

## CRM Program Effectiveness

How do you measure the effectiveness of your Control Room Management (CRM) Program? There is no regulatory requirement to measure the effectiveness of any part of a CRM Program, except for the effectiveness of the fatigue education and training. Most companies do not do anything that is not required, even if doing so would lead to improved performance, enhanced professionalism, and a better program.

I have been thinking that PHMSA might emphasize measures of program effectiveness similar to what is done with public awareness programs, integrity management programs, and operator qualification programs. But they probably have enough work with natural gas pipeline mega rules and hazardous liquids pipeline final rules and the organizational changes of a new administration in Washington, D. C.

In any case, I think it is important to look at all elements of a CRM plan, written and implemented, to determine if it is meeting your company and control room goals. I will be writing articles this year on how to measure the effectiveness of your CRM Program.

Years ago, I was responsible for developing and implementing operational performance measures that were aligned with corporate strategic goals and that were applicable to all positions in operations and maintenance. The desire was to have measures that an operations employee, such a pipeline controller, could see were aligned with corporate strategic goals. That approach worked well and we improved company and individual performance.

Let's apply that to control room management. PHMSA has stated the intent of the CRM regulations in these terms:

- Create an environment to help assure controllers will be successful in maintaining pipeline safety and integrity
- Assure companies are addressing fatigue risks in the control room
- Verify that procedures, systems, and equipment are well thought out and function as designed

If I have an effective CRM program, the controllers are successful in maintaining pipeline safety and integrity. One measure of effectiveness is zero incidents where an error by a controller, a procedure, a system, or equipment caused a threat to public or pipeline safety. I used the term "Target Zero" to promote that measure.

The measurement of errors, after they have occurred, is an outcome measure and a lagging indicator. If the measure of effectiveness you are seeking is zero errors and controllers make 20 errors in a year, would your CRM program be effective? It is important to look at the causes of those errors because it is likely your procedures, systems, and equipment are not well thought out and are not functioning as designed.

In this series of articles, I will place more emphasis on process measures and leading indicators. If I want to achieve zero errors, I must measure things regularly that prevent errors, make sure they exist, and are being used. In other words, I do not want to wait until I have controller errors and then take corrective actions. I want to prevent errors and accidents.

Therefore, I can develop measures in these CRM areas, and others:

- Roles and responsibilities
- Information management
- Fatigue mitigation
- Alarm management
- Change management
- Operating experience
- Training, qualifications, and competencies

The measure of effectiveness most companies are using is compliance with the PHMSA inspection questions. That is a baseline, minimal measure. Why not aim for excellence? Choose worthy targets.

***"The person who aims at excellence will be above mediocrity; he who aims at mediocrity will be far short of it." Burmese proverb***