Whose Fault is it Anyway?
A Practical Illustration of Human Factors in Process Safety

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ABSTRACT

Consider your morning coffee shop stop! While you are attempting to fumble through your wallet before you have had your mandatory intake of fuel, the people behind the counter have upset conditions on their hands – too many grouchy patrons and too little time. In order to move the process along, shortcuts are taken. This occurs every morning, and nothing ever goes wrong…right? It just so happens that this morning, a new blender has been installed. Joe Java, who is exhausted from a late night on the town, turns it on without closing the lid, and frozen coffee frappe billows over onto the floor. This has happened before too, but no one has fallen on it...until now.

Human factors issues are at the core of this small-time process safety related incident. An individual knew the protocol, broke the rules, and caused an accident. In this case, one human factors incident relates to a number of typical PSM issues, such as Management of Change, Pre-Startup Safety Review, Training and Operating Procedures. As a result of the incident, Emergency Response and Accident Investigation were enacted.

Although a coffee shop is not what we typically think of when we think of process safety and human factors, if we can see the risk in our morning coffee, we can only imagine the implications human factors can have on our daily tasks at our facilities. Human Factors relates to the interaction of people, systems, products and machines in their working environment. When we understand what individuals are capable of doing, what limitations they have, and what a person may do in a given situation, we can start to understand how to optimize their performance for our business.
This paper supports the philosophy that people are integral and key features of business systems; therefore systems, tools and equipment should be designed with the potential capabilities and limitations of people in mind. When we recognize these potential differences we can better appreciate the ways in which systems, procedures, working environments and people should interact with each other for optimum business performance.