

April 10, 2003

MEMORANDUM TO: Glenn M. Tracy, Director  
Division of Nuclear Security, NSIR

FROM: M. Christopher Nolan, Acting Chief */RA/*  
Licensee Personal Security Section  
Division of Nuclear Security, NSIR

SUBJECT: SUMMARY OF THE FEBRUARY 21, 2003, PUBLIC MEETING  
TO DISCUSS DRAFT ORDER REGARDING FATIGUE OF  
NUCLEAR FACILITY SECURITY FORCE PERSONNEL AT  
NUCLEAR POWER PLANTS

On February 21, 2003, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting at NRC Headquarters with representatives from power reactor licensees, the Nuclear Energy Institute, the Project on Government Oversight, the Union of Concerned Scientists, other industry stakeholders and the members of the public. The purpose of this meeting was to discuss the draft Order concerning fatigue of security force personnel at nuclear power plants and related matters outlined in the meeting agenda (Attachment 1). A copy of the draft Order and Compensatory Measures (CMs) was included in the notice for February 21, 2003, public meeting which can be viewed via ADAMS (ADAMS Accession Number ML030680670). This was the second public meeting on this topic. The majority of the discussion was related to the changes made to the staff's proposal as a result of comments from the first meeting held January 23, 2003. Attachment 2 lists the attendees at the February 21, 2003.

The following major issues discussed were:

#### Industry View

The staff received comments from the industry that were reiterated from the January 23, 2003, public meeting stating that Orders on fatigue were not necessary. Additionally, if the staff decided to go ahead with Orders, the industry would support the expansion of Generic Letter 82-12 to cover security personnel.

Representatives from the industry argued that the staff should consider reducing the scope of security personnel covered under the order to only include armed responders and others as required as part of the protective strategy. The staff should defer judgement on watchpersons as a part of the fatigue rulemaking effort since this is not urgent.

The industry commented that the break between work periods should be increased from 8-hours to 10-hours to prevent deviations when switching between an 8-hour shift schedule and a 12-hour schedule.

The staff should clarify the level of training required by individuals who would complete fatigue evaluations and expectations for the self-declaration process.

The staff should consider addressing security systems outages in a manner similar to plant outages.

The staff should clarify the meaning of "increase in threat condition" and stipulate that the allowed time period for elevated overtime will reset on each increase.

The CMs should allow licensees to exceed the group limits during unplanned plant outages and increases in threat conditions for up to 210 days rather than the specified 120 days. This increase would allow licensees more time to hire new security force personnel and properly train them as well.

The CMs should be revised to delete the following language describing self-declaration procedures that states: consistent with the requirements of 10 CFR Part 26, "Fitness-For-Duty Programs," and 10 CFR 50.7, "Employee Protection." Only require documentation on self-declarations of unfit for duty due to fatigue if the licensee disagrees with the individual's self-declaration and returns the individual to work. Provide additional guidance if an individual provides a self-declaration including whether a drug and alcohol test would be required and whether the evaluation must be performed by a psychologist or psychiatrist.

The staff should extend the implementation period of the Order from 60 days to perhaps 6 months to 9 months.

Questions were posed by industry concerning the Orders relaxation process. The process is described in section 5.8.9, "Order Relaxation," of the Enforcement Manual which is available on the NRC website at <http://www.nrc.gov.201/OE/> under guidance documents.

Licensees indicated that they have some reluctance to hire new security force personnel as a result of uncertainties associated with the potential changes to the design basis threat, guard force training requirements and the uncertainties associated with the threat environment.

### Nuclear Security Officers

The staff received a comment that the average 60-hour limit during planned outages allows nuclear security officers to work too many hours.

The staff received a comment that indicated that licensees would not need to rely on overtime or need deviations to cover sick leaves, late arrivals, and vacations if they would staff their shifts adequately. Shifts have been cut back to the bare bone.

### Public View

The staff should consider changing the language on individual limits to read the licensee shall "demonstrate" rather than "monitor" readiness.

Further, it was noted that the individual limits are much greater than the Department of Energy's 1994 draft guidelines: no more than 12 hours per work day, including shift turnover, and no more than 60 total hours per week.

The CM should provide limits on work hours during increased threat conditions. A member of the public was concerned that security officers would be most fatigued when needed most.

The staff received a comment from the public objecting to the 16 hours in any 24-hour period and 72 hours in any 7-day period individual limits because this would allow security guards to work when they are likely to be fatigued.

The above information and the attached documents were shared and disclosed between NRC staff and the meeting attendees and are not intended as verbatim.

Attachments: 1. Agenda  
2. List of Attendees

CONTACT: Dr. Garmon West, NSIR/DNS  
301-415-0211

G. M. Tracy

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CONTACT: Dr. Garmon West, NSIR/DNS  
301-415-0211

**DISTRIBUTION:**

LPSS r/f    B. Baxter    M. Rothschild    D. Desaulniers    M. Burrell  
RidsNsrOd    J. Persensky    RidsNsrDns    S. Richards    J. Goldberg  
B. Wetzel    B. Westreich    W. Desmond    A. DiPalo

**Accession No. ML030580670**

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\*See previous concurrence

OFFICE	LPSS/DNS	<b>E</b>	LPSS/DNS	
NAME	MLivingston*		CNolan*	
DATE	04/7/03		04/10/03	

**OFFICIAL RECORD COPY**

**MEETING WITH STAKEHOLDERS TO DISCUSS A DRAFT ORDER  
REGARDING FATIGUE OF NUCLEAR FACILITY SECURITY FORCE PERSONNEL  
AT NUCLEAR POWER PLANTS**

**February 21, 2003**

**ONE WHITE FLINT NORTH IN ROOM 14B6**

**AGENDA**

- |  |                       |
|--|-----------------------|
| <b>INTRODUCTIONS AND OPENING REMARKS</b>   | <b>1:00pm-1:15pm</b>  |
| <ul style="list-style-type: none"><li>- Purpose, need and objectives for the meeting.</li><li>- Format and procedures for participation in the meeting.</li><li>- Review of January 23, 2003, meeting.</li></ul>                     |                       |
| <b>PRESENTATION OF DRAFT ORDER, COMPENSATORY MEASURES FOR FATIGUE</b>  | <b>1:45pm-2:45pm</b>  |
| <ul style="list-style-type: none"><li>- Scope.</li><li>- Work hour controls for individuals.</li><li>- Comments and questions. (Stakeholders)</li></ul>  |                       |
| <b>BREAK</b>   | <b>2:45pm-3:00pm</b>  |
| <b>CONTINUATION...PRESENTATION OF DRAFT ORDER, COMPENSATORY MEASURES FOR FATIGUE</b>   | <b>3:00pm-4:30pm</b>  |
| <ul style="list-style-type: none"><li>- Work hour controls for shifts.</li><li>- Licensees exempt from C.1 and C.2 (CM) during declared emergencies.</li><li>- Procedures</li><li>- Comments and questions. (Stakeholders)</li></ul> |                       |
| <b>CLOSING REMARKS BY NRC</b>  | <b>4 :30pm-5:00pm</b> |
| <ul style="list-style-type: none"><li>- Summation of major topics.</li><li>- Next steps.</li><li>- Comments and questions. (Stakeholders)</li></ul>  |                       |

**ATTACHMENT 1**

**ATTENDANCE LIST**

Meeting with stakeholders to discuss draft order concerning worker fatigue at Nuclear Power Plants

On February 21, 2003, the following individuals attended the open meeting held in room 14B6 of the One White Flint Building, Rockville, Maryland.

<b>Name</b>	<b>Organization</b>	<b>E-mail</b>	<b>Phone Number</b>
Charles Wilbanks	Sciencetech US	<a href="mailto:cwillbanks@sciencetech.com">cwillbanks@sciencetech.com</a>	301-258-1865
James Davis	NEI	<a href="mailto:jwd@nei.org">jwd@nei.org</a>	202-739-8105
Charles Dugger	ENTERGY	<a href="mailto:cdugger@entergy.com">cdugger@entergy.com</a>	508-830-8955
John McGaha	ENTERGY	<a href="mailto:jmcgaha@entergy.com">jmcgaha@entergy.com</a>	949-368-9275
Joe Wanbold	So. CA EDISON	<a href="mailto:wanboljj@sce.com">wanboljj@sce.com</a>	949-368-9275
Julius Persensky	RES/DSARE	<a href="mailto:jjp2@nrc.gov">jjp2@nrc.gov</a>	301-415-6759
Garmon West	NRC/NSIR	<a href="mailto:gxw@nrc.gov">gxw@nrc.gov</a>	301-415-0211
David Desaulniers	NRR/DIPM	<a href="mailto:drd@nrc.gov">drd@nrc.gov</a>	301-415-6759
Paul Serra	STPEGS	<a href="mailto:plserra@stpegs.com">plserra@stpegs.com</a>	361-972-8053
Gary Detter	Constellation	<a href="mailto:gary.detter@nmp.cm.com">gary.detter@nmp.cm.com</a>	315-415-0262
Jack Goldberg	NRC/OGC	<a href="mailto:jrg1@nrc.gov">jrg1@nrc.gov</a>	301-415-1681
Bryan Dolan	Duke	<a href="mailto:bjdolan@duke-energy.com">bjdolan@duke-energy.com</a>	704-875-4225
Barry Westreich	NRC/NSIR	<a href="mailto:bcw@nrc.gov">bcw@nrc.gov</a>	301-415-0221
Ted Straub	PSEG Nuclear	<a href="mailto:theodorecstruab@pseg.com">theodorecstruab@pseg.com</a>	856-334-2241
James Buchanon	RIV	<a href="mailto:JUB@nrc.gov">JUB@nrc.gov</a>	817-860-8274
Brian Zaleski	ICF Consulting	<a href="mailto:bzaleski@icfconsulting.com">bzaleski@icfconsulting.com</a>	903-371-5828
Patricia Campbell	Winston & Strawn	<a href="mailto:pcampbell@winston.com">pcampbell@winston.com</a>	202-368-5766
Les England	ENTERGY	<a href="mailto:lengland@entergy.com">lengland@entergy.com</a>	601-368-5766
Lane Hay	Bechtel SERCH	<a href="mailto:lhay@bechtel.com">lhay@bechtel.com</a>	301-228-6312
Bill Desmond	NRC/NSIR	<a href="mailto:wjw2@nrc.gov">wjw2@nrc.gov</a>	301-415-0260
John Tomlinson	NRC/NSIR	<a href="mailto:jet2@nrc.gov">jet2@nrc.gov</a>	301-415-0262
Kenneth Halliday	FIRST ENERGY	<a href="mailto:halliday@firstenergycorp.com">halliday@firstenergycorp.com</a>	724-682-5072
Ronald Rose	NEI/FE	<a href="mailto:rwr@nei.org">rwr@nei.org</a>	202-739-8127
Luke Greenle	Ameren VE	<a href="mailto:lhgraessle@cal.ameren.com">lhgraessle@cal.ameren.com</a>	573-676-8129
H. John Sefick	OPPD	<a href="mailto:hsefick@oppd.com">hsefick@oppd.com</a>	402-533-6624
Danielle Brian	POGO	<a href="mailto:pogo@pogo.org">pogo@pogo.org</a>	202-347-1122
Edwin Layman	NCI	<a href="mailto:lyman@nci.org">lyman@nci.org</a>	202-822-6594
Susan Leonard	POGO		
David Lochbaum	UCS	<a href="mailto:dlochbaum@ucsusa.org">dlochbaum@ucsusa.org</a>	202-223-6133
Chris Nolan	NRC/NSIR	<a href="mailto:mcn@nrc.gov">mcn@nrc.gov</a>	301-415-8171
Alex Sapountzis	NRC/NSIR	<a href="mailto:aps@nrc.gov">aps@nrc.gov</a>	301-415-7822

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ORDER MODIFYING LICENSES  
(EFFECTIVE IMMEDIATELY)**

I.

The licensees identified in Attachment 1 to this Order hold licenses issued by the U.S. Nuclear Regulatory Commission (NRC or Commission) authorizing operation of nuclear power plants in accordance with the Atomic Energy Act of 1954 and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50. Commission regulations at 10 CFR 50.54(p)(1) require these licensees to maintain safeguards contingency plan procedures in accordance with 10 CFR Part 73, Appendix C. Specific safeguards requirements for reactors are contained in 10 CFR 73.55.

II.

On September 11, 2001, terrorists simultaneously attacked targets in New York, N.Y., and Washington, D.C., utilizing large commercial aircraft as weapons. In response to the attacks and intelligence information subsequently obtained, the Commission issued a number of Safeguards and Threat Advisories to its licensees in order to strengthen licensees' capabilities and readiness to respond to a potential attack on a nuclear facility. On February 25, 2002, the Commission issued Orders to the licensees of operating power reactors to put the actions taken in response to the Advisories in the established regulatory framework and to implement additional security enhancements which emerged from the NRC's ongoing comprehensive security review.

Work hour demands on nuclear facility security force personnel have increased substantially over the past 15 months and the current threat environment continues to require heightened security measures. Therefore, the Commission has determined that the security measures addressed by the enclosed compensatory measures are required to be implemented by licensees as prudent, measures to address issues that may arise from work-hour related fatigue of nuclear facility security force personnel. Therefore, the Commission is imposing requirements, as set forth in Attachment 2 of this Order, on all licensees of these facilities. These requirements, which supplement existing regulatory requirements, will provide the Commission with reasonable assurance that the public health and safety and common defense and security continue to be adequately protected in the current threat environment. These requirements will remain in effect until the Commission determines otherwise.

In order to provide assurance that licensees are implementing prudent measures to achieve a consistent level of protection, all licenses identified in Attachment 1 to this Order shall be modified to include the requirements identified in Attachment 2 to this Order. In addition, pursuant to 10 CFR 2.202, the NRC finds that in the circumstances described above, the public health, safety and interest require that this Order be immediately effective.

### III.

Accordingly, pursuant to Sections 103, 104, 161b, 161i, 161o, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR Parts 50, 72, and 73, IT IS HEREBY ORDERED, **EFFECTIVE IMMEDIATELY**, THAT ALL LICENSES IDENTIFIED IN ATTACHMENT 1 TO THIS ORDER ARE MODIFIED AS FOLLOWS:

- A. All Licensees shall, notwithstanding the provisions of any Commission regulation or license to the contrary, comply with the requirements described in Attachment 2 to this



Order except to the extent that a more stringent requirement is set forth in the Licensees' security plans. The Licensees shall immediately start implementation of the requirements in Attachment 2 to the Order and shall complete implementation **no later than [insert date 60 days from the date of issuance]**.

- B. 1. All Licensees shall, within **twenty (20) days** of the date of this Order, notify the Commission, (1) if they are unable to comply with any of the requirements described in Attachment 2, (2) if compliance with any of the requirements is unnecessary in their specific circumstances, or (3) if implementation of any of the requirements would cause the Licensee to be in violation of the provisions of any Commission regulation or the facility license. The notification shall provide the Licensee's justification for seeking relief from or variation of any specific requirement.
2. Any Licensee that considers that implementation of any of the requirements described in Attachment 2 to this Order would adversely impact safe operation of the facility must notify the Commission, within **twenty (20) days** of this Order, of the adverse safety impact, the basis for its determination that the requirement has an adverse safety impact, and either a proposal for achieving the same objectives specified in the Attachment 2 requirement in question, or a schedule for modifying the facility to address the adverse safety condition. If neither approach is appropriate, the Licensee must supplement its response to Condition B.1 of this Order to identify the condition as a requirement with which it cannot comply, with attendant justifications as required in Condition B.1.
- C. 1. All Licensees shall, within **twenty (20) days** of the date of this Order, submit to the Commission, a schedule for achieving compliance with each requirement described in Attachment 2.

2. All Licensees shall report to the Commission when they have achieved full compliance with the requirements described in Attachment 2.

D. Notwithstanding the provisions of 10 CFR 50.54(p) and 72.186(b), all measures implemented or actions taken in response to this Order shall be maintained until the Commission determines otherwise.

Licensees' responses to Conditions B.1, B.2, C.1, and C.2 above, shall be submitted in accordance with 10 CFR 50.4 or 72.4 as applicable. In addition, Licensees' submittals that contain Safeguards Information shall be properly marked and handled in accordance with 10 CFR 73.21.

The Director, Office of Nuclear Reactor Regulation may, by letter, relax or rescind any of the above conditions upon demonstration by the Licensee of good cause.

#### IV.

In accordance with 10 CFR 2.202, the Licensee must, and any other person adversely affected by this Order may, submit an answer to this Order, and may request a hearing on this Order, within twenty (20) days of the date of this Order. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time in which to submit an answer or request a hearing must be made in writing to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and include a statement of good cause for the extension. The answer may consent to this Order. Unless the answer consents to this Order, the answer shall, in writing and under oath or affirmation, specifically set forth the matters of fact and law on which the Licensee or other person adversely affected relies and the reasons as to why the Order should not have been issued. Any answer or request for a hearing shall be submitted to the Secretary, Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission,

ATTN: Rulemakings and Adjudications Staff, Washington, DC 20555. Copies also shall be sent to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555; to the Assistant General Counsel for Materials Litigation and Enforcement at the same address; to the Regional Administrator for NRC Region I, II, III, or IV, as appropriate for the specific facility; and to the Licensee if the answer or hearing request is by a person other than the licensee. Because of possible disruptions in delivery of mail to United States Government offices, it is requested that answers and requests for hearing be transmitted to the Secretary of the Commission either by means of facsimile transmission to 301-415-1101 or by e-mail to [hearingdocket@nrc.gov](mailto:hearingdocket@nrc.gov) and also to the Office of the General Counsel either by means of facsimile transmission to 301-415-3725 or by e-mail to [OGCMailCenter@nrc.gov](mailto:OGCMailCenter@nrc.gov). If a person other than the licensee requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.714(d).<sup>1</sup>

If a hearing is requested by the Licensee or a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Order should be sustained.

Pursuant to 10 CFR 2.202(c)(2)(i), the Licensee may, in addition to demanding a hearing, at the time the answer is filed or sooner, move the presiding officer to set aside the immediate effectiveness of the Order on the ground that the Order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error.

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<sup>1</sup>The most recent version of Title 10 of the *Code of Federal Regulations*, published January 1, 2002, inadvertently omitted the last sentence of 10 CFR 2.714 (d) and paragraphs (d)(1) and (d)(2) regarding petitions to intervene and contentions. For the complete, corrected text of 10 CFR 2.714 (d), please see 67 FR 20884; April 29, 2002.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section III above shall be final twenty (20) days from the date of this Order without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section III shall be final when the extension expires if a hearing request has not been received. AN ANSWER OR A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

FOR THE NUCLEAR REGULATORY COMMISSION

Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation

Dated this       day of

## Compensatory Measures

### A. Background:

These compensatory measures (CMs) are established to delineate licensee responsibility in response to the threat environment presently in existence in the aftermath of the events of September 11, 2001. Excessive work schedules can challenge the ability of security force personnel to remain vigilant and effectively perform their duties.

### B. Scope:

Operating nuclear power reactor licensees shall comply with the following CMs to ensure, in part, that nuclear facility security force personnel are not assigned to duty while in a fatigued condition that could reduce their alertness or ability to perform functions necessary to identify and promptly respond to plant security threats. Work hour controls shall apply to personnel performing the following functions: armed member of the security force, central alarm station operator, secondary alarm station operator, security shift supervisor, and watchperson.

### C. Compensatory Measures:

#### 1. Work Hour Controls for Individuals

##### (a) Personnel performing the functions identified in B:

##### (1) Shall not exceed the following limits, excluding shift turnover time:

- (i) 16 hours in any 24-hour period,
- (ii) 26 hours in any 48-hour period, and
- (iii) 72 hours in any 7 day period.

##### (2) Shall have a minimum 10-hour break between work periods. The participation in turnover is permitted during the break period.

##### (3) May be authorized, by the licensee, to deviate from the limits specified in C.1(a)(1) and/or C.1(a)(2) provided:

- (i) The licensee could not have reasonably foreseen or controlled the circumstance necessitating the deviation,
- (ii) The security shift supervisor has determined that the deviation is required to maintain the security for the facility,
- (iii) An evaluation is performed, in advance, by an individual trained in the causes, symptoms, and effects of fatigue that determined that the individuals readiness would not be adversely effected by the additional work period to be authorized under the deviation, and
- (iv) The basis and approval for items (i), (ii), and (iii) are documented.

(b) The number and duration of approved deviations shall be limited to the extent practicable.

(c) The licensee shall monitor and control individual work hours to ensure that excessive work hours are not compromising worker alertness and performance.

## 2. Work Hour Controls for Shifts

Shift average work hours for personnel performing the functions identified in B shall be controlled in accordance with the following limits:

(a) Normal Plant Conditions: The average number of hours actually worked per shift, by personnel performing the functions identified in B, shall not exceed 48 hours per week averaged over a rolling consecutive period not to exceed six (6) weeks. Worker absences and workers who were not assigned to the shift for the entire period should be prorated when calculating the average.

(b) Planned Plant Outages:

(1) The average number of hours actually worked per shift, by personnel performing the functions identified in B, shall not exceed 60 hours per week averaged over a rolling consecutive period not to exceed six (6) weeks. For planned abnormal plant conditions whose duration is less than the averaging period the limit would be 60 hours per week averaged over the duration of the condition. Part weeks, worker absences and workers who were not assigned to the shift for the entire period should be prorated when calculating the average.

(2) The limit defined in C.2(b)(1) can be used for up to 90 days. For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.2(a). The use of the limits defined in C.2(b)(1) shall not exceed 120 days.

(c) Unplanned Plant Outages or Increase in Threat condition:

(1) There are no specific shift limits for this condition.

(2) For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.2(a). The use of the allowance defined in C.2(c)(1) shall not exceed 120 days.

3. Licensees shall be exempt from the requirements of C.1 and C.2 during declared emergencies as defined in the licensee's emergency plan.

#### 4. Procedures

Develop or augment procedures, as necessary, for personnel within the scope of this CM to:

(a) Describe the process for implementing the controls for hours worked specified in C.1, C.2, and C.3 of this CM.

(b) Describe the process to be followed if an individual reports prior to or during a duty period that he or she considers himself or herself unfit for duty due to fatigue consistent with the requirements of 10 CFR Part 26, "Fitness-For-Duty Programs," and 10 CFR 50.7, "Employee Protection."

(c) Document self-declarations of unfit for duty due to fatigue.

(d) Address other factors that could affect fatigue such as mental stress, illness, and the use of prescription and over-the-counter medications.