

Detailed Stakeholder Comments from the Public Meetings

The staff held two public meetings regarding the Orders and additional security measures (ASMs) with each class of licensee during the period September 2003 to February 2004. The stakeholder comments and the staff's proposed resolutions are summarized below:

Independent Spent Fuel Storage Installations (ISFSIs) Comments

1. Section C.2(b) allows a group work-hour average of 60 hours per week during planned security system outages. Some licensees requested that the allowance include planned evolutions such as fuel movement, including fuel loading and transport of the fuel to storage casks. The staff believes that whereas fuel movement occurs infrequently, it is an important activity that places additional demands on security force personnel. Additionally, during the evolution, the licensee has several opportunities to start and stop operations, if necessary. Because opportunities exist to start and stop operations and with the increased demands placed on security officers during fuel movement, it is especially important that security force personnel remain vigilant and effectively perform their duties during these periods. Licensees should not increase security workforce hours beyond the contexts in the ASMs during these activities. Therefore, the staff did not incorporate the request.
2. Some ISFSIs are not physically co-located with a power reactor, but are located a short distance away from the site of a power reactor. Licensees of such facilities requested that the ASMs allow them to implement the fatigue Order for power reactors in order to use a uniform set of requirements for the ISFSI and the power reactor. The staff addressed the request by allowing ISFSIs and decommissioning reactor facilities to implement established fatigue programs from other power reactor facilities to reduce costs associated with implementing the ASMs at a site.
3. The ISFSI licensees noted that requirements should be based on risk. These licensees stated that for many of the facilities, the risk is considerably less than for power reactors (e.g., the reactor has been shut down, and the spent fuel has been removed and placed in storage casks). The Commission considered the potential consequences of terrorists attacks on these facilities when it previously established additional requirements for security officers. It is important that the officers remain alert when performing functions required by the site security plan. The proposed final Orders and ASMs are consistent with this expectation.
4. Licensees of ISFSIs and decommissioning reactors proposed an alternate approach to managing work hours for security officers. The Category I fuel cycle facilities had a similar comment. They requested that a simplified option be provided in the ASMs to control security force work hours versus using the group work-hour averaging method in Section C.2. The licensees proposed that security personnel be assigned a work process schedule not to exceed a nominal 42-hour week. Specifically, licensees proposed that annual overtime, outside the normal rotation schedule, shall be limited to 500 hours annually, with quarterly limits not to exceed 150 hours. After reviewing the proposal, the staff developed the option in Section C.1(a)(4). The option establishes controls for actual work hours rather

than overtime alone, and limits officers to 700 hours quarterly and 2,600 hours annually. This option may be used in place of the group work-hour controls in Section C.2. The quarterly hour limits are based on allowing individual officers the opportunity to work elevated work hours to cover operations that may be planned or emerge unexpectedly for the licensee during a quarter. The 700 hours per quarter are based on officers working 42 hours per week multiplied by 13 weeks and allowing an additional 154 hours, comparable to the 150 hours proposed by the licensees, to handle any planned or unplanned events for the licensee. The staff did not intend for the licensee to allow individual officers to work up to 700 hours each quarter and that is the reason for the annual limit of 2,600 hours. The 2,600 hours annual limit is based on officers working 42 hours per week multiplied by 50 weeks (it is assumed that officers will use 2 weeks of leave per year) and allowing an additional 500 hours, which is in agreement with the 500 hours proposed by the licensees, to handle any planned or unplanned events for the licensee. Additionally, the staff added in Section C.4 the requirement that the licensee state in its procedures which option it will use to determine security force work hours. It is the staff's intent and expectation that the licensee will not switch between the options for the sole purpose of maintaining compliance. During the staff's February 26, 2004, public meeting with ISFSI and decommissioning reactor licensees and the Nuclear Energy Institute (NEI), the attendees agreed with the changes, as well as the language about unplanned security outages and increased threat conditions in this option.

Decommissioning Reactor Facilities Comments

1. Some licensees indicated they do not have a fitness-for-duty (FFD) program in place and implementing a program that manages fatigue could be costly. This comment applies to the granting of a deviation from the individual work-hour controls in Section C.1(a)(3), which requires an evaluation by individuals with training in the symptoms, contributing factors, and effects of fatigue to determine that the worker's FFD would not be adversely affected by the additional work hours. The staff discussed options with the licensees for implementing fatigue training and noted that it is not requiring these licensees to implement a behavior observation program or FFD program identical to a power reactor program. Adequate training on fatigue would require not more than 3 hours and can be conducted through regularly scheduled training by the licensee.
2. Some licensees have a small administrative staff and believe that it is an unnecessary administrative burden to document self-declarations of being unfit for duty due to fatigue. The licensees recommend deleting the requirements concerning self-declaration from Section 4 of the ASMs. The documentation is necessary for periodic review of this program to ensure that officers are not forced to work while in a fatigued condition that may compromise their alertness and ability to maintain security for the facility. In addition, the documentation is only required if the individual is returned to duty (contrary to the individual's self-declaration of being unfit for duty) without a minimum of a 10-hour break. The documentation for these limited circumstances would not be expected to require more than a few minutes to complete.

3. Some licensees have a small administrative staff and only one security shift supervisor per shift. If the security shift supervisor for the upcoming shift is unable to come to work, the previous security shift supervisor must stay over to authorize any deviation (i.e., Section C.1(a)(3) of the ASMs) from the individual work-hour limits and the break between work periods. The licensees believe that it is an unnecessary administrative burden. These licensees requested that additional personnel be given the authority to allow deviations from the individual work-hour limits and the break between work periods. The authority to approve a deviation is limited to individuals qualified to determine whether the deviation is necessary to maintain the security of the facility and must be kept at a high enough level that use of this allowance is limited and appropriate. Those instances are rare when a security shift supervisor is unable to come to work and the on-shift supervisor must stay over to approve any deviations. For these reasons, the staff did not incorporate the requested change.

Category I Fuel Cycle Facilities Comments

1. The licensees requested similar relaxations previously granted to the power reactor licensees. The staff revised the draft ASMs to (1) exclude shift turnover time in the group work-hour controls for all classes of licensees; and (2) allow the average number of hours worked by personnel, during the actual conduct of the force-on-force exercises, to not exceed 60 hours per week, excluding shift turnover time for the licensee.
2. In general, the licensees asserted in the two meetings and in a letter dated January 28, 2004, from Mr. Winfred Nash to Mr. Glenn Tracy, that the Order is not required and imposes an unnecessary burden. The security requirements issued post September 11, 2001, have increased demands on security officers. The proposed ASMs are necessary to help ensure that fatigue does not compromise the ability of the security force to execute its responsibilities consistent with the requirements of 10 CFR 73.45 and 73.46.

Furthermore, in a letter dated March 3, 2004, from Mr. Winfred Nash to Chairman Diaz, BWXT reiterated its position that the fatigue Order is not required and imposes an additional complexity and cost to their operations that is not required, as well as unwarranted intrusion into management of its security operations. BWXT asserts that since September 11, 2001, it has increased security officer staffing by approximately a 50%. This has reduced officer overtime on average for the facility to approximately 20%, according to September 2003, data submitted by the licensee. Additionally, BWXT contends that at their facility, most officers work in two-person teams at all times, while those officers assigned to single-person stationary posts are frequently rotated through a variety of posts or given frequent breaks. As a consequence, BWXT believes that their officers are less likely to experience performance-related fatigue issues.

The staff acknowledges that certain BWXT staffing practices (e.g., two person teams, breaks, and frequent rotation of workers among job posts) can help mitigate the effects of fatigue on security officers. However, such practices have generally limited value in that they are only effective for a short time period and do not prevent fatigue, only delay the

onset of gross impairments of attention. The amount of time an individual has been continuously awake and the amount of prior sleep are the primary determinants of fatigue related degradations in performance. Although the stimulation of another worker or job rotation can aid officers in maintaining attention, other cognitive capabilities important to job performance (e.g., decision making) can continue to degrade as a function of fatigue. The staff also notes that the proposed work hour controls for the ASMs were based largely on the guidelines in the "NRC's Policy on Factors Causing Fatigue of Operating Personnel at Nuclear Reactors." The guidelines were developed primarily for personnel who work in multi-person teams. As a consequence, the staff does not believe that the use of multi-person teams, breaks, and job rotation warrant exceptions to the proposed requirements.

The proposed final ASMs require a more comprehensive and effective approach for managing fatigue of security personnel than the action described by the licensee. Specifically, the ASMs require work-hour controls that address both acute and chronic fatigue for any threat level. In addition, the ASMs require facilities to allow officers a minimum of a 10-hour break between work periods, which gives these individuals the opportunity to sleep a nominal 7 to 8 hours to mitigate fatigue. The staff acknowledges that work hours are not the only cause of worker fatigue; accordingly the ASMs address fatigue more broadly by requiring a formal process whereby individuals may self-identify themselves as unfit-for-duty due to fatigue and the licensees must review and handle this situation. The staff also agrees with BWXT that effective supervision is an important element of managing worker fatigue. The ASMs ensure that supervisors assessing worker fatigue have training appropriate to this task.

BWXT did not provide any unique or significant information for treating it differently from other licensees in the public meetings and their correspondence. The staff notes that the Orders will not impose a regulatory burden above and beyond what the Commission has already found acceptable for security force personnel at power reactors. The staff has developed requirements that give licensees substantial flexibility in implementing work-hour controls for their facilities, while at the same time reducing the likelihood that fatigue would compromise the ability of the security force to perform its responsibilities.

In conclusion, the staff believes the Order is required to ensure that the ability of the security force to perform its responsibilities is not compromised at any time, especially during increased threat conditions, which may require officers to work elevated work hours. As a consequence, issuance of this Order to the Category I fuel cycle facility licensees is warranted. Once the Order is issued, the licensee has an opportunity to respond to the Commission's Order within 20 days indicating the reasons, if any, the licensee cannot comply with this Order.

3. The Category I fuel cycle facility licensees requested a simplified option be provided in the ASMs to control security force work hours versus using the group work-hour averaging method in Section C.2. The staff developed this new option in Section C.1(a)(4). The option establishes controls for actual work hours rather than overtime, and limits officers to

700 hours quarterly and 2,600 hours annually. This option may be used in place of the group work-hour controls in Section C.2.

Gaseous Diffusion Plants (GDPs) Comments

1. Paragraph A of Section III of the Order states that implementation of the Order shall be completed no later than 180 days from the date of issuance. The Department of Energy (DOE) requested for the United States Enrichment Corporation (USEC) that the implementation period be extended to 270 days. The request is based on new demands that USEC will be facing beginning in June 2004 to provide increased security for the new DOE-depleted uranium conversion facilities at Paducah and Portsmouth. The facilities are hiring additional security officers to meet these demands; however, officers are required to have a "Q" clearance to perform their duties (as required by DOE), and the average clearance processing time for security personnel is currently approximately 460 days. The staff concludes that with the unique demands placed upon USEC to support DOE activities, it is acceptable to extend the implementation period of the Order to 270 days for USEC.
2. Section III, paragraph B.2, states that the licensee must notify the Commission within 20 days of issuance of the Order if the Order would impact safe operations of the facility. Both DOE and USEC requested that this section of the Order include reference to security when safety is referenced in this section. DOE and USEC believe that the Order impacts security programs as well as safety at the USEC facilities. The current language is adequate and sufficiently broad in scope that security is a subset of maintaining safety at the facility.
3. In a letter dated March 30, 2004, from Mr. Steven Toelle to Mr. Martin Virgilio as well as discussed in both public meetings, USEC stated that due to DOE contractual requirements, security officers are required to perform some type of physical fitness activity every week, which equates to approximately three additional work hours. Both DOE and USEC requested that the individual and group work-hour controls (Sections C.1(a)(1), C.2(a) and C.2(b)(1)) be revised to allow security officers to work these additional hours without the time being included in the group work-hour calculations and allowed during the 10-hour break between work periods. Individuals are given the flexibility when to perform this activity and both DOE and USEC believe that the physical activity helps mitigate fatigue. The staff acknowledges that physical exercise, in some instances, may provide limited improvements in sleep quality. The staff also recognizes that the exercise requirement can be met without necessarily causing an extension of the number of continuous hours an individual remains on duty, or disruption or reduction of sleep. The staff revised the ASMs to accommodate the request; however, the ASMs will limit the exclusion to no more than 3 hours per week from the group work-hour controls and the breaks between work periods.
4. For USEC only, DOE periodically requires that security officers support emergent operations (i.e., security events) that require the guarding of special nuclear or classified material and require officers to work elevated work hours for the operation. USEC requested that security officers, while performing only DOE-regulated activities, be exempt from the work-hour controls of this Order. However, USEC proposed that when an officer transitions back from performing DOE-regulated activities to performing NRC-regulated activities, the officer must be given a 48-hour break prior to commencing NRC-regulated

activities. The staff recognizes that this licensee has unique contractual requirements with DOE and therefore has updated Section C.1(a)(2) to reflect this unique requirement and require that officers be given a 48-hour break when transitioning from DOE activities to NRC activities.

5. Periodically, DOE (according to the Arming and Arrest Authority Security Plan (AAASP)) requires a sizeable number of GDP officers to test their skills and abilities (e.g., physical fitness and firearms tests). These officers are removed from their assigned duties to perform the tests and as a result other officers work elevated work hours for a short period to maintain security for the facility. USEC requested that they be allowed to work elevated work hours similar to other classes of licensees, such as power reactor and Category I fuel cycle facility licensees, whose security officers perform force-on-force drills. The staff agrees that adding provisions to the ASMs to address this DOE requirement is warranted and has provided a new Section C.2(d) to allow officers to not exceed 60 hours per week on average and during the actual conduct of the AAASP exercise.
6. DOE has its own security advisory system (i.e., security conditions (SECON)). USEC requested that the ASMs recognize the alternate SECON system and allow USEC to take similar actions in the final Order for an increase in threat advisory as promulgated by DOE. The staff agrees that this request is warranted and has referenced the DOE advisory system in the ASMs.
7. USEC and Honeywell requested that the 10-hour break between work periods be reduced to an 8-hour break to support the facility's 8 hour and 12 hour per day shifts and collective bargaining agreements between USEC and security (i.e., require that officers work overtime in increments of 4, 8, or 12 hours); additionally, USEC would like to maintain its ability to track work hours using current computer software. The staff did not incorporate the request since the 10-hour break period is based upon allowing individuals to receive a nominal 7 to 8 hours of sleep to mitigate fatigue.

In a letter dated March 30, 2004, from Mr. Steven Toelle to Mr. Martin Virgilio, USEC indicated that if the Commission does not reduce the 10-hour break between work periods to an 8-hour break and if the 3 hours per week of physical fitness training is not excluded from determining the group work-hour average and allowed during the 10-hour break period, then USEC will need to hire additional security personnel to comply with the work-hour restrictions of this Order. Therefore, USEC requests that the implementation period be extended to 460 days to account for the average clearance processing time for security personnel of approximately 460 days. The staff has proposed to the Commission (in item 3 above) to exclude up to 3 hours per week from the group work-hour controls and the break between work periods; however, the staff did not incorporate USEC's request to reduce the break period to 8 hours. The staff notes that the 460 days is an average clearance processing time and that in some cases officers have been able to receive their "Q" clearance in as little as 6 months. On the basis of these considerations, the staff did not extend the implementation period to 460 days. However, the staff accommodated the request to a limited extent by relaxing the implementation period (see comment 1).

8. In a letter dated March 30, 2004, from Mr. Steven Toelle to Mr. Martin Virgilio, USEC requested that in Section C.1(a)(3)(ii), for the individual authorized to approve deviations, be changed from the Security Shift Supervisor to the General Manager or Plant Shift Superintendent or Assistant Plant Shift Superintendent based upon USEC's current procedure requirements and technical service requirements (TSRs). The staff incorporated the change to support the licensee's TSRs.
9. USEC and ISFSI and decommissioning reactor facility licensees requested that the individual responsible for reviewing the number and duration of approved deviations in Section C.1(b) be changed to an individual other than the Security Manager. This reviewer should be someone that is an independent, higher level of management than the Security Shift Supervisor approving the deviations identified in Section C.1(a)(3)(ii). Furthermore, the staff notes that this action is performed periodically and is not required to be performed at a specific time, thereby allowing individuals to perform this review at their convenience. Based on discussions with USEC regarding its work practices as well as a letter dated March 30, 2004, from Mr. Steven Toelle to Mr. Martin Virgilio, the staff added to the ASMs that Senior Management personnel other than the individual authorizing the deviation in C.1(a)(3)(ii) may perform the review. For the other facilities (i.e., ISFSIs and decommissioning reactors), the staff did not incorporate the request because these facilities were requesting that any manager review the deviations; this did not meet the intent that the individual would be independent, qualified and at a higher level than the Security Shift Supervisor identified in Section C.1(a)(3)(ii) for performing the reviews.
10. USEC requested that in the group work-hour control sections (i.e., Sections C.2(a) and C.2(b)(1)), workers who did not work 75% of the normally scheduled hours during the averaging period include only those workers who were on extended disability leave or extended military leave. The staff did not incorporate this request, because it would allow workers who were on extended leave for other reasons (e.g., sickness, vacation, jury duty, and so forth) to be included when determining the group work-hour average. This would artificially reduce the group average and allow officers to work elevated hours above the group work-hour average intended by the NRC within these sections of the ASMs.
11. USEC, in the planned security system outages of Section C.2(b)(1), requested that the averaging period used to determine the group work-hour average could exceed 6 weeks. This request would allow the licensee to use periods greater than 6 weeks when determining the group work-hour average, thereby allowing officers to increase their work hours over a longer period while still maintaining the 60 hours per week average required within this section. Another licensee (i.e., Honeywell) had a similar comment in that Honeywell wanted to extend the averaging period from 6 weeks to 12 weeks for determining the group work-hour average. The staff did not incorporate either request. The intent of using a period not to exceed 6 weeks, when determining the work-hour average is to obtain prompt feedback regarding licensee performance in managing group work-hours and potential cumulative fatigue.

12. USEC requested an extension of the 120-day period of increased work hours allowed in Sections C.2(b)(2) and C.2(c)(2) for planned and unplanned security system outages and increased threat conditions. The basis for USEC's request is the need to hire additional officers. The period for using this allowance would be extended until security clearances are obtained, which currently averages 460 days. The staff did not incorporate the request because the intent of the 120-day limit is to limit the time period officers are required to work these elevated work hours, thereby limiting security force fatigue.
13. USEC requested that Section C.2(c) for unplanned security system outages and increase in threat levels be changed to include conditions that require increased staffing such as unplanned security work for DOE and NRC, increase in DOE or NRC threat conditions, and periods of training or testing to determine regulatory compliance. The staff interprets this request as an allowance for USEC to utilize this section of the ASMs frequently to support work, so that officers are not subjected to group work-hour limits when this section is utilized. The staff did not incorporate this request. The intent is that this section only be used for infrequent events such as security outages or increased threat levels. Additionally, the staff notes that the ASMs currently address the following issues: unplanned security outages, increased threat levels for both NRC and DOE through each agency's advisory program, and training and testing as required by the DOE AAASP Exercise.
14. Section C.3 allows exemption from the ASMs during declared emergencies. The GDP licensees requested that this section also include provisions for labor strikes, lockouts, and work stoppages. The staff did not incorporate the requested provisions. The staff notes that the licensee has control over these issues and that the licensee has the ability to request a relaxation to these ASMs at anytime if it is able to show good cause.
15. USEC stated that the individual annual and quarterly limits option is not required for its facility and requested that the option not be included within the ASMs. USEC believes that the limit was incorporated to support DOE-regulated activities. The staff did not incorporate this request and included the option since its purpose is to allow facilities to utilize an alternate approach to managing work hours for security officers. This option may be used in place of the group work-hour controls in Section C.2.

Honeywell Comments

1. Honeywell indicated that the original Note 1, which allows for a deviation from a 10-hour break to an 8-hour break for a scheduled transition of crews between work schedules or shifts, is not required for its facility and asked that it be deleted. The staff incorporated the request.
2. Honeywell requested that the individual work-hour controls in Section C.1(a)(1)(ii) be changed from security officers are not to work greater than 26 hours in any 48-hour period to 26 hours in any 32-hour period. The staff did not incorporate the requested changes since the licensee could require security officers to work a 16-hour shift, allow only a 6-hour break, and require officers to work a 10-hour shift. The licensee under this scenario would only allow a 6-hour break, which is less than the 10-hour break between work periods to mitigate fatigue.