The study of the physiology of sleep and the effects of fatigue has advanced to the point where the acquired knowledge can now be utilized and applied in industrial environments. In effect, the science has moved from the strictly medical arena to an applied science.

The majority of applications of this knowledge seemed to be geared toward creating working environments that, taking into account the physiology of sleep, minimize the effects of fatigue on human beings in the work environment.

The information available regarding the contributing factors of fatigue in actual incidents or accidents tends to be limited to catastrophic events (i.e. Hinton, Bhopal, Three Mile Island.)

After exhaustive review of many documents related to fatigue both inside and outside the railway industry, coupled with my own knowledge of the investigative protocol used by the railways when investigating running trades employee injury or rule violation, I was struck by the complete absence of the gathering, or measurement of an individuals fatigue data as a factor in day to day incidents within the rail industry. My knowledge of this absence of measurement of fatigue is not new; however, in the context of present efforts to manage fatigue, it has become particularly obvious in its absence.

Contact with running trades union representatives’ at the two Class I railroads here in Canada indicate that the question of fatigue, when arising in the course of an investigation, is normally couched in the context of whether or not a person was rested prior to reporting for duty. As a self-defense measure, out of fear of being disciplined for not being rested, the employee invariably responds in the affirmative regardless of the degree of fatigue he/she may have been experiencing at the point of reporting for duty or even during the shift. In those rare cases where the employee responds that he/she was tired or not rested, the company will invariably investigate and offer as evidence, the amount of time off immediately prior to the employees shift. This presumes, incorrectly, that the amount of time off prior to a shift is an accurate indicator as to whether an employee was fatigued or not.

I believe this method of handling the issue of fatigue, particularly in the context of an investigation represents a paradigm of thought in which we are all trapped; company, employee and unions alike. For our part (union), we are reluctant to pursue the issue of fatigue in the context of an investigation in the belief that to admit to being tired or fatigued when reporting for and engaging in work will subject our members to discipline. The company’s, I believe, are unwilling to recognize or unaware of the degree to which the safety and economics of their operations are jeopardized by fatigued employees because a clear and concise measurement of that effect, on a case by case basis, has never been drawn. Further, they do not believe they are responsible for the state of fatigue of their employees.

It is clearly recognize that fatigue is a condition in our industry that needs to be addressed inasmuch as actions are being proposed to reduce those conditions that lead to fatigue.
What we do not recognize is the importance of identifying the degree to which fatigue is a contributing factor in all accidents and injuries. Nor do we have any measurement systems in place by which we might establish the effectiveness of those changes we might make in the pursuit of reducing fatigue.

The issue of measurement is a critical factor in ensuring both the success of any implemented plans, and the essential need to keep the issue front and center so as to not allow the continued glossing over of the problem. In fact, I believe that if an economic argument can be made in the context of properly managed fatigue factors and reduction associated with the cost of injuries and accidents, the corporations will become far more motivated to deal with the problem.

I propose the following –

- Fatigue as a potential contributing factor in any accidents, rule violations or injuries be recognized as an issue to be measured and documented.

- That fatigue data collected in the context of any/all injury/rule violation/accident investigation be accomplished through a scientifically designed questionnaire which can be properly analyzed to gauge the degree to which an individual’s fatigue may have been a factor.

- That the issue of an employee’s fatigue be removed as an issue for which discipline can be issued.

- That data collected relevant to the issue of fatigue, be communicated to all affected parties as a part of the educational process anticipated in the regulations.

- That this data be collected and forwarded to a centralized location so as to allow for the overall measurement of the effects of fatigue on day to day operations, but also to be used as a benchmark by which we can measure the success of any fatigue management plans that are put into effect.