Journal of System Safety

eEdition

A publication of the System Safety Society

Vol. 44, No. 3 • May-June 2008

President's Message

Content and Methodologies

By James H. Wiggins Sr., P.E., CSP

I have been a member of the Society for many years, observing and sometimes participating in the implementation of what we (the practitioners) would call new methodologies. These new methodologies may have incorporated a new process, combined existing processes or just been a new name for an existing methodology. What is important is not what we *call* a process, but what the process contains and the benefits it brings to our programs.

When I first came into the system safety practice, a person I greatly respect told me that, "System safety is more art than science." If system safety is "art," then we are challenged to be truly rigorous in our work. Our work products must be first and foremost a quality product — accurate, complete and to the level of detail that provides benefit to our customers. Products must also be repeatable by other system safety engineers, so that a similar result would be achieved if using the same method.

There was a group of high-voltage electricians in attendance at a system safety course. One group rated electrical shock from a high-voltage power line as a Category I severity. Another group rated the same electrical shock as Category IV. The difference was that the Category IV group was evaluating the situation after they had applied all the barriers and safeguards that they would normally use. A good set of preliminary definitions, rules and process descriptions probably would have solved the problem. If a project manager were to pick up two reports of the hazard analysis described above, how would he or she be able to judge which was correct, without the details of what work was accomplished?

How can that same manager determine the differences in risk assessment between two persons? Years back, we were discussing the research needed to try to normalize the products between two engineers — one who continually reports the hazard as an extreme high risk, and one who continually reports the hazard as an extreme low risk. Such research may bear fruit if we wish to make our work more "science" than "art."

The methodologies to increase the science of our work reside in the *System Safety Analysis Handbook*. They are the foundation methodology for performing our technical work. I strongly encourage a focus on making our work product the result of scientific methods and repeatable thought. I would also encourage research into how to increase the uniformity and quality (as defined above) of our work.

Your comments, suggestions and help are respectfully solicited. ΣΣ

— Jim Wiggins