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(64FR67202) August 19, 2002

Ms. Annette L. Vietti-Cook  
Secretary of the Commission  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Attention: Rulemakings and Adjudications Staff

**Re: NRC Proposed Rulemaking Concerning Worker Fatigue**

Dear Ms. Vietti-Cook:

The following comments concerning the NRC's proposed rulemaking on worker fatigue are submitted on behalf of the Nuclear Utility Backfitting and Reform Group ("NUBARG").<sup>1</sup> These comments supplement previous comments filed by Winston & Strawn on behalf of NUBARG and other licensees concerning a Petition for Rulemaking<sup>2</sup> (letter dated February 14, 2000). NUBARG has followed with interest the NRC's ongoing efforts associated with the proposed rulemaking, and for the reasons discussed below, recommends that all actions associated with the rulemaking be suspended until the NRC performs a backfit analysis to determine whether it can substantiate the proposed rulemaking. It is NUBARG's opinion that the NRC has not yet demonstrated that the proposed rulemaking can satisfy the backfit rule since the majority of the proposed rule's basis is subjective and speculative. NUBARG's requested actions are consistent with specific direction from the Commission issued as part of its approval of the Staff's proposed rulemaking plan. The Commission requested that the Staff consider

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<sup>1</sup> NUBARG is a consortium of utilities (representing a number of operating power reactors) which was formed in the early 1980s and actively participated in the development of the NRC's backfitting rule (10 C.F.R. § 50.109) in 1985. NUBARG has subsequently monitored the NRC's implementation of the backfitting rule and regulatory reform efforts.

<sup>2</sup> PRM-26-2, 64 Fed. Reg. 67,202 (Dec. 1, 1999).

backfit implications identified by the Office of General Counsel which, heretofore, does not appear to have occurred.

NUBARG believes, based on its participation in Stakeholder meetings and review of supporting information provided by the Staff, that the proposed rulemaking will not provide a substantial increase in public health and safety over the level of protection provided by current requirements and practices. The nuclear industry already enjoys the reputation of being one of the safest industries in which to work. This reputation is due, in no small measure, to the continuing ability of nuclear power plant employees, and, in particular, licensed operators, to support operation of their units. Recognizing that operator effectiveness is of paramount importance and an essential element of the defense in depth of the public health and safety, the nuclear power industry takes appropriate measures to ensure the high performance and alertness of operators, as well as other workers.

The key is adherence to and enforcement of already existing worker fatigue provisions in technical specifications and plant procedures when appropriate. The nuclear industry currently devotes significant resources to the identification, monitoring, and improvement of human performance issues. Moreover, the NRC has required licensees to adopt fitness-for-duty and behavioral observation programs and administrative requirements applicable to a range of employees, including all those having unescorted access to a nuclear power facility. These efforts have been successful in accomplishing their goals for safety in the nuclear power industry.

### **Background**

The proposed rulemaking was initiated in response to a petition for rulemaking. On December 1, 1999, the NRC published for public comment a notice of receipt of a petition for rulemaking dated September 28, 1999, that was filed with the Commission by Mr. Barry Quigley.<sup>3</sup> The petitioner stated that his action was based upon the transition of the electric power industry which translates into fewer people who are working more and sometimes many more hours at nuclear power plants. The petitioner apparently believed that clear and enforceable working hour limits are required to ensure that the impact of personnel fatigue is minimized. In particular, the petitioner requested that the NRC (1) add enforceable working hour limits to 10 C.F.R. Part 26, (2) add a criterion to 10 C.F.R. § 55.33(a)(1) to require evaluation of known sleeping disorders, (3) revise the Enforcement Policy to include examples of working hour violations warranting various NRC sanctions; and (4) revise NRC Form-396 to include self-

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<sup>3</sup> 64 Fed. Reg. 67,202 (Dec. 1, 1999).

disclosure of sleeping disorders by licensed operators.<sup>4</sup> The petitioner also requested changes to NRC Inspection Procedure 81502, "Fitness for Duty Program."<sup>5</sup>

Winston & Strawn's comments on the petition (February 14, 2000) addressed the points raised by the petitioner and demonstrated that there is no basis for establishing regulations on working hour limits for the following reasons:

- Licensees of nuclear power plants adequately control overtime and have clear incentives from a business perspective to maintain sufficient staff for routine operations and contingencies.
- In response to Generic Letter 82-12, "Nuclear Power Plant Staff Working Hours" (June 15, 1982), licensees committed to develop administrative procedures governing required shift staffing, and most (if not all) licensees have included requirements in plant technical specifications, thereby providing the NRC with enforcement authority over these requirements.<sup>6</sup>
- Data presented by the petitioner did not demonstrate that staffing being less than "adequate" correlates to "fatigue," nor did the data demonstrate that "fatigue" had contributed in "a respectable percentage" to any major events in the NRC Human Factors Information System database.
- Petitioner's citations to studies of fatigue in the transportation industry are interesting, but have not been demonstrated to be relevant to the manner in which nuclear power plant workers perform safety-related activities, (e.g., quality assurance controls, independent verification, post-maintenance testing).
- Experience in the nuclear power industry does not support Petitioner's assertion that fatigue has been under-reported as a root cause of significant events.

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<sup>4</sup> *Id.* at 67,203-04.

<sup>5</sup> *Id.* at 67,202.

<sup>6</sup> For example, the NRC issued a noncited violation of Technical Specification 6.2.2.g for failure to adhere to overtime restrictions at Arkansas Nuclear One (NRC Inspection Report 50-313; 50-368/2002-03, July 19, 2002).

### **Staff's Proposed Actions in Response to Petition**

In SECY-01-0113, the NRC Staff proposed to the Commission resolution of the petition and requested approval of a rulemaking plan.<sup>7</sup> The Staff identified four options and recommended an option (*i.e.*, Option 2) that would provide an alternative approach to the petition for amending the NRC's fitness-for-duty requirements in 10 C.F.R. Part 26 to establish thresholds for working-hour controls. The approach would specify that hours worked in excess of these thresholds would be controlled through a risk-informed process.<sup>8</sup>

In justifying the proposed rulemaking, the Staff relied largely on subjective criteria which do not demonstrate the need for the proposed action. Though the Staff agreed that there must be a reasonable causative link between fatigue and adverse events, it did not agree that it must demonstrate significant problems due to fatigue in order to justify the new requirements. The Staff took issue with an underlying contention in the public comments on the petition that licensee's existing voluntary practices with respect to working hour limits eliminates the need for the rulemaking and for the NRC to perform a backfit analysis.<sup>9</sup> Notwithstanding the NRC's objections to the applicability of the backfit rule, it agreed that such an analysis would be performed.<sup>10</sup>

### **Commission Direction to the Staff**

Considering the Staff's comments concerning backfit, in the Commission's approval of the proposed rulemaking plan, it directed that, *inter alia*, the Staff "should address and resolve the backfit issues prior to expending significant resources on this rulemaking."<sup>11</sup>

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<sup>7</sup> SECY-01-0113, "Fatigue of Workers at Nuclear Power Plants," June 22, 2001.

<sup>8</sup> The Commission approved the option recommended by the Staff in "Staff Requirements - SECY-01-0113 - Fatigue of Workers at Nuclear Power Plants," Jan. 10, 2002.

<sup>9</sup> NUREG-BR-0058 (Rev. 3), "Regulatory Analysis guidelines of the U.S. Nuclear Regulatory Commission" (July 2000), Section 4.3.1, give guidance on the treatment of industry initiatives in estimating values and impacts for a regulatory/backfit analysis.

<sup>10</sup> SECY-01-0113, Att. 2 at 22-23.

<sup>11</sup> "Staff Requirements - SECY-01-0113 - Fatigue of Workers at Nuclear Power Plants," Jan. 10, 2002.

The backfitting issues identified by the Office of General Counsel in SECY-01-0113, are summarized below:<sup>12</sup>

- All four options proposed by the Staff would constitute a backfit, and it would be difficult to successfully assert that any of the exceptions set forth in 10 C.F.R. § 50.109(a)(4)(i) through (iii) would apply to the proposed rulemaking options.
- A backfit analysis should be prepared for the proposed rulemaking to determine whether the proposed rule would constitute a substantial increase to protection of public health and safety, and whether the direct and indirect costs of the proposed rule are justified in view of this increased protection.

NUBARG has monitored the Staff's activities and is unaware of any Staff actions aimed at addressing the backfit issues as directed by the Commission. Nevertheless, both the Staff and the industry have expended significant resources as part of the pre-proposed rulemaking stage. NUBARG suggests that from an efficiency perspective, the backfit analysis should demonstrate that the proposed NRC action is viable before more time and licensee resources are spent on an ill-fated rule.

#### **New Overtime Requirements Cannot Satisfy the NRC's Backfit Rule**

Any new requirements limiting overtime at nuclear power plants would affect Part 50 licensees and be subject to the NRC's backfit rule. 10 C.F.R. § 50.109(a)(1). Section 50.109(a)(3) of the rule establishes two fundamental criteria that must be met by a new regulation that does not qualify for any of the backfit exceptions in 10 C.F.R. § 50.109(a)(4). As noted above, in SECY-01-0113, the Office of General Counsel stated its position that the proposed rulemaking would have backfit implications and would require a backfit analysis in accordance with 10 C.F.R. § 50.109(a)(4) to determine whether the recommended regulatory changes would result in a substantial increase in protection to public health and safety, and whether the costs of the proposed requirements would be justified.

It is NUBARG's position that neither of these conditions can be met by any additional requirements or limitations on overtime at nuclear power plants. Moreover, none of the exceptions in the backfit rule would apply to such requirements or limitations. Accordingly, the proposed requirements and limitations on overtime at nuclear power plants do not and will not satisfy the backfit rule. NUBARG's position is based on the following points.

- Additional requirements or limitations on overtime would not result in a substantial increase in safety. Current overtime requirements, practices, and procedures have been

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<sup>12</sup> SECY-01-0113, Att. 2 at 20.

designed to ensure that all plant personnel are adequately rested and alert while performing their duties. Further reductions in work hours, therefore, would not materially improve the ability of plant personnel to competently perform their assigned duties.<sup>13</sup> Because further reductions in work hours would have no material impacts on safety, such reductions *a fortiori* cannot substantially increase public health and safety.<sup>14</sup>

- The direct and indirect costs of any additional overtime requirements or limitations do not appear to be justified by increased protection. More specifically, because limited, if any, increased protection would result from such additional overtime requirements or limitations, no costs for such overtime requirements or limitations would be justified.<sup>15</sup> Thus, neither of the NRC's backfit criteria could be satisfied by any additional overtime requirements or limitations.
- None of the exceptions in the backfit rule would apply.<sup>16</sup> All facilities currently are in compliance with overtime limitations. 10 C.F.R. § 50.109(a)(4)(i). Additional overtime requirements and limitations are not required to provide adequate protection of the public health and safety because current practices and procedures have been demonstrated to provide such adequate protection. 10 C.F.R. § 50.109(a)(4)(ii). A redefinition of adequate protection as it may apply to overtime is also not justified. 10 C.F.R. § 50.109(a)(4)(iii).

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<sup>13</sup> NUREG-BR-0058 (Rev. 3), "Regulatory Analysis guidelines of the U.S. Nuclear Regulatory Commission" (July 2000), Section 4.1, discussing regulatory requirements or guidance already existing, states that the "need for regulatory action must be justified within the context of what would prevail if regulatory action were not taken." Thus, any regulatory/backfitting analysis must credit programs and requirements already in place when evaluating whether a substantial increase in safety would be achieved by the new requirements.

<sup>14</sup> Common defense and security are not affected by this request so need not be considered.

<sup>15</sup> Even assuming an increase in the level of protection, costs to implement the additional controls and recordkeeping could be substantial because of longer outages and replacement power costs that could result.

<sup>16</sup> As noted above, the NRC's Office of General Counsel stated its position that "it would be difficult to successfully assert that any of the exceptions set forth in 10 C.F.R. 50.109(a)(4)(i) through (iii) apply to any of the four rulemaking options for the proposed rulemaking." SECY-01-0113, Att. at 20.

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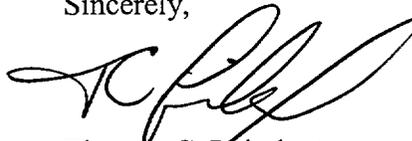
Because none of the backfit exceptions apply and because neither of the backfit criteria can be met, new overtime requirements or limitations cannot satisfy the backfit rule.

### Conclusion

For the foregoing reasons, it is NUBARG's position that the proposed rulemaking has not been demonstrated to result in a substantial increase in safety, based on information presently available to the public, and, therefore, no additional requirements could be justified under the backfit rule. In Generic Letter 82-12 and other guidance, the NRC recognized that the issue of employee overtime is significant and deserving of attention. Licensees have taken action accordingly. In addition, worker fatigue is taken into account in fitness-for-duty, training, and behavioral observation programs which are already required by the Commission's regulations. Licensees are sensitive to the fatigue and overtime issues and have incentives to maintain adequate staffing in order to avoid excessive overtime. For these reasons, NUBARG recommends that the Staff perform a backfit analysis for the proposed rulemaking option as directed by the Commission before proceeding further with any actions associated with the proposed rulemaking.

It is NUBARG's position that, absent performance of a backfit analysis, the Staff appears to be unnecessarily expending significant resources on a rulemaking effort that may not constitute a justified backfit. It may be more appropriate to expend the same resources to focus on Staff actions to reinforce existing programs and standards for behavioral observation rather than amend Part 26 to impose specific requirements on the control of working hours.

Sincerely,



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Patricia L. Campbell  
Counsel for NUBARG

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