



ASSE Energy Corridor Section Newsletter

March 2017

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Links:

[ASSE Energy Corridor Section](http://gulfcoast.asse.org/energy-corridor-events/)

<http://gulfcoast.asse.org/energy-corridor-events/>

[ASSE Gulf Coast Chapter](http://gulfcoast.asse.org)

<http://gulfcoast.asse.org>

[ASSE](http://www.asse.org)

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Current Events

Welcome to the March 2017 edition of the ASSE Energy Corridor Section Newsletter! We're very excited about our growing Section and the meetings, events and speakers we have coming up for you in the coming months!

We've now transitioned our meetings to Spring Creek Barbeque and are enjoying the new setting and, of course, food offerings!

Upcoming Elections: If interested in running for an office with the Energy Corridor Section, please contact Tabitha (contact information on the right hand bar). Elections will be in June.

Thank you for your dedication to safety!
Your ASSE Energy Corridor Section Team

Coming Up!

On April 13, the ASSE Energy Corridor Section is proud to host Ken Wells of Lifeline Strategies and his presentation on "Operating Procedures: Underused Tool for Quality and Safety?"

About the Presentation: The offshore SEMS rules, PHMSA pipeline rules and OSHA PSM rules all require the use of procedures. However, many oil and gas industry companies have inadequate or no procedures for many operations. Of the ones that do have procedures, many bypass safety departments in developing them and write procedures that are difficult to understand or use in the field. As a result, they are missing out on a valuable tool to identify and control on-the-job hazards. The talk will look at how medicine and aviation use procedures to consistently improve safety. It will look at best practices for involving safety managers in the process of developing procedures and for using them to help speed up competency for new personnel, focus training on task-specific skills and create simple, effective skills and knowledge competency programs.

About Ken: Ken Wells is the President of Lifeline Strategies, a consulting firm focusing on addressing client needs in safety management, government advocacy and compliance and occupational medicine. As noted by Mr. Wells, he was deeply involved in the

Get Involved!

- Are you a speaker?
- Are you a writer?
- Have an idea for the Section?
- Have a topic you'd like to see Addressed?
- Have something to share?

Let us know!

- Please get in touch using our contact information above to let us know your thoughts. We'd love to hear from you!

An Opportunity!

- The Energy Corridor Section has an opening on the leadership team for our Secretary position
- If interested in pursuing this position, please feel free to get in touch with us at the contact information listed above - we'll look forward to hearing from you!

Inclement Weather

With hurricane season quickly approaching, the City of Houston has developed an Emergency Information Center available online.

This online resource contains

implementation of the offshore Safety and Environmental Management Systems (SEMS) Rule, advising operators and contractors on interpreting and complying with SEMS requirements. He also noted that he developed the most widely attended classes on understanding SEMS and developing SEMS skills and knowledge programs, as well as the basic awareness training on SEMS given to most offshore workers. He holds an MBA and lives in Kingwood, TX.

In Other News:

If interested in a professional development opportunity geared towards the Houston medical community, BSI is presenting the EHSENTIALS 2017 Symposium at the UT/MD Anderson Cancer Center. More information is below:

Join healthcare industry peers and EHS professionals for an information-rich, strategy-packed day devoted exclusively to the latest EHS trends, issues, strategies and solutions affecting healthcare facilities today.

NETWORK WITH OTHER HEALTHCARE INDUSTRY EHS PROFESSIONALS	MULTI-TRACK PROGRAM ADDRESSING TODAY'S EHS CHALLENGES
EHS Leaders and EHS Professionals	Workplace Violence
Safety Leaders	Injury Prevention
Risk Management Leaders	Emergency Preparedness
Environmental Professionals	High-Consequence Pathogens
HR Leaders	Active Shooter
Facilities Leaders	Sharp Injury Prevention
Students and Professionals Seeking Healthcare Employment	Safe Patient Handling
	USP 800 / Hazardous Drugs
	And More!

CEUs Available

For Online Registration
www.ehssentials.com/texas2017

PRESENTED BY

The University of Texas MD Anderson Cancer Center, The University of Texas Health Science Center, The University of Texas School of Public Health, Texas Children's Hospital, BSI EHS Services and Solutions, CHI St. Luke's Health

important information on storm notifications, information, news and recovery information.

The City of Houston Emergency Information Center is located [here](#).

Safety Perspectives

Volatility and Chaos: Hazard Controls and Active Shooters

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Amber Johnson, MPA

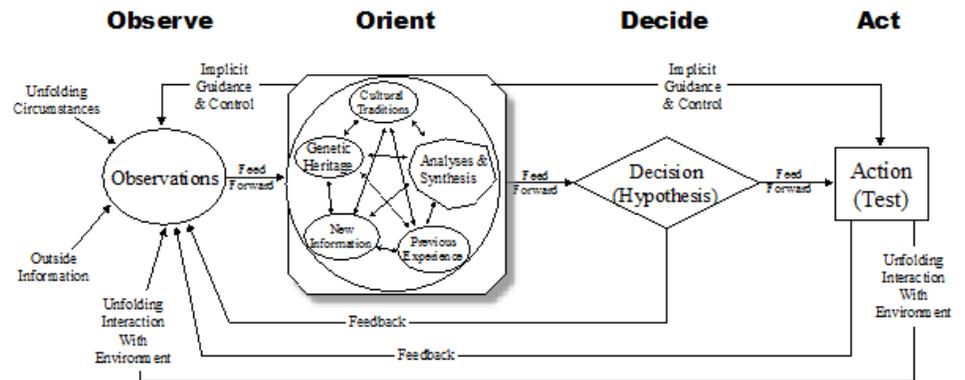
During 2007, a U.S. Army squad leader in the 82nd Airborne sent an email to his friend who had asked him what a normal day was like in Baghdad, Iraq. He replied truthfully, that his squad patrolled a 14-mile circle around Baghdad and hoped that nobody shot at them and nothing exploded. Essentially, he wrote, they could only hope to carry on this routine for approximately 15 months and hope to survive it. This is a similar sentiment that has been written by many veterans in many wars with the ever-present possibility of immediate, sudden violence and the hope to survive it being extreme situational awareness and the ability to react to it.

Unfortunately, with recent active shooter and terrorist events in Paris, Brussels, Orlando, San Bernardino and more, this same ability to recognize potential violence and react to it has become just as relevant and necessary in seemingly safe places as it is in active combat zones. In these inherently chaotic and volatile situations, the chances of controlling the hazard increase with a systematic approach; for example, the U.S. Army rehearses the React to Ambush drill for it to become hardwired as muscle memory. Whether a citizen caught in a very bad situation or a responder seeking to end a very bad situation, systematic hazard controls can be used to mitigate an active shooter incident and contain the intrinsic volatility and chaos that come with it.

The Citizen

As a citizen going about a normal day's business, even in a seemingly safe and peaceful environment, situational awareness is required. Before a hazard can be avoided or eliminated, it must first be identified. The art and science of situational awareness has been developed over the years using Colonel (Retired) John Boyd's Observe-Orient-Decide-Act, or OODA, Loop. A simple theory and model developed for use in aerial combat and later adopted for use in ground combat and emergency management contexts, the OODA Loop allows the user to observe the situation around him or her, orient him or herself to the environment and variables, make a decision as to his or her reaction and then do so *before* any harm can come to him or her. Ultimately, it allows the user to stay one step ahead of any danger (Coram, 2002). Once the hazard – in this case, an active shooter – has been identified, a decision can be made as to the appropriate reaction.

Figure A – Colonel (Ret.) John Boyd’s OODA Loop



(Coram, 2002)

Hazard Control

With the hazard/shooter identified, hazard controls can then be systematically applied. As active shooter situations are inherently chaotic and volatile, many are unable to determine a course of action; this inability to think clearly and respond to the threat can cause increased danger. With this, training and conditioning can be conducted to develop these responses in the same manner as a fire drill. However, unlike a fire drill in which a uniform response can be conducted for a facility, responses to an active shooter will vary based on the individual or circumstances. These responses can be based on the Hierarchy of Controls (Stephans, 2004).

Hazard elimination. With hazard elimination being the most effective means of controlling a hazard, eliminating an active shooter threat is similarly the most effective means of controlling the situation. In the case of an unarmed citizen, eliminating the hazard would mean egressing the situation. However, with recent legislation regarding open firearm carry and more historical concealed handgun licensing programs, very real situations could occur in which citizens could and have sought to eliminate active shooters by force with personal firearms. This, in turn, has the potential to create further hazards in which responders cannot tell the difference between an active shooter and a citizen with a firearm; this must be taken into consideration by each citizen opting to exercise open carry or concealed firearm options.

Hazard substitution. In substituting a hazard, a less hazardous option is accepted to mitigate a risk. In the case of an active shooter, should the hazard not be eliminated by egress or force, the citizen can substitute the hazard by finding cover and concealment – hiding – from the shooter.

Engineering controls. In the same manner as hazard substitution and hiding from a shooter, engineering controls apply when seeking to separate the citizen from the hazard/shooter. In this

case, cover and concealment from the active shooter would be an effective means of mitigating the hazard.

Administrative controls. Procedures used to limit exposure to a hazard would apply to an active shooter context in terms of panic buttons, egress routes and plans, exercises and drills used to develop the proper training and conditioning needed to respond to an event and/or call for assistance.

Personal protective equipment. With the most effective means of a citizen mitigating an active shooter event being egress or cover and concealment, most, if not all, citizens would not have personal protective equipment on their person at the time of an event.

As a citizen going about everyday business, citizens maintain a different level of readiness for events such as active shooters than professional responders such as law enforcement officers. With this, hazard controls applicable to professional responders differ from citizens.

The Responder

As professional responders, law enforcement officers, medical technicians, emergency managers and others have a larger scope and a different set of expectations in terms of situational awareness and hazard control than a citizen. With this, not only do theories and models such as Colonel Boyd's OODA Loop (Coram, 2002) apply heavily, but more macro-level needs apply in terms of emergency management.

Emergency Management

As the need to recognize potential violence and react to an active shooter event becomes more relevant, emergency management plans and training should consider this threat as part of a comprehensive emergency management program. Emergency Managers must recognize emerging threats and manage them through innovation and adaptability (Waugh & Streib, 2006). A comprehensive emergency management program plans and trains for relevant threats through mitigation, preparedness, response, and recovery (Perry & Lindell, 2007).

Including active shooter events in a comprehensive and systematic planning and training process allows organizations to prepare their personnel to prevent and respond to active shooter events.

Active shooter response is profoundly public safety-based; this should be taken into consideration when drafting active shooter plans, training, and exercises. The critical tasks associated with mitigation, preparedness, response, and recovery involve coordination and collaboration between emergency management and other disciplines, organizations, and agencies (Waugh & Streib, 2006). Plans, training, and exercises should include input and involvement with public safety personnel. To prepare the citizen for this threat, emergency management's focus for training and exercises should center around survival education to an active shooter event based on public safety best practices. Education through training and exercises provides an

avenue for personnel awareness of hazard controls and response options to an active shooter event.

Hazard Control

With the situation managed from the responder's perspective, hazard controls can be implemented to protect the responder while controlling the situation in real time. This is intrinsically difficult in the context of a volatile, chaotic and time-bound situation such as an active shooter. For this reason, situational awareness to identify and observe the shooter's location, orientation, intentions, specific threats/weapons and other details is extremely important.

Hazard elimination. In the case of a responder seeking to protect the public, hazard elimination would apply in terms of arresting or neutralizing the shooter by force. This, in turn, is subject to laws and procedures on use of force or rules of engagement.

Hazard substitution. To substitute a hazard to mitigate a risk, responders would be able to utilize cover and concealment as per the location and orientation of the shooter to maintain safety until the hazard can be arrested or eliminated.

Engineering controls. Similar to hazard substitution, engineering controls allow the responder to separate him or herself from the hazard/shooter; this would apply to cover and concealment while orienting oneself to arrest or eliminate the shooter.

Administrative controls. In the case of administrative controls, procedures to limit exposure to the hazard would apply in an active shooter context in terms of reinforcements and assistance and uses of differing tactics, techniques and procedures to arrest or eliminate the shooter.

Personal protective equipment. One major difference between the citizen and the professional responder in an active shooter situation is that the professional responder does have access to should use PPE. This may exist in the forms of Kevlar vests, ballistic helmets or other equipment to mitigate active shooter hazards. In other contexts, various weapons are also carried and used by responders.

Ultimately, response to an active shooter is a real-time, chaotic, volatile and intrinsically dangerous situation. For this reason, a systematic approach to hazard control is beneficial in conditioning and training for both citizens and professional responders. Should a situation be handled by immediately egressing or eliminating the shooter, the situation would be better handled. However, if this is not possible, the Hierarchy of Controls (Stephans, 2004) allows for options of cover and concealment via hazard substitution or procedural functions such as panic buttons or calls for reinforcements. While not as effective as immediately neutralizing the hazard, they offer as-safe options for response. Finally, just as in a workplace safety situation, should a direct confrontation be necessary and no other options work, PPE is a viable option. This, however, relies on the responder's actual

use of the equipment in the moment. Ultimately, with these hazard control options implemented, trained and conditioned, a better chance exists of safely mitigating – or surviving – an active shooter event.

References

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Waugh, W. L. and Streib, G. (2006). Collaboration and Leadership for Effective Emergency Management. *Public Administration Review*, 66: 131–140.

About the Authors:

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Amber Johnson, MPA, is currently the Emergency Management Planner for the Memorial Hermann Health System. Her experience includes planning and operations in the public, private, and nonprofit sectors. The majority of her career has been spent in healthcare emergency management planning and operations including her role as a regional program specialist for the SouthEast Texas Regional Advisory Council's Hospital Preparedness Program before moving into her current role in 2015. Amber holds a Bachelor of Science in Emergency and Disaster Management and a Master's Degree in Public Administration and has presented her work for the Gulf Coast Safety Institute at the College of the Mainland and the Association of Occupational Health Professionals in Healthcare.