



# LACK OF AWARENESS

“**Work Zone Awareness – Work Zones Demand Our Undivided Attention**” was displayed on several electronic billboards above Interstate Highway 20 near Birmingham, Alabama. I did a little research and discovered that the month of April includes “National Work Zone Awareness Week.” In 2008, crashes in US highway work zones caused 720 fatalities. Although this was a 39% decrease from 2002, 720 fatalities equates to almost two deaths per day in work zones in 2008. <http://www.tfhr.gov/pubrds/10mar/08.htm>

Don't we notice all those warning signs, concrete barriers, flashing blue lights, flashing signs about speed limits, equipment, and human beings with orange vests and orange hats working while we drive by in our vehicles? How difficult is it for **you** to maintain awareness while driving a vehicle? If it is difficult to pay attention in a work zone on a highway, what might that indicate about our abilities to pay attention and maintain awareness in a pipeline control room or a facility where we perform operations or maintenance or management tasks?

Previous articles about *The Dirty Dozen Causes of Errors and Accidents* focused on stress, fatigue, complacency, and distractions. Any of those causes can contribute to a general lack of awareness in the workplace, the vehicle, or at home. I suggest you review those four causes individually or in a team meeting. Pay close attention to their effects and how to prevent them from causing you lack of awareness.

Another issue with awareness is lack of situational awareness. Dr. Mica Endsley provides a useful model for understanding and applying three levels of situational awareness. [http://www.satechnologies.com/situation\\_awareness/](http://www.satechnologies.com/situation_awareness/)

## Level 3 - Projection

## Level 2 - Comprehension

## Level 1 - Perception

Perception means that you are able to take in all the critical factors in the environment. What are the critical factors in a control room display, for example? Comprehension means you understand the purposes of those factors and the relationships between them and your operational goals at a particular time. Being aware of what will happen with those factors in the immediate future is the meaning of projection. A useful exercise for discussing situational awareness is the start up of a pipeline when it is shutdown. What must you perceive, comprehend, and project? What is the normal operation? What would you do with an abnormal or emergency condition?

In addition to individual situational awareness, the concepts of team situational awareness and distributed situational awareness are important on pipelines. The use of technology for supervisory controls, data acquisition, and communications should provide the same information to all the people involved in pipeline operations, wherever they are located. Think about some potential problems that can occur if the people at a pipeline facility have a lack of awareness of an operational task a pipeline controller is performing that affects their facility. What can be done to prevent that type of lack of awareness? Plan well, communicate well, and manage all changes well.

The safety valves for general lack of awareness include addressing the effects of stress and fatigue, and preventing complacency and distractions from causing your awareness to wane. For lack of situational awareness, use a self-questioning or “What-If?” attitude. Make sure you have adequate knowledge and understanding of the critical factors for your job. Use effective shift planning and communication techniques, and perform as many critical tasks as possible early in the work day or on the work shift. If you do not understand something about a task, ask someone else. Successful people are willing to seek advice and expertise from others to prevent errors and accidents. Be aware that human beings have difficulties maintaining awareness and paying undivided attention.