598th NETS-ACS Meeting
How Batteries Work and Die

Date: Thursday, March 3rd, 2011
Location: Eastman Lodge

Agenda

6:00 PM Social/Dinner
6:45 PM Dr Bill Tindall

Menu
Catered by Braeden's Barbeque
Pulled Pork or Pulled Turkey Sandwiches
Baked Beans
Cole Slaw
Brownies
Tea

The cost for the meal is $12/person. Make check to "NETSACS" Indicate number in your party. RSVP's are fine with the understanding that payment will be made at the meeting. No cost to attend the lecture only.

Please RSVP by noon on February 28th, 2011 Please reply to: **Mary K. Moore** mkmoore@eastman.com 423-229-1911	Next Meeting on April 21st, 2011 Awards Banquet Distinguished Member Award NETS-ACS Chemical Technician Award and many more.

Directions to the Eastman Lodge

Use I-26 – Take Exit 3 for Meadowview Parkway.
Turn west, going under I-26 on Meadowview Parkway \ Reservoir Road
The name of the road will become only Reservoir Road
Go 2.3 miles and turn right on Bays Mountain Park Road
You should see a sign for Bays Mountain Park
Take the right fork in the road in 0.2 miles to the Lodge

Dr. Bill Tindall
Retired from Eastman Chemical Company

How Batteries Work and Die

Fifty years ago our needs for batteries were largely confined to the car's starter and a dim flashlight. The car battery required frequent water additions performed at the full service gas station. The flashlight batteries leaked and corroded the flashlight abandoned in the drawer or glove compartment. We have come a LONG way, and some believe batteries have been developed to near their theoretical potential. Today, reliable high capacity batteries are needed to provide power for a host of mobile devices- watch, pacemaker, tools, cell phone, lab top, garage door opener or even the primary power source for a car. Hundreds of battery chemistries are known but only a few are optimum for typical consumer applications- lead acid, alkaline, nickel metal hydride, silver oxide and lithium ion.

I will describe the chemistry that provides power from these common batteries and the chemistry that leads to their death, as well as how this chemistry is packaged into the consumer product. We may even take a glimpse at fuel cells, a subcategory of batteries that has great theoretical promise but suffers great practical problems. Some useful information on how to buy, care for and store batteries will be provided.

Bio
Bill received his BS Degree in Chemistry from Clarkson College, Potsdam, NY, and his PhD in Electrochemistry from the University of Minnesota. He worked in the research and environmental laboratories at Eastman Chemical Company and now is currently a retired. He now devotes his time to being a sheep farmer.