Fatigue Training/Education CRM Effectiveness

While there are no stated requirements to measure the effectiveness of the entire Control Room Management plan, there are two inspection questions related to the effectiveness of fatigue training and education. Are you reviewing the effectiveness of your program? There should be a record, beginning in the calendar year 2012, of how companies have reviewed the effectiveness of its fatigue training/education program at least once each calendar year, not to exceed 15 months. Our CRM clients have been provided a form that can be used for that review.

The first question is D2-3: *Is the effectiveness of the fatigue education program reviewed at least once each calendar year, not to exceed 15 months?* The guidance with that question indicates that one gauge of effectiveness may be controller test scoring (the lazy man's gauge). I prefer the other suggested gauge of discussing with the trainees the thoroughness or missing elements of the training program content (requiring an interpersonal discussion and actually talking to other people about what they have learned about fatigue mitigation and what behaviors they have changed as a result of what they learned).

The second question is D3-3: *Is the effectiveness of the fatigue training program reviewed at least once each calendar year, not to exceed 15 months?* The guidance with that question indicates that companies need to establish what metrics best serve to demonstrate the effectiveness of their program and then review what has actually been done compared to those metrics. Have you established metrics that can be used to review your program's effectiveness?

The simplest metric is whether or not the company is providing fatigue training and education to controllers and supervisors at least once each calendar year, not to exceed 15 months. A related metric is what content is included in the fatigue training and education. In one Notice of Amendment, an inspector stated, "The CRM plan did not indicate what the training includes. More detail must be added to clearly show how the company trains their personnel on fatigue mitigation."

Use the information below as a starting point in developing measures of fatigue training/education CRM effectiveness:

- Is fatigue training/education required of and provided to all Controllers and Control Room Supervisors at least once each calendar year, not to exceed 15 months?
- Have metrics been established to measure the effectiveness of the fatigue training/education program and is there a review of those metrics at least once each calendar year, not to exceed 15 months?
- Does the CRM plan state the role and responsibilities of a person who provides the fatigue training/education and/or who performs the annual review?
- Does the CRM plan state that the fatigue training/education program includes these subjects?
  - Fatigue mitigation strategies
  - How off duty activities contribute to fatigue
  - How to recognize the effects of fatigue
  - The other 13 subjects from FAQs D.04 and D.05
- Has the content of the fatigue training/education program been reviewed to ensure that all the subjects are actually included in either a training course or educational materials?
- Does the annual review include a survey or interviews with Controllers and Supervisors on the effectiveness of the fatigue training and education?

I believe that the CRM requirements related to fatigue training and education are straightforward and simple to meet. Our four-hour classroom course covers every subject that should be included in fatigue training and education. The complimentary monthly fatigue educational articles we have provided each month since January 2011 are written to cover the subjects mentioned by PHMSA. Some of the online courses used for fatigue training cover all the subjects; others do not. This is one of the reasons to review the effectiveness of the fatigue training and education program used by your company.