



# AMERICAN CHEMICAL SOCIETY KENTUCKY LAKE SECTION

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### KLS-ACS Web Page

<http://kentuckylake.sites.acs.org/>

## February 2014 Kentucky Lake Section Meeting

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### Hig's Restaurant

1027 Oakwood Drive, Milan, TN 38358

Thursday, February 20, 2014

Dinner @ 6:00 pm, Presentation @ 7:00 pm

*Buffet Dinner for \$10 (Students \$5)*

**Presentation: "The Cardinal Rule of Explosives Safety"**

### J. Keith Butler

Environmental Programs Manager, American Ordnance LLC

See next page for Abstract and Biographical Sketch

## Comments from the Chair

Thank you to everyone who attended the January Meeting in Union City. I hope you all enjoyed the meeting dealing with the ACS Leadership Institute Report, Implications of the ACS Strategic Plan as well as projections on \$ amounts spent on STEM including chemistry and job creation. This month's meeting will focus on the safety aspect of chemistry from our own Keith Butler. Do not miss this great opportunity to learn something new and you never know you may want to use that safety procedure(s) in your own laboratory setting! Please plan to attend this meeting and support your local section. We are looking forward to seeing you soon.

~Bommanna Loganathan, Chair

## The Cardinal Rule of Explosives Safety

The US Military and its contractors work safely with energetic materials on both an industrial scale and on a laboratory scale. Practices and procedures used with these materials will benefit academic and research laboratories that work with reactive, energetic, and explosive materials. The most effective practice may be one of the simplest and cheapest to implement. This is especially useful for laboratories beginning new projects with inexperienced laboratory workers. Though not a substitute for a detailed Chemical Hazard Analysis with strictly enforced standard laboratory procedures, the Cardinal Rule of Explosives Safety must be adhered to at all times. A review of accidental laboratory detonations demonstrates how property damage and injury would have been reduced by obedience to this simple rule: "Expose the minimum number of people to the minimum amount of explosive for the minimum amount of time."

### Biographical Sketch

**J. Keith Butler**, *keith.butler@aolc.biz*, Environmental Programs Manager, American Ordnance LLC, Milan, Tennessee 38358

"I have been amazed by the transforming power of chemistry ever since I received a Sears ChemCraft chemistry set when I was 10 years old. Since entering college there has not been a season of my life when I was not involved with laboratory work."

Mr. Butler received a B.S. in Chemistry from Union University and a M.S. in Chemistry from The University of Memphis. As a graduate student his focus of study was on analytical and inorganic chemistry. His first position was as a formulations chemist preparing and developing industrial products for a variety of applications. Since 1987 he has been at the Milan Army Ammunition Plant as Chemist, Senior Chemist, Chief Chemist and currently Environmental Manager. Working with energetic materials has made Mr. Butler an advocate for chemical safety. He has been published in the American Chemical Society (ACS) journals *The Journal of Chemical Health and Safety* and *The Journal of Chemical Education*.

As Environmental Manager for American Ordnance LLC, the operating contractor of the Milan Army Ammunition Plant, his primary responsibilities include the execution of the ISO 14001 Environmental Management System. This requires minimizing environmental risks and ensuring compliance with regulatory requirements including Resource Conservation and Recovery Act (RCRA), Hazard and Solid Waste Amendments of 1984 (HSWA), Clean Air Act (CAA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA), Emergency Response and Community Right-to-Know Act (EPCRA), Superfund Amendments and Reauthorization Act (SARA), Toxic Substance Control Act (TSCA), Federal Insecticide Fungicide and Rodenticide Act (FIFRA), National Environmental Protection Act (NEPA) and others.

In addition to his work in industry, Mr. Butler has held Adjunct faculty positions at Jackson State Community College and Union University. He is active in the American Chemical Society and was the 2007 Chair for the Kentucky Lake section and is the current Alternate Councilor, Public Relations Chair and web administrator. He sits on the ACS Joint Board Council Committee on Public Relations and Communications and chairs the CPRC Awards sub-committee. As an ACS tour speaker he has given presentations to over 30 local sections.