



# A Safety Professional's Risk Assessment Journal

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*Aaron D. Duff*

*The American Society of Safety Engineers (ASSE) has assembled a Risk Assessment Committee for the purposes of communicating to the business community the importance of the risk assessment process; improving the risk assessment competencies of safety, health, and environmental professionals; providing cost-effective solutions as business partners; and taking a leadership role in developing risk assessment policy. The product of this committee has been the development of a Risk Assessment Institute.*

*A key focus area of the Risk Assessment Institute is the study of corporations and safety professionals with successful Risk Assessment Programs in an effort to learn from their experiences and assist others in the development of their own risk assessment program. The case studies examine their experiences as they developed and implemented their risk assessment program, their lessons learned, and their suggestions to others who may be getting started on their own risk assessment program development.*

### Case Study Subject

<b>Safety Professional</b>	Aaron D. Duff Associate Director – Emergency Preparedness, Loss Prevention, PSM
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## Background

Aaron D. Duff is the Associate Director of Global Emergency Preparedness, Loss Prevention, and Process Safety Management at Bristol-Myers Squibb in New Brunswick, New Jersey. Prior to working at Bristol-Myers Squibb, he was a Senior Environmental, Health and Safety (EHS) Specialist at DuPont Pharmaceuticals.

Aaron earned his Bachelor of Science degree in Environmental Health and Safety Management from Slippery Rock University of Pennsylvania and his Master of Business Administration from Dowling College. His interest in occupational health and safety began in his freshman year of college. Aaron knew he didn't want to spend his career sitting behind a desk every day. When he took an Introduction to Industrial Safety course his freshman year of college, he found a field that interested him and would give him the opportunity to spend time on a production floor with the employees whose safety he was protecting.



*Aaron Duff has enjoyed a 15-year career in environmental, safety, and health.*

## Safety – A Personal Perspective

When any significant business decision is being made, Aaron wants to “be at the table.” He believes that safety should be an important component in any major business decision, and the safety professional is the best-qualified person to speak for the safety impact of any decision. He would like for safety professionals to be seen as so valuable that management would not even consider making a major decision without the safety professional's input.

Aaron's introduction to the risk assessment concept occurred while conducting process safety management (PSM) work. When discussions with his management at Bristol-Myers Squibb started focusing on evaluation of high-risk activities and safety culture and understanding risk, Aaron started looking more closely at the risk assessment process.

Aaron noted that at facilities in Italy and France, there would be a binder at the entrance to every work area with detailed work instructions including risk analysis for all routine and non-routine tasks. He realized that the U.S., Asia, and South America were using some risk-assessment-like assessments in job hazard analysis and job safety analysis, but the concept was not as widely adopted into the health and safety culture as it was in the European countries.

## Putting Risk Assessment and Risk Control to Work in the Workplace

Communication with management about growing the risk assessment concept was initiated by questions from management regarding understanding risk and the evaluation of high-risk activities. The quantification aspects of risk analysis allowed management to see value in the process and trust that it would facilitate making good business decisions regarding spending resources (time and money) on safety initiatives.

Aaron worked with colleagues at Bristol-Myers Squibb to introduce and implement a risk assessment program in the Engineering Organization. Engineering was a logical place to start – the employees there

already tended to view their work tasks very analytically, so they adapted easily to the new risk assessment provisions.

With the model in place in the engineering department, management became more comfortable with the risk assessment mind-set. They were able to see, based on risk assessments, where to put resources – time and money.

When the 2011 earthquake/tsunami hit Japan, Aaron and the management at Bristol-Myers Squibb started to focus also on the business continuity aspect of risk analysis.

Then they began to look objectively at risk as it was associated with:

1. Safety
2. Environment
3. Business interruption
4. Legal and reputation

Throughout his career, and even over the past 10 years, Aaron has seen a lot of evolution in tools used for risk assessment. He notes that the fundamentals remain the same – frequency and severity. Information sources and technology have changed considerably, and he cites many commercially available software

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Large companies in any industry should already be doing risk assessments; initiatives like those of the Risk Assessment Institute will open doors to smaller companies that may not have the same level of expertise.

*Aaron D. Duff*

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packages that greatly simplify the risk assessment process. He reports that with the software package, he is able to build rules and templates into the system so that users can complete risk assessments without having to be technical experts in the use of the equipment involved, then track recommendations and track risk reduction.

### **Program in Practice**

As they began to formalize the risk assessment process, Aaron and the safety team spent about a year standardizing the process. They ran into situations where individual pockets of people had already started doing risk assessments on their own, and those groups had to be brought into the mainstream using the same methods and measures as everyone else. Also, there was a lot of discussion on what a significant loss might be. Everyone's personal and professional experiences affected their idea of what is significant, and it was important for consistent risk analysis that everyone work with the same standards of measurement. Specific risk assessments tools had to be chosen or developed so that everyone was using the same tools.

Among the things that Aaron has learned as he has worked in various management situations is that a safety professional and management sometimes have different ideas of an acceptable level of risk. He believes that is often communication-related; either there is something about the risk that management does not understand, or management is aware of a factor that the safety professional is not. In fact, increased communication is one of the benefits that he sees from the risk assessment process. The conduct of risk assessments is a visible activity that fosters discussion, which elevates awareness and reduces risk.

Bristol-Myers Squibb has seen a reduction in lagging indicator rates such as days away. Aaron is proud of their near “best in class” safety performance in their industry for the past five years.

### Passing it Forward

Aaron believes that a key first step in planning a risk assessment program is to design a risk matrix that is relevant to your company. It likely could be a simple three-by-three grid with low, medium, and high for the likelihood and severity. The perimeters of each of those levels should be strictly defined, so that the assessments are meaningful and consistent throughout the organization. Then, follow through to evaluate job activities or processes.

Aaron credits his success in risk assessment to good mentors and the ability to learn within the organizations in which he has been involved. Although he cites several training resources that he recommends and feels are valuable, he believes nothing replaces the “school of hard knocks” where safety professionals learn through their personal/professional experiences and through the guidance of mentors. Each safety professional must learn and understand their company’s tolerance for risk and build a program with that in mind.

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Safety is good business. Taking safety into consideration helps management make good business decisions and can save money.

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When he mentors less experienced safety professionals, he tries to guide them away from being compliance directed. He notes that they must keep an eye on compliance, but not be driven by it.

According to Aaron, safety professionals must realize that a successful risk assessment program cannot be achieved in a vacuum. Management must be involved, and the operations personnel must be engaged in the process.