UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555 - 0001

May 27, 2003

MEMORANDUM TO: Theodore R. Quay, Chief
Equipment and Human Performance Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

/RA/

FROM: David C. Trimble, Chief
Operator Licensing and Human Performance Section
Equipment and Human Performance Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE APRIL 3, 2003, PUBLIC MEETING TO DISCUSS THE DEVELOPMENT OF A PROPOSED WORKER FATIGUE RULE

On April 3, 2003, the staff held a public meeting regarding the development of a proposed rule concerning worker fatigue at nuclear power plants. The rulemaking has been proposed as an amendment to 10 CFR 26, “Fitness for Duty Programs.” The meeting participants (see Attachment 1) included representatives from the power reactor licensee community, the Nuclear Energy Institute (NEI), the Professional Reactor Operator Society, and the Union of Concerned Scientists. The meeting agenda is provided as Attachment 2. The focus of the meeting was the staff’s presentation of draft language for the proposed rule (Attachment 3). Meeting attendees provided comments on the proposed rule language and methods proposed for achieving the objectives of the rule. A synopsis of stakeholder comments is provided in Attachment 4. In addition, the industry task force provided five white papers (Attachment 5) which address matters of particular interest to the industry stakeholders. The topics of these white papers are:

1. the definition of "directing" as used in §26.30(a) of the draft rule text,

2. the basis for the task force position that individuals performing the watchperson function should not be included in the work scheduling controls,

3. the basis for approving a deviation as described in §26.30(b)(3)(ii) of the draft rule text,

4. the documentation to be required for a deviation as described in §26.30(b)(4) of the draft rule text, and

5. a metric addressing the nominal 40-hour work week objective of Generic Letter 82-12.

In response to the proposed white paper definition of “directing” the staff proposed a revised definition that incoporates the concept of face-to-face interaction and omits position titles. In response to the white paper concerning the scope of security personnel subject to the proposed rule, the staff agreed to consider a functional definition of watchperson that would focus on the safeguards functions that would be subject to the work scheduling controls. In response to the white paper concerning the basis for approving deviations, the staff noted that the acceptance criteria was not clear and consequently open to abuse and that the qualifications of a senior manager that can approve deviations should be specified. In response to the white paper concerning documentation, the staff expressed concern that documentation limited to signatures certifying that a fatigue assessment was completed would not support independent evaluation of the fitness-for-duty determination. Finally, in response to the white paper concerning a metric addressing the objective of a nominal 40-hour work week, the staff stated that it would consider the proposed concepts in their development of the requirements for group work hour controls.

The staff closed the meeting with a commitment to schedule the next stakeholder meeting for April 24, 2003.

Attachments: As stated

In response to the proposed white paper definition of “directing” the staff proposed a revised definition that incoporates the concept of face-to-face interaction and omits position titles. In response to the white paper concerning the scope of security personnel subject to the proposed rule, the staff agreed to consider a functional definition of watchperson that would focus on the safeguards functions that would be subject to the work scheduling controls. In response to the white paper concerning the basis for approving deviations, the staff noted that the acceptance criteria was not clear and consequently open to abuse and that the qualifications of a senior manager that can approve deviations should be specified. In response to the white paper concerning documentation, the staff expressed concern that documentation limited to signatures certifying that a fatigue assessment was completed would not support independent evaluation of the fitness-for-duty determination. Finally, in response to the white paper concerning a metric addressing the objective of a nominal 40-hour work week, the staff stated that it would consider the proposed concepts in their development of the requirements for group work hour controls.

The staff closed the meeting with a commitment to schedule the next stakeholder meeting for April 24, 2003.

Attachments: As stated

DOCUMENT NAME:C:\ORPCheckout\FileNET\ML031470437.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without enclosures **"E"** = Copy with enclosures **"N"** = No copy

OFFICE	DIPM/IEHB		DIPM/IEHB		DIPM/IEHB					
NAME	DDesaulniers		DTrimble		TQuay					
DATE	5/16/03		5/21/03		5/27/03		/ /2003		/ /2003	

OFFICIAL RECORD COPY

Public Meeting to Discuss Development of a Proposed Rule Concerning
Worker Fatigue at Nuclear Power Plants

April 3, 2003

Attendance List

NAME	AFFILIATION
David Trimble	NRC/NRR
David Desaulniers	NRC/NRR
Mike Karney	NEI/Exelon
Barry Quigley	Self
David Lochbaum	Union of Concerned Scientists
Robert Evans	NEI
Jim Gallman	TXU
Gerald Ellis	Exelon
Ralp Mullis	Progress Energy
Mark Burzynski	TVA
Brian Richter	NRC/NRR
Steven Turrin	PROS (via teleconference)
John Fee	SCE
Alan Roecklein	NRC/NRR
Deann Raleigh	Scientech (via teleconference)
Garmon West	NRC/NSIR
J. Persensky	NRC/RES
Robert Meyer	PROS (via teleconference)
Marjorie Rothschild	NRC/OGC
Chris Nolan	NRC/NSIR

PROPOSED RULE CONCERNING WORKER FATIGUE
AT NUCLEAR POWER PLANTS

April 3, 2003

AGENDA

Morning Session

8:30-8:40 Introductions and Opening Remarks

8:40-9:00 Status of Security Worker Fatigue Orders

9:00-9:30 Written Policy and Procedures

9:30-10:15 Work Scheduling Controls

10:15-10:30 Break

10:30-11:30 Work Scheduling Controls

11:30-12:00 Training

12:00-1:00 Lunch

Afternoon Session

1:00-2:00 Fatigue Assessment

2:00-2:45 Audits and Corrective Action

2:45-3:00 Break

3:00-3:30 Recordkeeping

3:30-4:00 Meeting Summary and Future Schedule

Note: This is a Category 3 Meeting. The public is invited to participate in this meeting by providing comments and asking questions throughout the meeting.

Attachment 2

NOTE: DRAFT WORKER FATIGUE RULE LANGUAGE IS PROVIDED IN BOLD PRINT

PART 26 – FITNESS FOR DUTY PROGRAMS

1. The authority citation for Part 26 continues to read as follows:

AUTHORITY: Secs. 53, 81, 103, 104, 107, 161, 68 Stat. 930, 935, 936, 937, 948, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2111, 2112, 2133, 2134, 2137, 2201, 2297f); secs. 201, 202, 206, 88 Stat. 1242, 1244, 1246, as amended (42 U.S.C. 5841, 5842, 5846).

2. The text of 10 CFR Part 26 is amended as follows:

Subpart A - Administrative Provisions

§ 26.1 Purpose

This part prescribes requirements and standards for the establishment and maintenance of fitness-for-duty (FFD) programs.

§ 26.3 Scope

(a) The regulations in this part apply to licensees authorized to operate a nuclear power reactor.

(b) The regulations in this part apply to licensees authorized to possess, use, or transport formula quantities of strategic special nuclear material (SSNM) under Part 73 of this chapter.

(c) The regulations in this part apply to a Corporation that obtains a certificate of compliance or an approved compliance plan under Part 76 of this chapter only if the Corporation elects to engage in activities involving formula quantities of SSNM. When applicable, the requirements apply only to the Corporation and personnel specified in §26.25(a)(3).

(d) Combined operating permit holders, under Part 52, Subpart C of this chapter, or construction permit holders under §50.23 of this chapter, with a plant under active construction, shall comply with §§26.23 (Performance objectives), 26.41 (Audits), and 26.189 (Determination

of fitness) of this part, shall implement a drug and alcohol testing program, including random tests; and shall make provisions for employee assistance programs, imposition of sanctions, procedures for the objective and impartial review of authorization decisions, protection of information, and recordkeeping.

(e) Individuals who are performing activities under this part and who are also subject to a program regulated by another Federal agency or State need be covered by only those elements of a licensee's FFD program that are not included in the Federal agency or State program, as long as all of the following conditions are met:

(1) The individuals are subject to pre-access (or pre-employment), random, and for-cause testing for the substances specified in paragraph §26.31(d)(1) of this part at or below the cutoff levels specified in §26.163(a)(1) of this part;

(2) Breath specimens are subject to confirmatory testing with an evidential-grade breath alcohol analysis device that meets the requirements specified in §26.91 of this part;

(3) Urine specimens are tested for validity and the presence of drugs and drug metabolites at a laboratory certified by HHS, the College of American Pathologists or other comparable certification program;

(4) Training is provided to address the subjects listed in §26.29(a);

(5) An impartial and objective procedure is provided for the review of any findings of a FFD policy violation; and

(6) Provisions are made to ensure that the testing agency or organization notifies the licensee or C/V granting authorization of any FFD policy violation.

§ 26.5 Definitions

Acute fatigue **means . . .**

Circadian factors **means . . .**

Cumulative fatigue **means . . .**

Directing **means face-to-face supervision of an ongoing operational evolution or maintenance task. ...**

§ 26.7 Interpretations

no change

§ 26.9 Exemptions

no change

§ 26.11 Communications

no change

§ 26.13 Information collection requirements: OMB approval

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number (update for proposed rule).

(b) The approved information collection requirements contained in this part appear in §§26.197, 26.199, 26.201, and 26.203.

§ 26.15 Future revisions

no change

Subpart B - Program Elements

§ 26.21 FFD program

Each licensee subject to this part shall establish and implement a FFD program that complies with the applicable requirements in this part.

§ 26.23 Performance objectives

Fitness-for-duty programs must:

(a) Provide high assurance that individuals subject to this part are trustworthy and reliable as demonstrated by the avoidance of substance abuse;

(b) Provide reasonable assurance that individuals subject to this part are not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform their duties;

(c) Provide reasonable measures for the early detection of persons who are not fit to perform activities within the scope of this part; and

(d) Provide reasonable assurance that the workplaces subject to this part are free of the presence of illegal drugs and alcohol, and the effects of such substances.

(e) Provide reasonable assurance that worker fatigue is managed commensurate with maintaining public health and safety.

§ 26.25 Individuals subject to the FFD program

(a) The following individuals shall be subject to the FFD program:

(1) All persons granted unescorted access to nuclear power plant protected areas;

(2) All persons required by the licensee to physically report to the licensee's Technical Support Center or Emergency Operations Facility, in accordance with licensee emergency plans and procedures;

(3) SSNM licensee and transporter personnel who:

(i) Are granted unescorted access to Category IA Material;

(ii) Create or have access to procedures or records for safeguarding SSNM;

(iii) Measure Category IA Material;

(iv) Transport or escort Category IA Material; or

(v) Guard Category IA Material.

(4) All FFD program personnel involved in the day-to-day operations of the program, as defined by licensee or C/V procedures, who:

(i) Can link test results with the individual who was tested before a FFD policy violation determination is made;

(ii) Make determinations of fitness;

(iii) Make authorization decisions;

(iv) Are involved in the selection or notification of individuals for testing; or

(v) Are involved in the collection or onsite testing of specimens.

(b) The following individuals are not subject to the FFD program:

(1) Persons who are not employed by the licensee's or C/V's FFD program, who do not routinely provide FFD program services, and whose normal workplace is not at the licensee's or C/V's facility, but who may be called upon to provide a FFD program service, including, but not limited to, collecting specimens for drug and alcohol testing, performing behavioral observation, or providing input to a determination of fitness. Such persons may include, but are not limited to, hospital, employee assistance program (EAP), or substance abuse treatment facility personnel, or other medical professionals;

(2) NRC employees, law enforcement personnel, or offsite emergency fire and medical response personnel while responding onsite;

(3) SSNM transporter personnel who are subject to U.S. Department of Transportation drug and alcohol fitness programs that require random testing for drugs and alcohol.

§ 26.27 Written policy and procedures

(a) General. Each licensee subject to this part, and each C/V with a licensee-approved FFD program, shall establish, implement, and maintain written policies and procedures designed to meet the general performance objectives and applicable requirements of this part.

(b) Policy. Licensees and C/Vs shall prepare a clear and concise FFD policy statement and make the most current revision of this statement readily available to all individuals subject to the policy. Methods of making the statement readily available include, but are not limited to, posting the policy in multiple work areas, providing individuals with brochures, or allowing individuals to print out the policy from a computer. The policy statement must be written in sufficient detail to provide affected individuals with information on what is expected of them and what consequences may result from lack of adherence to the policy. At a minimum, the written statement shall:

(1) Describe the consequences of the use, sale, or possession of illegal drugs on or off site, and the abuse of legal drugs, including alcohol;

(2) Describe the expectation that individuals who are notified that they have been selected for random testing will report to the collection site within the time period specified by the licensee or C/V;

(3) Describe the consequences of refusals to provide a specimen for testing and subversion of the testing process;

(4) Prohibit the consumption of alcohol, at a minimum:

(i) Within an abstinence period of 5 hours preceding any scheduled working tour; and

(ii) During the period of any working tour.

(5) Convey that abstinence from alcohol for the five hours preceding any scheduled working tour is considered to be a minimum that is necessary but may not be sufficient to ensure the individual is fit for duty;

(6) Address other factors that could affect fitness for duty such as mental stress, fatigue, illness, and the use of prescription and over-the-counter medications that could cause impairment;

(7) Provide a description of programs that are available to personnel desiring assistance in dealing with drug, alcohol, **fatigue,** or other problems that could adversely affect the performance of activities within the scope of this part;

(8) Describe the consequences of violating the policy;

(9) Describe the individual's responsibility to report any legal actions, as defined in §26.5; and

(10) Describe the individual's responsibility to report FFD concerns.

(c) Procedures. The licensee and C/V shall prepare written procedures that describe the methods to be used in implementing the FFD policy and the requirements of this part. The procedures shall:

(1) Describe the methods and techniques to be used in testing for drugs and alcohol, including procedures for protecting the individual providing a specimen and the integrity of the specimen, and the quality controls used to ensure the test results are valid and attributable to the correct individual.

(2) Describe immediate and follow-up actions that will be taken, and the procedures to be used, in those cases where individuals subject to this part are determined to have:

(i) Been involved in the use, sale or possession of illegal drugs;

(ii) Consumed alcohol during the mandatory pre-work abstinence period, while on duty, or to excess before reporting to duty, as demonstrated with a test that can be used to determine BAC;

(iii) Attempted to subvert the testing process by adulterating or diluting specimens (in vivo or in vitro), substituting specimens, or by any other means;

(iv) Refused to provide a specimen for analysis; or

(v) Had legal action taken on a drug- or alcohol-related charge.

(3) Describe the process to ensure that persons called in to perform an unscheduled working tour are fit for duty, and the requirements for licensee and C/V personnel who are scheduled by licensee emergency plans and procedures to physically report to a licensee's Technical Support Center or Emergency Operations Facility. Consumption of alcohol during the abstinence period shall not by itself preclude a licensee from using individuals needed to respond to an emergency. At a minimum:

(i) The procedure must require a statement to be made by a called-in person as to whether the individual considers himself or herself fit for duty and whether the individual has consumed alcohol within the pre-duty abstinence period stated in the policy;

(ii) If alcohol has been consumed within this period and the person is called in, the procedure must:

(A) Require a determination of fitness by breath alcohol analysis or other means; and

(B) Require the establishment of controls and conditions under which the individual who has been called-in can perform work, if necessary.

(iii) If the individual reports that he or she considers himself or herself unfit for duty for other reasons, including illness, fatigue, or other potentially impairing conditions, and the person is

called in, the procedure must require the establishment of controls and conditions under which the individual can perform work, if necessary.

(4) Describe the process to be followed when a worker declares, while on duty, that he or she is not fit for duty for reasons including illness, fatigue, or other potentially impairing conditions. The procedure shall describe individual and licensee responsibilities and require the establishment of controls and conditions under which the individual can perform work, if necessary.

(5) Describe the process for implementing the work scheduling controls.

(**6**) Describe the process to be followed if an individual's behavior raises a concern regarding possible possession, use or sale of illegal drugs, possession or use of alcohol on-site, or impairment of any kind that may constitute a risk to the health and safety of the public. The procedure must require that persons who have a FFD concern about another individual's behavior contact the personnel designated in licensee and C/V procedures to report the concern. The procedure also must state that the decision to conduct a determination of fitness of an individual who may be impaired, which may include, but is not limited to, testing for drugs and alcohol, shall be made by appropriate personnel.

§ 26.29 Training

(a) Content of training. Licensees and C/Vs must ensure that individuals subject to this part have the knowledge and abilities (KAs) required to implement their responsibilities under the FFD policy, as follows:

(1) Knowledge of the policy and procedures that apply to the individual and the consequences of violating the policy;

(2) Knowledge of the individual's role and responsibilities under the FFD program;

(3) Knowledge of the roles and responsibilities of others, such as the MRO, and the human resources, FFD and EAP staffs;

(4) Knowledge of the EAP services available to the individual;

(5) Knowledge of the personal and public health and safety hazards associated with abuse of illegal and legal drugs, including alcohol;

(6) Knowledge of the potential effects on job performance of prescription and over-the-counter drugs, dietary conditions, illness, mental stress, and fatigue;

(7) Knowledge of prescription and over-the-counter drugs and dietary conditions that have the potential to affect drug and alcohol test results;

(8) Ability to recognize drugs and indications of the use, sale, or possession of drugs;

(9) Knowledge of the indications and risk factors for common sleep disorders and effective shiftwork strategies for obtaining adequate rest;

(10) Ability to identify contributors to decreased alertness in the workplace and the effective use of fatigue countermeasures;

(**11**) Ability to observe and detect performance degradation, indications of impairment, or behavioral changes; and

(**12**) Knowledge of the individual's responsibility to report fitness concerns; and ability to initiate appropriate action, including referral to the person(s) designated by the licensee or C/V to receive fitness concerns and to the EAP.

(b) Comprehensive examination. Successful completion of training must be demonstrated by passing a comprehensive examination that addresses the KAs in paragraph (a) of this section. The examination must include a comprehensive random sampling of all KAs with questions that test each KA, including at least one item for each KA. The examination must be

administered under the supervision of a proctor as defined by licensee or C/V training requirements. The minimum passing score required shall be 80%. Remedial training and testing is required for individuals who fail to answer correctly at least 80% of the test questions. The examination may be administered using a variety of media, including, but not limited to, hard-copy test booklets with separate answer sheets or computer-based administration.

(c) Training administration. Licensees and C/Vs shall ensure that individuals performing activities under this part are trained, as follows:

(1) Training for all personnel must be completed prior to an initial assignment of duties within the scope of this part.

(2) Refresher training must be completed on a nominal 12-month frequency, or more frequently where the need is indicated. Individuals who pass a comprehensive annual examination that meets the requirements in paragraph (b) of this section may forgo the refresher training.

(3) Initial and refresher training may be delivered using a variety of media, including, but not limited to, classroom lectures, required reading, video, or computer-based training systems. The licensee or C/V must monitor that training is completed and provide a qualified instructor or designated subject matter expert to answer questions in the course of training.

(4) Licensees may accept training of individuals who have been subject to a Part 26 program and who have had initial or refresher training, or successfully passed a comprehensive examination that meets the requirements in paragraph (b) of this section, within the prior 12 months.

§26.30 Work Scheduling Controls

(a) Work scheduling controls shall be implemented at nuclear power reactors authorized to operate. These controls shall apply to the following categories of job functions:

(1) operation or directing the operation of systems and components that a risk-informed evaluation process has shown to be significant to public health and safety;

(2) maintenance or directing the maintenance of structures, systems and components that a risk-informed evaluation process has shown to be significant to public health and safety;

(3) performing the duties of a Health Physics or Chemistry technician required as part of the minimum shift complement for the on-site emergency response organization;

(4) performing the duties of a Fire Brigade member responsible for understanding the effects of fire and fire suppressants on safe shutdown capability as required by 10 CFR 50, Appendix R, Paragraph H, "Fire Brigade."

(5) performing security duties as an armed member of the security force, central alarm station operator, secondary alarm station operator, security shift supervisor, or watchperson.

(b) *Individual Work Hour Controls*. Personnel performing the functions identified in §26.30(a) shall be subject to the following work scheduling controls:

(1) Individuals shall not work more than 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) Individuals shall have a minimum 10-hour break between work periods. Participation in shift turnover is permitted during the break period. An 8-hour break is permitted as an exception to the 10-hour break requirement if the 8-hour break is necessary to accommodate a scheduled transition of a crew between work schedules or shifts.

(3) Licensees may authorize individual workers to deviate from the requirements of §26.30(b)(1) and (2) provided:

(i) the licensee could not have reasonably foreseen or controlled the circumstances necessitating the deviation,

(ii) the operations shift manager determines that the deviation is necessary to mitigate or prevent conditions adverse to safety, or the security shift manager determines that the deviation is necessary to maintain the security of the facility, and

(iii) a supervisor trained in the contributors, symptoms, and effects of fatigue assesses the individual's fitness for duty and determines that it will not be adversely affected by the additional work period to be authorized under the deviation. As a minimum, the assessment shall address the individual's work history for the past 7 days, the potential for fatigue-related errors to affect the safe performance of the work, and the use of any compensatory measures.

(4) The basis for individual deviations from the requirements of §26.30(b)(1) and (2) shall be documented. The documented basis shall include:

(i) a statement of the scope of work for which the individual work limit extension is approved and a description of the circumstances causing the need for the work schedule extension to be unforseen or uncontrollable,

(ii) the basis for the determination that the work schedule extension is necessary to mitigate or prevent conditions adverse to safety or maintain the security of the facility,

(iii) the basis for the determination that the individual's fitness for duty will not be adversely affected by the additional work period to be authorized under the deviation, including the use of any compensatory measures.

(c) *Group Work Hour Controls*.

[Deferred pending issuance of Compensatory Measures]

(d) Licensees shall be exempt from the individual and group work scheduling controls during declared emergencies as defined in the facility's emergency plan.

(e) Licensees shall monitor and control individual work hours to ensure that worker alertness and performance are not compromised. As a minimum, the plant manager, or designee, shall review individual hours actually worked on a quarterly basis to ensure that workers are not being assigned hours that can compromise their alertness and performance.

§ 26.31 Drug and alcohol testing

(a) General. To provide a means to deter and detect substance abuse, licensees shall implement drug and alcohol testing programs for persons subject to this part.

(b) FFD program personnel.

(1) Licensees and C/Vs shall carefully select and monitor FFD program personnel, as defined in 26.25(a)(4) of this subpart, based upon the highest standards for honesty and integrity, and shall implement measures to ensure that these standards are maintained. These measures must ensure that the honesty and integrity of such persons is not compromised or subject to influence attempts due to personal relationships with any individuals subject to testing, an undetected or untreated substance abuse problem, or other factors. At a minimum:

(i) Supervisors, co-workers within the same work group, and relatives of the individual being tested shall not perform any assessment or evaluation procedures. The integrity of specimen collections in these instances may be assured through monitoring of the collection by an independent individual designated by the licensee or C/V for this purpose, including, but not limited to, security force or quality assurance personnel who have been trained to monitor specimen collections and the preparation of specimens for shipping;

(ii) Appropriate background investigations, criminal history checks, and psychological evaluations of the FFD program personnel must be completed before assignment to tasks directly associated with administration of the FFD program. The credit and criminal history checks must be periodically updated.

(iii) FFD program personnel shall be subject to a behavioral observation program designed to assure that they continue to meet the highest standards of honesty and integrity.

(2) Use of specimen collection services for drugs or alcohol at a local hospital or other organizations that meet the requirements of 49 CFR 40, “Procedures for Department of Transportation Workplace Drug and Alcohol Testing Programs” (65 FR 41944, August 9, 2001) is acceptable for FFD program personnel listed in 26.25(a)(4) of this part.

(c) Conditions for testing. Licensees shall administer drug and alcohol tests under the following conditions:

(1) Pre-access. Within 30 days before the assignment to activities within the scope of this part, unless the individual meets the conditions for an exemption described in §§26.9 or 26.25(b);

(2) For cause. In response to any observed behavior or physical condition that creates a reasonable suspicion of possible substance abuse or after receiving credible information that an individual is abusing drugs or alcohol;

(3) Post-event. As soon as practical after an event involving a failure in individual performance that resulted in:

(i) A significant injury or illness that results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness, or a significant injury or illness diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness;

(ii) A radiation exposure or release of radioactivity in excess of regulatory limits, or

(iii) Actual or potential substantial degradations of the level of safety of the plant.

(4) Return to duty. Before an individual's authorization is reinstated following a violation of the substance abuse provisions of the FFD policy;

(5) Follow-up. As part of a follow-up plan to verify continued abstinence from substance abuse; and

(6) Random. On a statistically random and unannounced basis so that all persons in the population subject to testing have an equal probability of being selected and tested.

(d) General requirements for drug and alcohol testing.

(1) Substances tested. Licensees shall, at a minimum, test for marijuana, cocaine, opiates, amphetamines, phencyclidine, and alcohol.

(i) In addition, licensees may consult with local law enforcement authorities, hospitals, and drug counseling services to determine whether other substances with abuse potential are being used in the geographical locale of the facility and by the local workforce that may not be detected in the panel of drugs specified in (d)(1) of this paragraph.

(A) When appropriate, other substances so identified may be added to the panel of substances for testing.

(B) Appropriate cutoff limits must be established by the licensee for these substances and management actions must be the same for the additional substances as for those in the required panel of drugs specified in (d)(1) of this paragraph.

(C) The licensee shall establish rigorous testing procedures for these substances that are consistent with the intent of this part, so that the appropriateness of the use of these substances can be evaluated by the MRO.

(ii) Licensees may also test for any illegal drugs or any other substances suspected of having been abused by an individual and may consider any detected drugs or metabolites when determining appropriate action under Subpart D of this part. Any substances detected, including, but not limited to drugs or drug metabolites, may be considered in the analysis of any specimen suspected of being adulterated, diluted (in vivo or in vitro), substituted, or tampered with by any other means.

(2) Random testing.

(i) Random testing must include testing during all types of work periods, including weekends, backshifts, and holidays.

(ii) At a minimum, random tests must be administered by the FFD program on a nominal weekly frequency and at various times during the day.

(iii) Individuals selected for random testing must be required to report to the collection site as soon as reasonably practicable after notification, within the time period specified in FFD program procedures.

(iv) Reasonable efforts must be made to test persons selected for random testing. Persons offsite when selected for testing, and not reasonably available for testing when selected, must be tested at the earliest reasonable and practical opportunity when both the donor and collectors are available to collect specimens for testing and without prior notification to the individual that he or she has been selected for testing.

(v) A person completing a test shall be immediately eligible for another unannounced test.

(vi) The sampling process used to select individuals for random testing shall ensure that the number of random tests performed annually is equal to at least 50% of the workforce population that is subject to the FFD program.

(3) Drug testing.

(i) Testing of urine specimens for drugs, except initial tests performed by licensees under paragraph (ii) below, must be performed in a laboratory certified by HHS for that purpose consistent with its standards and procedures for certification. Specimens sent to HHS-certified laboratories must be subject to initial validity and drug testing by the laboratory. Specimens screened as non-negative must be subject to confirmatory testing by the laboratory, except for invalid specimens that cannot be tested. Licensees shall ensure that laboratories report results for all specimens sent for testing, including blind performance test specimens.

(ii) Licensees may conduct initial validity and drug tests of urine aliquots to determine which specimens are valid and negative and need no further testing, provided the licensee's staff possesses the necessary training and skills for the tasks assigned, the staff's qualifications are documented, and adequate quality controls for the testing are implemented.

(iii) Licensees and C/Vs must, at a minimum, apply the cutoff levels specified in §26.163(a)(1) of this part for initial drug testing and in §26.163(b) of this part for confirmatory drug testing. Licensees, at their discretion, may implement programs with lower cutoff levels for drug testing. If a licensee or C/V implements lower cutoff levels, and an individual is determined to have a confirmed positive test result using the

licensee's or C/V's more stringent cutoff levels, the individual must be subject to all management actions and sanctions required by the licensee's or C/V's policy and this part, as if the individual had a confirmed positive test result using the cutoff levels specified in this part.

(4) Alcohol testing. Initial tests for alcohol must be administered by breath or oral fluids analysis using alcohol analysis devices that meet the requirements of §26.91. If the initial test shows a BAC of 0.02 percent or greater, a confirmatory test for alcohol must be performed. The confirmatory test must be performed with a breath alcohol analysis device meeting the evidential standards described in §26.91(a).

(5) If an individual has a medical condition that makes collection of breath, oral fluids, or urine specimens difficult or hazardous, the MRO may authorize an alternative evaluation process, tailored to the individual case, for determining whether a violation of the FFD policy has occurred, provided this process includes measures to prevent subversion and can achieve results comparable to those produced by urinalysis for drugs and breath analysis for alcohol.

(6) Specimens collected under NRC regulations may only be designated or approved for testing as described in this part and may not be used to conduct any other analysis or test without the permission of the donor.

§26.32 Fatigue Assessment

(a) Licensees shall assess workers for fatigue induced impairment in the following circumstances:

(1) For-cause. In response to any observed behavior or physical condition that creates reasonable suspicion that an individual is not fit-for-duty.

(2) Self-declaration. In response to a declaration by an individual that he or she is not fit for duty because of fatigue.

(3) Post-event. In response to events requiring post-event drug and alcohol testing as specified in §26.31(c)(3).

(b) Fatigue assessments shall be conducted by individuals trained in the symptoms, contributing factors, and effects of fatigue. The assessment shall address, as a minimum, the following factors:

(1) acute fatigue;

(2) cumulative fatigue; and

(3) circadian factors.

§ 26.33 Behavioral observation

Licensees and C/Vs with approved FFD programs must assure that individuals performing activities under this part are subject to behavioral observation by observers trained in accordance with §26.29 of this part to detect behaviors that may indicate possible possession, use or sales of illegal drugs, possession or use of alcohol on-site, or impairment **from fatigue or** any cause that, if left unattended, may constitute a risk to the health and safety of the public. Individuals assigned to perform activities within the scope of this part must report fitness concerns to the licensee or C/V personnel designated in the FFD policy. When the MRO is on-site at a licensee's facility, the MRO must be subject to behavioral observation.

§ 26.35 Employee assistance programs

(a) Each licensee subject to this part, and each C/V with a licensee-approved FFD program, shall maintain an employee assistance program (EAP) to strengthen the

FFD program by offering assessment, short-term counseling, referral services, and treatment monitoring to its employees with problems that could adversely affect the performance of activities within the scope of this part. Employee assistance programs must be designed to achieve early intervention and provide for confidential assistance.

(b) Licensees are not required to provide EAP services to C/V employees.

(c) The EAP staff shall inform licensee or C/V management, as appropriate, when a determination has been made that any individual's condition constitutes a hazard to himself or herself or others, including those who have self-referred.

§ 26.37 Protection of information

(a) Each licensee subject to this part, and any C/V upon which a licensee relies, that collects personal information about an individual for the purpose of complying with this part, shall establish and maintain a system of files and procedures for the protection of the personal information. Records shall be maintained and used with the highest regard for individual privacy.

(b) A signed consent that authorizes the disclosure of the personal information collected and maintained under this part must be obtained by the licensee or C/V prior to disclosure of the personal information, except for disclosures to the following individuals:

(1) The subject individual or his or her representative, when the representative has been designated in writing by the individual for specified FFD matters;

(2) Assigned MROs;

(3) NRC representatives;

(4) Appropriate law enforcement officials under court order;

(5) Licensee and C/V representatives who have a need to have access to the information in performing assigned duties, including determinations of fitness, audits of licensee or C/V FFD programs, and human resources or personnel functions;

(6) The presiding officer in a judicial or administrative proceeding initiated by the subject individual,

(7) Persons deciding matters on review or appeal; and

(8) Other persons pursuant to court order.

(c) Personal information collected under this part shall be disclosed to other licensees and C/Vs, or their authorized representatives, legitimately seeking the information as required by this part for authorization decisions and who have obtained a release from the subject individual.

(d) Upon receipt of a written request by the subject individual or his or her designated representative, the licensee, C/V, or HHS-certified laboratory possessing such records shall promptly provide copies of all records pertaining to the determination of a violation of the FFD policy, including test results, MRO reviews, and management actions pertaining to the subject individual. Records relating to the results of any relevant laboratory certification review or revocation of certification proceeding must be obtained from the relevant laboratory and provided to the subject individual upon request.

(e) Licensee and C/V contracts with HHS-certified laboratories and procedures for a licensee's testing facility shall require that test records be maintained in confidence, except as provided in paragraphs (b), (c) and (d) of this section.

(f) This section does not authorize the licensee or C/V to withhold evidence of criminal conduct from law enforcement officials.

§ 26.39 Review process for FFD policy violations

(a) Each licensee subject to this part, and C/Vs with licensee-approved FFD programs, shall establish a procedure, for their respective employees and applicants for unescorted access, for the review of a determination that the individual has violated the FFD policy. The procedure must provide for an objective and impartial review of the facts relating to the determination that the individual has violated the FFD policy.

(b) The procedure must provide notice to the individual of the grounds for the determination that the individual has violated the FFD policy, and must provide an opportunity to respond and to submit additional relevant information.

(c) The review must be conducted by persons not associated with the administration of the FFD program (see description of FFD program personnel in §26.25(a)(4) of this part), and may include licensee or C/V management personnel.

(d) If the review finds in favor of the individual, the relevant records must be corrected.

(e) A review procedure need not be provided by the licensee to employees of C/Vs when the C/V is administering a drug and alcohol testing program for its applicants and employees.

§ 26.41 Audits and corrective action

[Requirements concerning fatigue TBD]

(a) General. Each licensee subject to this part is responsible for the continuing effectiveness of the FFD program, including FFD program elements that are provided by C/Vs, the FFD programs of any C/Vs that are accepted by the licensee, and the programs of the HHS-certified laboratories relied upon by a licensee and its C/Vs. Each

licensee shall ensure that audits of these programs are conducted and that corrective actions are taken to resolve any problems identified.

(b) FFD program. Each licensee subject to this part, and C/Vs with licensee-approved FFD programs, shall ensure that the complete FFD program is audited as needed but no less frequently than every 36 months. Licensees and C/Vs are responsible for determining the appropriate frequency, scope, and depth of additional auditing activities within the three-year period based on review of program performance indicators such as the frequency, nature, and severity of discovered problems, testing errors, personnel or procedural changes, previous audit findings, and "lessons learned."

(c) C/Vs and HHS-certified laboratories.

(1) FFD services provided to the licensee by C/V personnel who are off site or are not under the direct daily supervision or observation of licensee personnel, including but not limited to, contracted MRO, EAP and specimen collection services, shall be audited on a nominal 12-month frequency.

(2) Annual licensee and C/V inspections and audits of HHS-certified laboratories need not duplicate areas inspected in the most recent HHS certification inspection. However, licensees and C/Vs must review the HHS certification inspection records and reports to identify any areas in which the licensee or C/V uses services that were not addressed by the HHS certification inspection. Any additional areas identified by licensees or C/Vs must be audited on a nominal 12-month frequency. Organizations and professionals that provide FFD program services, but who are not routinely involved in providing services to a licensee’s or C/V’s FFD program, as specified in §26.25(b)(1), are exempt from this requirement.

(d) Contracts. Licensee's contracts with C/Vs and HHS-certified laboratories must reserve the right to audit the C/V, the C/V's subcontractors providing FFD program services, and the HHS-certified laboratories at any time, including at unannounced times, and to obtain all information and documentation reasonably relevant to the audits. Licensee contracts with C/Vs and HHS-certified laboratories must also provide the licensee with the ability to obtain copies of any documents, including reviews and inspections pertaining to a laboratory's certification by HHS, and any other data that may be needed to assure that the C/V, it's subcontractors, or the HHS-certified laboratory are performing their functions properly and that staff and procedures meet applicable requirements. In addition, before the award of a contract, the licensee shall ensure completion of pre-award inspections and/or audits of the procedural aspects of the C/V's or the HHS-laboratory's operations.

(e) Conduct of audits. Audits must focus on the effectiveness of the program and be conducted by individuals qualified in the subject(s) being audited. The individuals performing the audit must be independent from both FFD program management and from personnel directly responsible for implementing the FFD program.

(f) Audit results. The result of the audits, along with recommendations, if any, must be documented and reported to senior corporate and site management. C/Vs with licensee-approved FFD programs must also provide the licensees they serve with copies of the audit report. Each audit report must identify conditions adverse to the proper performance of the FFD program, the cause of the condition(s) and, when appropriate, recommend corrective actions. Management shall review the audit findings and take corrective actions, including re-audit of the deficient areas where indicated, to

preclude, within reason, repetition of the condition. The resolution of the audit findings and corrective actions must be documented.

(g) Sharing of audits. Licensees may jointly conduct audits, or accept audits of C/Vs and HHS-certified laboratories that were conducted by other licensees subject to this part, when the services provided to the sharing licensees by the C/Vs and HHS-certified laboratories are the same.

(1) Licensees shall review audit records and reports to identify the areas not covered by the shared or accepted audit.

(2) Sharing licensees need not re-audit the same C/V or HHS-certified laboratory for the same period of time, except to audit program elements and services used by the licensee that were not addressed in the shared audit.

(3) Each sharing licensee and C/V shall maintain a copy of the shared audit and HHS certification inspection records and reports, to include findings, recommendations and corrective actions.

(4) If an HHS-certified laboratory loses its certification, in whole or in part, a licensee or C/V is permitted to immediately use another HHS-certified laboratory that has been audited within the previous 12 months by another NRC licensee having the same drug panel and cut-off levels. The licensee or C/V must ensure completion of an audit of any areas not audited by another licensee or C/V within three months of the change.

SUMMARY OF STAKEHOLDER COMMENTS CONCERNING
DRAFT WORKER FATIGUE FATIGUE RULE LANGUAGE, REVISION 3

The following synopsis of substantive stakeholder comments was derived from staff meeting notes:

§26.25 Definitions

See white paper number one of Attachment 5

§26.27 Written Policy and Procedures

26.27(c)(4) The requirement, as written, limits self-declarations to periods when the worker is on duty and does not address self-declarations of not fit for duty by personnel calling in to report they are not for fit.

§26.30 Work Scheduling Controls Fatigue Assessments

26.30(a) The scope should be changed from nuclear power plants "authorized" to operate to "licensed" to operate and an explicit exclusion included for plants that are certified permanently defueled.

26.30(a)(4) The scope statement for fire brigade personnel needs to be revised because some licensees are not subject to Appendix R requirements, or have exceptions, and the wording should be revised to make it clear the requirements apply to the fire brigade leader and 2 other members of the fire brigade with the specified knowledge requirements.

26.30(b)(3)(ii) The requirement should be revised to allow a broader range of senior licensee managers to authorize deviations.

26.30(b)(3)(iii) The requirement should specify that the fitness for duty determination be a face-to-face assessment.

26.30(e) The requirement to control work hours to "ensure that worker alertness and performance are not compromised" should be rewritten to require "reasonable assurance that worker fitness for duty is not compromised."

§26.32 Fatigue Assessment

The following general comments, questions, and concerns were provided concerning the requirements in this section:

"For-cause" term has negative connotations because it is associated with illegal or willful violations of FFD.

Will fatigue assessment require §26.77 process?

Will self-declarations allow for projected assessments of FFD?

Must self-declarations be made in person or can they be made by phone?

For-cause and self-declaration are different in significance.

Fatigue assessments could put an individual's job in jeopardy.

Should post-event assessments be focused on the job or the individual?

Is assessment necessary if the supervisor agrees the individual can go home? If assessment is not required if supervisor agrees to relieve individual, does this create disparate treatment if supervisor questions the veracity of other individual's declarations and requires an assessment?

Should regulation require assessments to be performed by an M.D. or other professionally qualified individual?

What happens if an individual refuses to provide information that may be required for the fatigue assessment?

What is required if a fatigue assessment yields a positive result?

Companies may need to issue sanctions because of moonlighting policies.

Without sanctions workers may use requirements as a haven.

Corrective actions for fatigue findings may force sanctions for off-duty behavior.

If an individual is determined not FFD because of fatigue, is it necessarily a policy violation?

Management could abuse fatigue assessments to target unwanted employees.

White Paper Number One
Defining Directing Work
March 18, 2003

Purpose: The draft rule requires that the work hour scheduling controls applies to personnel directing the operation or maintenance of structures, systems and components that a risk-informed evaluation process has shown to be significant to public health and safety. It is important that there be a clear and consistent understanding of what ***directing*** operation or maintenance means.

Issue: In the draft work scheduling control excerpts listed below, the term directing is used to provide succinct guidance to the industry. There is the potential however for misinterpretation since a well-defined operational definition of directing is not provided.

26.30 Work Scheduling Controls

(a) Work scheduling controls shall be implemented at nuclear power reactors authorized to operate. These controls shall apply to the following categories of job functions:

(1) operation or ***directing*** the operation of structures, systems and components that a risk-informed evaluation process has shown to be significant to public health and safety;

(2) maintenance or ***directing*** the maintenance of structures, systems and components that a risk-informed evaluation process has shown to be significant to public health and safety]

Proposed Text for Definitions Section: ***Directing*** operation or maintenance means a first-line supervisor, foreman, or team leader that is working in the power plant providing direct supervision of an ongoing operational evolution or maintenance task**.**

White Paper Number Two

Covered Security Personnel

March 18, 2003

Purpose: The section is provided to list those categories of plant security personnel who are to be covered by the work scheduling controls associated with the work-hours portion of the worker fatigue rule.

Issue: The cited section includes watchpersons and, as such, is overly inclusive. Security watchpersons' duties and responsibilities are at a level where they should not be included within the scope of the work-hours portion of the worker fatigue rulemaking. Security watchperson duties are generally associated with vehicle/personnel access control and searches. The role of the security watchperson is much less critical than the armed member of the security force, central alarm station operator, secondary alarm station operator, or security shift supervisor. As such, the position of watchperson is much less susceptible to fatigue related errors of consequence. In all cases, the security watch stations manned by these personnel at key vehicle or personnel entrance points, are monitored and protected by other security personnel that fall within the scope of the work hour requirements.

Security watchpersons do not have the same link to fatigue-relate issues (i.e., maintaining alertness in static posts and/or armed response decision making), as alarm station monitors or armed responders. As such, both their required vigilance levels and cognitive demands are less than those for personnel who have to maintain exceptional levels of visual and auditory vigilance; watching and listening for the unexpected (e.g., plant operators and security armed responders).

A risk-informed perspective would focus the most significant controls (i.e., work hour limitations) on the most risk-significant tasks. Other tasks, while of less risk significance, are still important and would be covered by the more general fitness for duty requirements of Part 26.

Proposed Text: '26.30 Work Scheduling Controls

(a) Work scheduling controls shall be implemented at nuclear power reactors authorized to operate. These controls shall apply to the following categories of job functions:

(1) operation or directing the operation of structures, systems and components that a risk-informed evaluation process has shown to be significant to public health and safety;
(2) maintenance or directing the maintenance of structures, systems and components that a risk-informed evaluation process has shown to be significant to public health and safety
(3) performing the duties of a Health Physics or Chemistry technician required as part of the minimum shift complement for the on-site emergency response organization;
(4) performing the duties of a Fire Brigade member responsible for understanding the effects of fire and fire suppressants on safe shutdown capability as required by 10 CFR XX.XX; or
(5) performing security duties as an armed member of the security force, central alarm station operator, secondary alarm station operator, or security shift supervisor, ~~or watchperson~~.

.....

White Paper Number Three
Granting Work-Hour Deviations
March 18, 2003

Purpose: This draft section specifies the level of plant management that can determine and grant work-hours deviations for operations, maintenance and security personnel.

Issue: (1) The industry agrees that a senior-level plant manager should both determine whether a deviation is necessary and grant the deviation after pre-specified conditions have been met, focusing on both the work to be performed and the person(s) being granted the deviation. The industry does think, however, that by specifying only operations and security shift supervisors the pool of potential senior-level decision makers is limited. Suggested alternative language would generically specify senior-level plant decision-making personnel, with the requirement that approved senior-level titles be specified in individual plant procedures.

(2) Anchoring the decision process to the prevention of conditions adverse to safety limits the normal decision making process. Although infrequent, non-safety or security related situations do arise in a plant that would be adequately compelling to justify granting individuals work-hour deviations. As a consequence, rigidly adhering to safety and/or security precursors as the only drivers for the thoughtful process of granting deviations significantly reduces licensee management prerogatives. If the process for granting follows an auditable path with required decision points reviewed by responsible plant management, the precursors to the decision should remain at the plant level.

Proposed Text: (3) Licensees may authorize individual workers to deviate from the requirements of §26.30(b)(1) and (2) provided:

(i) the licensee could not have reasonably forseen or controlled the circumstances necessitating the deviation,

(ii) the operations shift manager, or a senior-level designee determines ~~that the deviation is necessary to mitigate or prevent conditons adverse to safety, or the security shift manager determines that the deviation is necessary to maintain the security of the facility~~ whether to grant work-hours deviations, taking into account the plant/security conditions and the physical condition of eh personnel being granted the deviation, and

(iii) a supervisor trained in the causes, symptoms, and effects of fatigue, performs an assessment in accordance with §26.32 and determines that the individual's fitness for duty will not be adversely affected by the additional work period to be authorized under the deviation and evaluates the need for compensatory measures.

White Paper Number Four
Work-Hour Deviation Documentation
March 18, 2003

Purpose: This draft section is designed to ensure individual work-hour deviations follow the prescriptive requirements in subpart (b) (3) by documenting the bases for granting the individual deviations from the requirements of 26.30 (b) (1) and (2).

Issue: (1) Although infrequent, non-safety or security related situations do arise in a plant that would be adequately compelling to justify granting individuals work-hour deviations. As a consequence, rigidly adhering to safety and/or security precursors as the only drivers for the thoughtful process of granting deviations significantly reduces licensee management prerogatives. If the process for granting follows an auditable path with required decision points reviewed by responsible plant management, the precursors to the decision should remain at the plant level.

(2) The attached form (Appendix A) provides guidance for plant staff to perform individual and task analyses, implement fatigue management strategies, as well as providing specific review and authorization points along a decision continuum. In addition, the completed form provides auditable documentation.

Proposed Text: (4) The basis for individual deviations from the requirements of §26.30(b)(1) and (2) shall be documented. The documented basis shall include:
(i) a description of the conditions or circumstances for which approval is requested ~~safety or security condition necessitating the work schedule extension,~~
(ii) the basis for ~~the determination that the individual's fitness for duty will not be adversely affected by the additional work period~~ approval of the deviation,including any measures taken to manage the potential for fatigue-related errors, and
(iii) ~~an assessment of the potential for fatigue-related errors to affect the safe performance of the work and the use of any compensatory measures.~~a completed fitness for duty assessment.

White Paper Number Five
Developing a Manning/Work-Hours Metric
March 18, 2003

Purpose: Generic Letter 82-12 and, until recently, the draft rule contained a requirement to staff for a nominal 42 hour work week. Over the last year, there have been discussions on how to monitor this manning/work-hour requirement and provide a sound regulatory basis for citing of violations. In the most recent draft, a limit of 48 hours was proposed as a target value for average hours worked per week.

Issue: Work-hour average values between 48 and 56 were discussed in a recent public meeting. These values are significantly affected by the metric used for calculation. Before an actual average work-hour limit can be adequately justified, the metric to be employed in calculating the limit must be clearly defined. As the paper progresses to define an acceptable metric, "X" will be used to define the average work-hours limit.

Defining an acceptable metric is the goal of this white paper; however, in the course of definition, attention will be paid to closing the gap between short-term limits of up to 72 hours worked per week, for an individual, and the important recognition that working at or near this limit for an extended period, increases the potential for fatigue-related issues.

A primary goal of an acceptable metric is its specificity in delineating "X," the point at which licensees must take action and, if necessary, regulatory action is indicated. The value "X" must have a clear nexus to actual hours worked and their impact on worker performance as it is affected by fatigue.

At a minimum, an acceptable metric should possess the following features:

- Be closely related to the function it is monitoring
- Be as simple as possible
- Be measured on an effective frequency.
- Provide reasonable visibility for affected work groups.
- Provide adequate flexibility for licensee response before regulatory action is required.

Be closely related to the function it is monitoring. There are several work-hours related measures that can be monitored. In the past, much of the work-hours related data collected came predominately from pay records. These data represented an amalgam of hours paid and overtime listed. When colleting historical data, pay records are often the only reliable source available. These data can provide a basis for relative comparison and developing long-term trends; however, they do not provide a definitive measure of hours actually worked, or short-term changes to the size of a

work force. These data are also not adequately compatible for inter-utility comparisons because of the wide divergence in the bases for computing worker pay and overtime.

Using hours actually worked provides a strong link to the work-hour limit parameter being targeted. Hours actually worked is sensitive to changes in the size and work load of the work force of interest. It is therefore recommended that data collection and decisions be based on hours actually worked.

Be as simple as possible, and be measured on an effective frequency. The proposal provided in the most recent public meeting for a rolling six-week average would be a cumbersome process and may not provide the most direct relationship to goal of the measurement exercise---a true hours worked value. Fluctuations in vacation and sick leave, along with hours paid but not worked (e.g., hourly employees called out are paid for four hours even if they work less.), negatively affect the target measure.

Calculating the proposed rolling average on a rolling six week basis is too frequent and as such presents a burden without concurrent benefit. Quarterly measurement and evaluation is consistent with conventional business monitoring cycles and well established surveillance frequencies. Six week rolling averages are rarely used and constitute undue burden to develop a methodology to perform essentially continuous calculations. Also, periodic measurement of this parameter will more clearly illuminate bulk changes in the parameter than the essentially continuous calculations in a rolling average (in other words, the meaning of the difference between two measurements taken one quarter apart would be more clear than the meaning of the difference between two "rolling averages," say, the rolling average on March 23 and the rolling average March 24). Finally, the parameter measured will change very slowly from day to day and week to week. Quarterly monitoring is sufficient to provide fine-grained data upon which to identify trends that require additional attention.

Provide reasonable visibility for different sections of the workforce. Calculating over-all work hour values for an entire work force would not provide adequate bases for manning decisions within functional work groups. It is suggested the calculations be preformed on functional work groups. Functional work groups means groups of plant personnel who perform similar functions (e.g., health physics technicians and chemistry technicians, and licensed and non-licensed operators are generally considered separate functional groups).

Provide adequate flexibility for licensee response before regulatory action is needed. The metric should be adequately robust to provide succinct indicators that the licensee can use to address staffing issues, well in advance of them escalating to the point where regulatory intervention is indicated. The metric should provide concrete gradations where acceptable is clearly delineated from unacceptable.

Considering all the above listed factors, we recommend the metric be calculated quarterly, based on the number of people in the functional group being measured, and the people who are in the functional group for any portion of the calculation period be prorated based on the percentage of time in that group.

Proposed Text: (1) The average work hours for personnel performing the functions identified in §26.30(a)(1)-(5) shall be controlled as follows:~~in accordance with the following limit. While the plant is operating, the number of hours actually worked by a [shift] shall not exceed an average of 48 hours per person per week [averaged over a rolling consecutive period not to exceed six weeks. Worker absences and workers who were not assigned to the shift for the entire period shall be prorated when calculating the average.]~~

(i) For groups of workers performing functions associated with an operating unit, the number of hours actually worked should not exceed an average of "X" hours per person per week. The average is calculated quarterly by dividing the total number of hours actually worked (for the included population) by the number of individuals in the population and the number of applicable operating weeks in the quarter. The calculation shall be performed on a functional group basis. Functional groups are groups of plant personnel who perform similar functions (e.g., health physics technicians, chemistry technicians, maintenance personnel, licensed operators and non-licensed operators are typically considered as separate functional groups). Turnover time and hours paid but not actually worked are not to be included in the calculation. In addition, workers who are assigned to a functional group, but are not actually working within the functional group for any portion of the calculation period will have their group-related hours prorated.

(ii) If the average of "X" hours per person per week is exceeded, the licensee shall enter the issue into the plant corrective action program and take corrective action to restore the average to the less than "X" hours per person per week goal. If the licensee is unable to restore the average to less than the goal within the next quarter, or if the average exceeds "Y" hours per person per week, the licensee shall notify the NRC in writing, specifying the circumstances that have prevented the licensee from restoring the average, and/or are projected to prevent the licensee from restoring the average within the next quarter, and the actions being taken to restore the average to less than "X" hours as soon as reasonably possible.

APPENDIX A to White paper number Four

Work Hour Exemption
(NOTE: A-B and C must be completed)

Date_____

Time _____

Employee:_____

Work hour limits to be exceeded: (e.g., 16/24–26/48)_____

Approved number of hours to be worked:_____

(A) Fitness for Duty Evaluation Completed:

Name_____Title_____

(B) Work-Scope and Task Evaluation Completed:

Reason(s) for continuance_____

Reason(s) for personnel selection_____

Fatigue management strategies and/or compensatory measures in place (specify)_____

Name_____Title_____

(C) Exemption Authorization: (Plant Manager or designee)

Name_____Title_____