

# The CSRA Chemist

Savannah River Section  
of the

American Chemical Society

Vol. 47



No. 1

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## Mark Your Calendars! -- Two Meetings

Feb. 26th - Fort Discovery - Augusta,

6:00 Tour -w/Trammell, 7:00 Dinner

8:00 Joe F. Edwards, Jr. -- "An Update on

National Science Center Programs and Partnership  
Opportunities"

Mar. 17th - ANS/ACS Joint Meeting

Aiken Brewery on St. Patrick's Day

6:30 Social, 7:00 Dinner

8:00 [Dr. Stephen H. Stow](#) -- "...And Some of the

Cowboys Wore White Hats: Disposal of Liquid Nuclear Waste  
at Oak Ridge National Laboratory during the Manhattan  
Project"

Please Call: Glenda Blystone to make reservations, 725-  
2605 by Feb 25 and Mar 16. Please read notes for details  
about the dinners.

# Up Coming Events --

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February 26th

- Fort Discovery Tour, Dinner, and National Science  
with Joe Edwards

March

March 17th - Steven H. Stow, ORNL, Tour Speaker  
[note this is St. Patricks Day - so expect green  
beer somewhere]

March 28 - 227th ACS National Meeting will be held March  
28 to April 1, 2004, in Anaheim, CA.

April - Event Open

May - Student Awards or Picnic

June - Summer Break

July - Summer Break

August - 228th ACS National Meeting, Philadelphia, PA, August 22-  
26, 2004.

September

- First Fall Meeting - To Be Announced

October

- Local Speaker - Elections - Business Meeting  
- WOW Chemistry - ASU  
- National Chemistry Week  
- Science Education Enrichment Day - USCA

November

- Nov 9, Steven Dutch, U. WI - Green Bay, Tour Speaker,  
- Nov 10-14, SERMACS, Research Triangle Park, NC

December -- Holiday Party, Recognitions and New Officers

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# Fort Discovery, Augusta ...see the Mars Rover Simulator

The meeting is scheduled for Thursday, February 26. For those interested, local ACS member and Fort Discovery volunteer Bill Trammel will lead a tour of Fort Discovery at 6:00 pm. Fort Discovery is one of three facilities in the United States with a Mars Rover Simulator and exhibit (the others are the Smithsonian Institution and a Science Center in San Francisco). Dinner will start at ~7:00 pm followed by a presentation by former astronaut and current Fort Discovery CEO Joe F. Edwards. Dinner will consist of roast beef and vegetable lasagna, salad, Italian green beans, new potatoes, fresh baked rolls, cookies, and drinks. Dinner cost is \$15.00 per person. Parking is available in the garage below Fort Discovery and the elevator can be used to bring people upstairs for the meeting.

Speaker: Joe F. Edwards, Jr.

Title: "An Update on National Science Center Programs and Partnership Opportunities"

About Joe F. Edwards, Jr.

Joe F. Edwards is a former Astronaut, aviator and test pilot. He holds a Bachelor of Science degree in Aerospace Engineering from the United States Naval Academy and postgraduate degrees in Systems Engineering, Industrial Management and Engineering Flight Test. Joe piloted the last American crewmember to the Russian Mir space station. He managed the operations and development of the International Space Station from Star City, Russia and was the Astronaut safety manager for ISS development.

As a Navy aviator, he flew combat missions in Desert Shield/Desert Storm. He has an extensive career centered on military affairs and the execution of foreign policy, serving in the Operations directorate of the Joint Staff under General Colin Powell.

He is currently serving as the Chairman and CEO of the National Science Center, an organization established by Act of Congress to improve the quality of science and mathematics education of American students. He has recently completed his first book, a memoir of his flying career at NASA and during the Cold War. Joe resides in Augusta, Georgia with his wife and young daughter.

Speaker        [Dr. Stephen H. Stow](#)

Title        ...And Some of the Cowboys Wore White Hats: Disposal of Liquid Nuclear Waste at Oak Ridge National Laboratory during the Manhattan Project

Abstract    When asked, most people would contend that the disposal of waste materials — including the highly toxic liquid nuclear waste — from operations at Clinton Laboratories (now Oak Ridge National Laboratory or ORNL) during the Manhattan Project was of secondary interest and was handled in a haphazard and irresponsible fashion. This talk addresses new and previously unpublished information that demonstrates this was not the case and that the world premier scientists and engineers of the Manhattan Project were highly dedicated to “proper” management decisions for the liquid wastes. The talk traces the evolution of waste management-related thoughts and actions at Clinton Laboratories from the start of the Manhattan Project in 1942 to the arrival of the Atomic Energy Commission in 1947. The involvement of the Chicago-based Metallurgical Laboratory, under the direction of Arthur Compton and Glenn Seaborg, and the construction and development of super-secret scientific facilities at Clinton Labs never lost sight of issues related to the safe handling and disposal of the liquid wastes. Chemical principles dominated the thinking for the waste handling prior to disposal, when volume minimization and protection of human health were of paramount importance; the lack of knowledge of the chemical behavior of radionuclides in the environment, including the biosphere, after disposal was a frustration faced by all. The scientists, engineers, and medical professionals involved with this activity were of world class caliber on a mission to produce a nuclear weapon to end the war. However, their professional ethics and concern for their fellow man continued to direct their thoughts and actions toward “proper” waste management. They were not solely directed toward bomb production at any cost, as many would automatically presume. Indeed, these individuals can be viewed as “cowboys” in a western town, where they battled a common enemy on the frontier of science. By today’s standards, what was done to manage liquid nuclear wastes in the 1940s is, of course, totally unacceptable. We must view their efforts in light of the times and with full understanding that they lacked knowledge of the chemical and physical characteristics of radionuclides, many of which had never even been envisioned before. Without the integrity that was demonstrated by these pioneers, we would be facing a much greater challenge today as we strive to clean up the disposal problems of the past.

# Young Chemists

The section is forming a YCC group. Please contact Norman Johns or Andrew Marinik if you are interested in this activity.

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## Local Section Awards -

ACS-SR Special Recognition Award - special award made to the member making a unique contribution to the objectives of the Savannah River Local Section.

[Denise Creech Outstanding High School Chemistry Teacher Award](#) - trophy awarded annually to the teacher making the most significant contributions to the advancement of chemistry education.

Chairman's Service Award - certificate of appreciation to members making significant contributions to the Savannah River Local Section.

CSRA Science Fair Award - CRC Handbook of Chemistry and Physics awarded to the Science Fair project best exemplifying chemical science principles.

[ACS-SR Chemistry Olympiad Award](#) - recognizes the Local Section Olympiad finalists nominated to take the National Chemistry Olympiad examination.

Chemistry Olympiad School Recognition Award - plaque presented to the CSRA school(s) participating for two consecutive years in the National Chemistry Olympiad. Year plates awarded for each subsequent year of participation.

The Awards Committee is seeking information from past ACS-SR chairman on awards received by the Section over the past 40 years. If you have information on any awards, please send this information to the [ACS-SR WEBMaster](#) for inclusion on the ACS-SR Web page.

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Welcome to SERMACS 2006!

November 1-4, 2006

[Augusta, Georgia](#)

Hosted by the [ACS-Savannah River Section](#). For more information, please contact a member of the SERMACS 2006 [Organization Committee](#).

Last Updated: 1/5/2004

Web Links from our Web Site  
WEBSITE: <http://acs-sr.home.mindspring.com>  
or <http://www.mindspring.com/~acs-sr/>

### Chemistry Internet Links

One of the most comprehensive list of Chemistry Links provided by  
UCLA Chemistry (<http://www.chem.ucla.edu/chempointers.html>)

### Common Weights and Measures

Source at UC Berkeley, Chemistry (<http://www.cchem.berkeley.edu/ChemResources/Weights-n-Measures/index.html>)

### Federal Information Exchange

FREE e-mail Service: sign up for grant announcements from most  
federal agencies (<http://www.fie.com>)

### Polymer and Materials Chemistry Jobs

(<http://www.chemistryjobs.com>)

### Ruth Patrick Science Education Center

(<http://rpsec.usca.sc.edu>)

### University of South Carolina at Aiken Department of Chemistry

Department tour as well as faculty and course information

(<http://chem01.usca.sc.edu/chemistry/>)

### Augusta State University Department of Chemistry and Physics

Local Chemistry faculty pages and course information

(<http://www.aug.edu/chemphys/Welcome.html>)

### WebElements

a WWW Periodic Table and more links

(<http://www.cchem.berkeley.edu/Table/index.html>)

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