will provide inconsistent and ambiguous data. To be meaningful, group work-hour limits should be able to be applied, and measured, consistently across the industry. However, differences in lengths of shifts, numbers of turnovers, and shift turnover practices among plants would inhibit meaningful plant-to-plant and industry-wide comparisons.

3. **Record-keeping burden:** The inclusion of shift turnover time will be unnecessarily burdensome and penalize some licensees. As discussed above, the Order specifically excludes turnover time from the calculation of the individual work-hour limits. Thus, including turnover time in the group work-hour limit calculation would require licensees to

calculate the hours that each individual worked twice -- once for the calculation of individual limits, which would exclude shift turnover time, and a second time for the calculation of the group limits, which would be required to include shift turnover time. The resultant multiple counting to implement the staff's interpretation of the Order's intent will create a clearly unwarranted record-keeping burden with no commensurate benefit. Further, plants on an 8-hour shift rotation would be penalized because they would have more shift turnovers each day, and thus significantly more cumulative time would be spent on shift turnovers.

**Conclusion:** The group work-hour controls established by the Order are intended to preclude significant amounts of overtime being worked by security officers over long periods of time by requiring licensees to ensure that they have hired and trained a large enough work force to support routine operations. This intent is clearly consistent with Generic Letter 82-12, Nuclear Power Plant Staff Work Hours, which states, "Enough plant personnel should be employed to maintain adequate shift coverage without routine heavy use of overtime." Generic Letter 82-12 has been in effect for more than twenty years and, with but a few exceptions, has been effective in achieving its purpose, and shift turnover time has never been included. Including shift turnover time in the evaluation of security force staffing would represent an insignificant amount of time in the context of total hours worked, but it would impose an unnecessary burden on licensees without any commensurate benefit. Finally, there is no logic that supports treating shift turnover time differently for group work-hour purposes than for individual work-hour limits.



**Rationale for not including the preparation for and conduct of pilot force-on-force exercise and annual licensee force-on-force exercises in group work-hour limits**

1. **Including the preparation for and conduct of pilot force-on-force exercises would not be appropriate:** The purpose of the pilot exercises is to develop the process that will be used by the NRC to evaluate the total security program of individual licensees, including observation and participation in the required exercises, through the mandated annual licensee force-on-force exercises. As has been demonstrated in the pilot force-on-force exercise program, significant changes in licensee protective strategies have resulted from the implementation of the Compensatory Measures required by the April 29, 2003, orders and the Interim Compensatory Measures mandated by the February 25, 2002, orders. The pilot exercises are intended to provide valuable insight to licensees and the NRC to evaluate the effectiveness of the security protective strategy developed by licensees and security program performance.

The pilot force-on-force exercises are, by their very nature, developmental, and are occurring coincident with licensees' implementation of the other April 29, 2003, security-related orders. The benefit of conducting these exercises far outweighs the extra man-hours being expended. These exercises occur only once for each participating licensee and therefore would not cause a long-term cumulative fatigue impact on the participating licensee's security force or create any resultant safety concern.

2. **Including the preparation for and conduct of annual licensee force-on-force exercises would not be appropriate:** The protective strategies developed by licensees in response to the NRC security related orders will likely require significantly more resources to prepare for and conduct the mandated annual exercises than in the past. The pilot program exercises conducted to date have proven that it takes a significant amount of overtime hours for the security force personnel covered by the work-hour order to prepare for and conduct these exercises. A complete shadow force of exercise participants must be created, using security force personnel on overtime, and monitors and adversaries provided. If the overtime hours for the exercises are included in the group work-hour metric for the work-hour order, the six-week period that includes the required exercise may exceed the 48-hour group average. Given the complexity of meeting the group work-hour limits on a six-week basis in this new context, it is possible that licensees may unavoidably, but not significantly, exceed the group limits, even though the individual work-hour limits are met. To require licensee to add staffing to prevent exceeding the 48-hour group average is not reasonable because the exercises occur infrequently and are not part of the licensee's discretionary use of overtime. It would be inconsistent with the purpose of the group work-hour controls to apply them in this context.

**Conclusion:** The group work-hour controls are intended to preclude significant amounts of overtime being worked by security officers over long periods of time by requiring licensees to ensure that they have hired and trained a large enough work force to support routine operations. This intent is clearly consistent with Generic Letter 82-12, Nuclear Power Plant Staff Work Hours, which states, "Enough plant personnel should be employed to maintain adequate shift coverage without routine heavy use of overtime." Generic Letter 82-12 has

been in effect for more than twenty years and, with but a few exceptions, has been effective in achieving its purpose. Including the work-hours involved in preparing for and conducting both pilot force-on-force exercises and annual licensee force-on-force exercises would represent a significant proportion of the total hours worked during the six weeks when the exercise is conducted, and would impose a staffing level requirement on licensees that is not reasonable solely to support the force-on-force exercises. Because there is a large benefit to both the licensee and the NRC from conducting these exercises, the extraordinary amount of resources required to prepare for and conduct these exercises should not be required to be included in the group work-hour controls metric.