

# 20th Anniversary Edition

## In the Beginning... CNTA's first Board of Directors



Mike Hosang  
Chair



Dan Ross  
Vice Chair



"Buzz" Rich  
Treasurer



Mike Butler  
Executive Director



Bill Reinig  
Technical Expert

Board Members: Sid Ballentine  
Donald Law  
Steve Sheetz  
Mickey Smith  
John Zawacki

Randolph Burnette  
Dr. Fred Davison  
Tim Simmons  
Nat Stetson

Ex-Officio Members: Albert Hodge, Jr.  
June Murff  
Eric Thompson  
Tommy Wessinger

Mike Hosang said public understanding of the nuclear industry is generally lacking and his group (CNTA ) will attempt to "fill a gap."

"We want to serve as a credible source of factual information for the media, elected officials and the public. Nuclear energy is an integral part of the fabric of our economy and the total life of this region from energy production to jobs. This technology should be well understood by everyone. We all have a stake in it"

"It (CNTA) is a grass-roots organization whose members will come from all walks of life and who share a common interest -- belief in nuclear energy as an important source of energy for our country and a bulwark of our national defense.

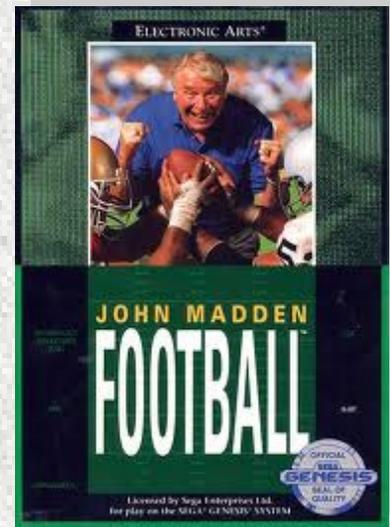
We speak as concerned citizens who support nuclear energy and who do not believe the public has enough information to make informed judgments about this vital energy source. There are . . . too many preconceived notions that breed misconceptions and stereotypes. We will address those stereotypes and misconceptions with facts."

J. Michael Hosang, CNTA's chairman in a statement at the Columbia SC news conference January 27, 1992

## What was Happening in 1991

### News Headlines:

- UN Launches massive air assault on Iraqi troops lead by US missiles
- UN ground troops lead by US military liberate Kuwait in 100 hrs.
- LA police officers beat motorist, caught on videotape
- Boris Yeltsin elected Russian President
- Jeffery Dahmer arrested for serial killings and cannibalism
- Magic Johnson announces he is HIV positive
- Terry Anderson last US hostage in Lebanon is released
- Slovenia and Croatia declare independence from Yugoslavia
- Gulf War broadcast live on TV
- Federal Reserve lowers interest to 5.5%
- Judge Clarence Thomas-Anita Hill hearings are televised
- Jay Leno succeeds Johnny Carson
- Warsaw Pact dissolved on July 1
- After 13 seasons, soap, "Dallas" ends
- Author John Grisham has a best seller, "The Firm"
- At 44, Nolan Ryan pitches a record 7th no-hitter
- "Smart" bombs have a 90% accuracy in Gulf War
- FDA questions the safety of silicone breast implants
- Elizabeth Taylor marries her 8th husband, Larry Fortensky 39
- Oakland firestorm in October, 1991 caused 25 deaths and cost \$2.5 billion in damage.
- Hurricane Bob in August caused 18 deaths and cost \$1.5 billion in damages.



## World and U.S. Events and Statistics

**World population** 1991: 5.359 billion

**U.S. population** 252,127,402

**U.S. Life expectancy:** 75.5 years

**Yearly Inflation Rate:** 4.25%

**Average Cost of new House:** \$120,000

**Average Monthly Rent:** \$495.00

**Cost of a gallon of Gas:** \$1.12

**Bacon, 1 pound:** \$1.95

**Eggs, 1 dozen:** \$.85

**President:** George Bush

**Vice President:** Dan Quayle

**Violent Crime Rate (per 1,000):** 59.0

**Property Crime Rate (per 1,000):** 51.4

**Year End Close Dow Jones Industrial Average:** 3168

**Fed. Reserve Interest Rates:** 6.50%

- US Supreme Court limits death row appeals
- William Webster retires as Director of CIA, Robert Gates succeeds him in May
- US indicts two Libyans in 1988 bombing of Pan Am Flight 103 over Lockerbie, Scotland

- France agrees to sign 1968 treaty banning spread of atomic weapons. China accepts nuclear nonproliferation treaty.
- Bush-Gorbachev summit negotiates strategic arms reduction treaty in July.
- Warsaw Pact dissolved in July
- Soviet Union breaks up after President Gorbachev's resignation; constituent republics form Commonwealth of Independent States
- **Nobel Peace Prize:** Daw Aung San Suu Kyi (Burma)
- **Nobel Prize in Chemistry:** Richard Ernst (Switzerland), for refinements he developed in nuclear magnetic-resonance spectroscopy
- **Nobel Prize in Physics:** Pierre-Gilles de Gennes (France), for his discoveries about the ordering of molecules in substances ranging from "super" glue to an exotic form of liquid helium
- **Nobel Prize in Physiology or Medicine:** Erwin Neher and Bert Sakmann (German), for their research, particularly for the development of a technique called patch clamp

- The FDA approves the use of Bristol-Meyers' ddI (didanosine) in the treatment of AIDS
- In Japan's worst nuclear accident to date, a leak of radioactive water causes a nuclear plant 220 miles west of Tokyo to release about 8% of the plant's annual radioactive emissions in a single day
- The first cholera epidemic in a century sickens 100,000 and kills more than 700 in South America
- First transpacific hot-air balloon flight. Richard Branson and Per Lindstrand flew about 6,700 miles from Miyakono, Japan, to 150 miles west of Yellowknife, Canada
- Gopher, the first user-friendly internet interface, is created at the University of Minnesota and named after the school mascot. Gopher becomes the most popular interface for several years.
- Fires in the hills of Oakland, CA burns thousands of homes and kills 25
- Seventy tornadoes break out in the central U.S., killing 17.

# Sports:

### World Series:

- Minnesota defeats Atlanta Braves (4-3)

### NBA Championship:

- Chicago defeats LA Lakers (4-1)

### Stanley Cup:

- Pittsburgh defeats Minnesota (4-2)

### Wimbledon Women:

- Steffi Graf defeats G. Sabatini (6-4 3-6 8-6)

### Wimbledon Men:

- Michael Stich defeats B. Becker (6-4 7-6 6-4)

### Kentucky Derby Winner:

- Strike the Gold

### NCAA Basketball Champions:

- Duke defeats Kansas (72-65)

### NCAA Football Champions:

- Miami-FI (AP) (12-80-0-) & Washington (USA, FW, NFF) (12-0-0)

# Entertainment News

Oscars Awarded—Best Picture: *Dances with Wolves*, Kevin Kostner

Grammys—Record of the Year: *"Another Day in Paradise"*, Phil Collins

Album of the Year: *Back on the Block*, Quincy Jones

Song of the Year: *"From a Distance," Julie Gold*, songwriter

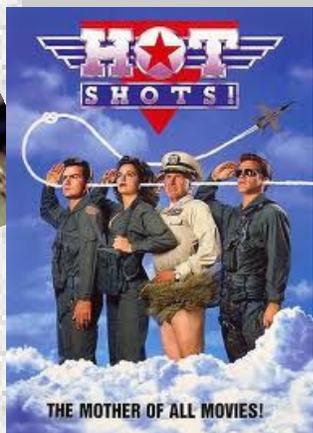
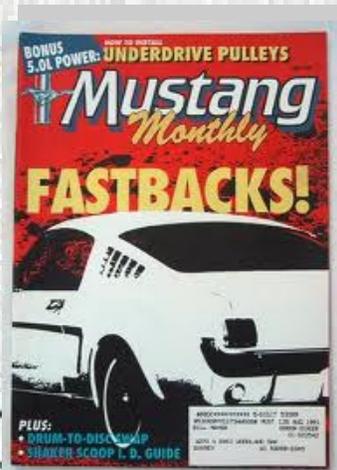
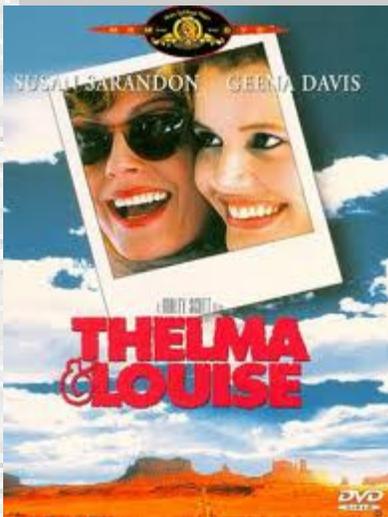
Miss America: *Marjorie Judith Vincent*, Illinois

Movies: *The Silence of the Lambs*, *Beauty and the Beast*, *JFK*, *Thelma & Louise*

Books: *Ben Okri*, *The Famished Road* and *Jane Smiley*, *A Thousand Acres*

Nobel Prize in Literature: *Nadine Gordimer* (South Africa)

# 1991



# CNTA History

By Bill Reinig



During DuPont's management of the Site, I was the Superintendent of the Health Protection Department (radiation protection and industrial hygiene) for ten years and then the General Superintendent of the Technical Department. In those positions, I was the spokesman for Dupont on radiation issues involving employees and the public. In that period, I was also the president of the national Health Physics Society and the chair

of the board that examines and certifies the technical competence of health physicists in this country.

In 1991, when I was invited to serve on CNTA's startup board, I was the Deputy General Manager of the Environmental, Safety in the Westinghouse organization. Immediately accepted because for years I had been frustrated by inaccurate allegations by adversarial groups. SRS was a favorite target of these groups since it was both a nuclear and weapons site. Heavy hitters, like Physicians for Social Responsibility (recipients of the Nobel Prize for Peace) and smaller anti-nuclear organizations spoke at public meetings and sent letters to the editor. Their opinions were sought by the media. The Augusta Chronicle, the second largest newspaper in Georgia, often inserted a skull and cross bones icon in articles about the Site. Most of the scary allegations pertained to radiation. I hoped that CNTA would be recognized by the media and public as a credible source of information about SRS and nuclear energy.

Mike Hosang, a leading realtor in Aiken was CNTA's first chairman. He stepped down after several months and Fred Davison became chairman. Fred was an ideal chairman for several reasons. He knew SRS and its missions because as president of the University of Georgia for 19 years he had oversight of the University's ecology laboratory at SRS. After receiving his veterinary degree, he earned his PhD in studies involving radiation and led a U.S. Atomic Energy Commission research project at Iowa State University. He was a convincing speaker and an enthusiastic advocate for nuclear power and other uses of nuclear energy. He knew many of the important political leaders and newspaper publishers in Georgia.

Fred Davison's only downside in the context of the chairmanship of CNTA was his busy involvement in many other activities. He was the president of the National Science Foundation Center adjacent to Fort Gordon that developed computer-based educational programs for elementary and high schools. Governors of Georgia appointed him to chair ad hoc committees. He was the district chair of the Boy Scouts in the Central Savannah River Area. In addition he was involved in an extraordinary number of civic and church activities.

Shortly after he became the CNTA chairman, the board cre-

ated the vice-chair position, and elected me to fill it. As vice-chair, I served as the chief operating officer. When I retired from Westinghouse about a year or so later. I spent an hour or two a day on CNTA business.

At the beginning and for about the first ten years, Mike Butler was the Executive Director of CNTA. He held this position and at the same time operated a successful public relations business with a six-person staff in Columbia. Butler worked part-time for us but was always on-call to answer media questions and to help us when new issues arose. He had previously headed public relations for TVA's reactor program and he was Secretary of Energy Jim Edwards' chief PR person. Together we began the Teller Lectures, the Up and Atom breakfasts, arranged media briefings in Columbia and Augusta announcing the formation of CNTA, 1992 announced the start of CNTA in the lead article on the front page. It ended by quoting Mike Hosang's statement: "There are too many misconceived notions that breed misconceptions and stereotypes. We will address these stereotypes and misconceptions with facts".

Photo is Dr. Edward Teller (L) and Bill Reinig (R), at the first lecture held. Bill currently lived in in Annapolis, MD

Teller said that he thinks "the dangers of radiation have been highly exaggerated. So-called nuclear wastes should be called nuclear byproducts and used for positive purposes in medicine, and in other areas, including to stabilize food and clean up sludge".

## First Teller Event

On January 27, 1992, media briefings were held in Augusta and Columbia to announce the start and purpose of Citizens for Nuclear Technology Awareness. Mike Butler and Jack Herrmann had already made contacts with the local media, and the briefings were well attended.

The novelty of a pro-nuclear grassroots organization after decades of covering groups that opposed nuclear energy, particularly the Savannah River Site, caught the media's attention. For example, the lead article on the front page of *The State* newspaper the next day told who we were and what we planned to do.

Our next goal after announcing we were in business was to relate more closely with community leaders and elected officials in the Central Savannah River Area. To accomplish this, we decided to hold a public meeting to commemorate the 50<sup>th</sup> anniversary of the startup of the first nuclear reactor beneath the University of Chicago's athletic stadium.



Mike Butler and I agreed that the key to a successful meeting would be a speaker who was a nationally recognized expert on nuclear energy. Of those we considered, Edward Teller was our first choice. Since the beginning of the nuclear age, Teller had been one of the nation's most influential scientists. The public knew him as the Father of the H-bomb and the originator of the strategic defense initiative, known as Star Wars. He was *Time* magazine's person of the year and considered by some to be the inspiration for the movie character, Dr. Strangelove.

We fully recognized that the chance of attracting world-famous Edward Teller to travel from California to speak at an event of a tiny organization that was less than a year old and was offering no speaker's fee was about the same as winning a major lottery. While both of us were cautiously optimistic, others probably thought we were wasting our time.

We, however, had a hook, and that was my friend Wade Patterson who was a colleague of Dr. Teller at Livermore National Laboratory. Wade told me that we couldn't speak directly with Teller but we could offer our invitation through his secretary (although retired, Teller still had an office at Livermore, the laboratory he founded, and also maintained a residence on the Stanford Campus.). Wade gave me her number and suggested that we mention that he endorsed our organization. A week or so went by. We were losing hope when, to our amazement and joy, Teller accepted our invitation.

Dr. Teller arrived at the Augusta airport in the late afternoon of Sunday, December 6, 1992. Fred Davison, Mike Butler and I were there to welcome him. He came slowly down the mobile stairway that was rolled up against the plane's door holding the railing with one hand and a long walking stick with other. He looked like an elderly man (he was 84) very exhausted from a tiring trip across the country. We drove him to the Radisson hotel in Augusta and said goodnight.

The next morning, Teller was rested, spry and ready to go to the National Science Foundation Center adjacent to Fort Gordon, where Fred was the president. Fred showed him the work of the Center. Teller was particularly interested in the Center's development of

computer programs aimed at teaching young children. Fred invited the CNTA board to be there to meet Teller. He arranged to have each member photographed with Dr. Teller and share lunch.

In the early afternoon, Dr. Teller visited a local middle school in Augusta and met with a group of students. Perhaps the most memorable line of his visit came from a young student who told Teller: "You're the first person I ever met who's in an encyclopedia."

Further taxing the stamina of this octogenarian, Dr. Teller participated in a press conference for local media at around 4:00 in the afternoon. After that, he went to his room to rest and prepare for his evening presentation.

That evening of December 7 the public meeting was held at the Radisson in a large ballroom with about 400 chairs set up in theater style. It was a sellout crowd. Fred introduced Dr. Teller who spoke seated on a chair in the center of a low stage, leaning on his walking stick for support and occasionally tapping it on the floor for emphasis.

He spoke extemporaneously for about 30 minutes in his deep voice and Hungarian accent. Speaking in layman's terms without using technical jargon, he explained his vision of the future and benefits of nuclear energy.

He underscored his belief that America must have nuclear energy and bemoaned the pending loss of jobs at the Savannah River Site. "If we lost 25,000 jobs at the Savannah River Site, it would be a national tragedy," he said. Teller's insight was prophetic as two decades later the SRS footprint had shrunk dramatically and employment had dropped to less than half its 1992 high.

As Teller spoke, I stood at the side of the room and could view the audience. They were mesmerized. So was I. We knew this was an extraordinary occasion.

After Dr. Teller's talk, a group photograph was taken of him with about 25 members of the audience who worked in the Manhattan Project during World War II.

Because the event was a so successful, we decided to hold annual public meetings. Dr. Teller gave us permission to call them Teller Lectures. In succeeding years, guest speakers were drawn by the event's association with Teller and readily accepted our invitation. Speakers have included former Secretary of Defense and Energy James Schlesinger, former Senate Majority Leader and White House Chief of Staff Howard Baker, Oak Ridge National Laboratory Director Alvin Weinberg and commercial nuclear energy pioneer Bill Lee and others of similar stature in the political and nuclear fields.

*Written by Bill Reinig and Mike Butler*

# First Edward Teller Event



Citizens for Nuclear Technology Awareness

PRESENTS **DR. EDWARD TELLER** 265

*On the Occasion of The 50th Anniversary of Nuclear Energy*

Monday, December 7, 1992  
6:00 PM Reception & Cash Bar  
7:00 PM Dr. Teller, Speaker

Radisson Hotel  
Two Tenth Street  
Augusta, Georgia

Admit One

**YES,** I support nuclear energy and SRS. I want to join Citizens for Nuclear Technology Awareness. My ticket includes the \$15 membership fee for 1992-93.



265

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Telephone \_\_\_\_\_



Kathy Butler & Dr. Teller



Dr. Teller & Mike Butler



Dr. Teller & Eric Thompson



Al Hodge & Dr. Teller



Dan Ross Dr. Teller



June Murff & Dr. Teller



Steve Sheetz & Dr. Teller



Buzz Rich & Dr. Teller



Dr. Teller & Mike Hosang



Dr. Teller & Bill Reinig



Al Hodge, Steve Sheetz, Fred Davison and Dr. Teller at luncheon, No 10 Downing Street

First Edward Teller Event continued .....



First Teller event held at the Marriot in Augusta, GA. 642 people attended the reception and heard Dr. Teller speak for an hour.



CNTA Display - Looking for new members.... on-going to this day!!



Large crowd at afternoon event, Radisson Hotel



One of the nine displays at the first event.



Dr. Teller, Fred Davison and high-school students



Dr. Fred Davison, Dr. Ruth Patrick and Dr. Eugene Odum, 1994 Teller Event

## EDWARD TELLER GUEST SPEAKERS FROM 1992 TO 2011



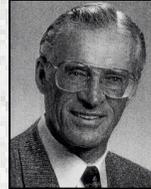
1992—Dr. Edward Teller, was a Hungarian-born American theoretical physicist, known colloquially as “the father of the hydrogen bomb,” even though he did not care for the title. Our 1st Speaker in the series. Dr. Teller passed away in September, 2003 at the age of 95.



2002—Mr. Corbin McNeill Corbin, Retired Chairman and co-CEO of Exelon Corporation, Director Electric Power Research Institute. His lecture was titled “The future is Brighter Than it May Appear”.



March, 1994—Dr. Margaret Maxey, Bioethics from University of Texas Austin. She is a recognized authority on energy matters and ethical aspects of energy policy. (Dr. Maxey replaced Dr. Dixie Lee Ray who passed away in late 1993)



2003—Dr. John Foster, former Chairman of the Defense Science Board, Consultant of Northrop Grumman Space Technology



1994—Dr. Leonard Sagan, a senior medical scientist with the Electric Power Research Institute. Dr. Sagan passed away in 1997.



2004—Dr. Henry Wagner, International Author on Nuclear Medicine from Johns Hopkins University School of Medicine. His lecture was titled “The History & Future of Nuclear Medicine”



1995—Mr. Bill Lee, former Chairman & CEO of Duke Power Company & strong supporter of nuclear power. “A true pioneer of commercial nuclear power”



2005—Dr. “Skip” Bowman, President and CEO Nuclear Energy Institute. His lecture was titled “America’s Nuclear Revival”



1996—Dr. Alvin Weinberg, member of the National Academy of Sciences & former White House energy advisor



2006—Dr. Nils Diaz, retired Chairman of the Nuclear Regulatory Commission. He was a nuclear engineering professor and chairman at the University of Florida



1997—Dr. James Schlesinger, Secretary of Defense from 1973 to 1975 under President Nixon and Gerald Ford.



2007—Mr. Dale Klein, Chairman of the Nuclear Regulatory Commission. Previously served as Assistant to the Secretary of Defense for Nuclear & Chemical/Biological Defense Programs



1998—Mr. Richard Rhodes, American journalist, historian and author of both fiction & non-fiction, including Pulitzer Prize –The Making of the Atomic Bomb & The Twilight of the Bombs.



2008—Ms. Gwyneth Cravens, author of “Power to Save the World” The Truth About Nuclear Energy”.



1999—Senator Howard Baker, Republican Senator from Tennessee, serving in the U.S. Senate from 1967-1985.



2009—Congressman James Clyburn, became the first South Carolinian and the second African American to ascend to the 3rd ranking position in the House of Representatives. Serving as House Majority Whip, leader of the House Democrat’s Faith Working Group.



2000—Dr. Harold Agnew was one of those distinguished few on Enrico Fermi’s team that produced the world’s first nuclear chain reaction under Stagg Field at the University of Chicago on December 2, 1942.



2010—Mr. Grizz Deal, CEO of Hyperion Power Generation. Twenty years of experience in technology commercialization and fast growing ventures.



2001—Senator Pete Domenici is one of the most influential and respected members of the U.S. Senate.



2011—Mr. Stephen Kuczynski, Chairman, President & CEO of Southern Nuclear Operating Company. Responsible for the construction of Plant Vogtle Units 3 and 4



Nuclear Pioneers with Dr. Teller at the 1992 event



TV and Newspaper coverage for Dr. Teller's appearances



One of the many displays



Dr. Fred Davison and Dr. Teller speaking to students



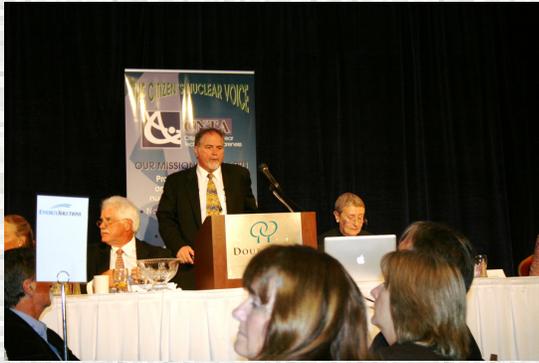
Dr. Teller signing autographs



Dr. Margaret Maxey—March, 1993 Teller Event



Dr. Alvin Weinberg—1996 Teller Event



2010 Edward Teller Event with Grizz Deal, Hyperion Power Generation. Event held at the Doubletree Hotel & Convention Center, Augusta, GA.



2009 Edward Teller event with Congressman James Clyburn.



Event held at the Doubletree Hotel & Convention Center, Augusta, GA.



2011 Guest Lecturer, Steve Kuczynski, Southern Nuclear Operating Company held at the USCA Convocation Center, Aiken, SC



Carlos Garcia and Dr. Nils Diaz at the 2006 Teller



In "A Summary of CNTA Activities" dated September, 1998, it mentions CNTA's intent to host a membership breakfast called "Up & Atom" at least once a quarter. The article states that CNTA has had Dr. John Till, who is heading a study of historic radiation exposures at SRS, Jim Miller of Southern Company, who discussed possible use of Plant Vogtle for Tritium production, and Burns and Roe Chairman Keith Roe, who discussed the Accelerator for Tritium Production (APT). The three mentioned speakers must have been the first invited speakers. Our breakfasts have increased to 8 or 9 a year, with attendance over 100 each time.

## UP & ATOM GUEST SPEAKERS from 1999 to 2001

Gary K. Bertsch, Director, Center for Intn'l Trade & Security, University of Georgia

Topic: National Security: How Will We Meet 21<sup>st</sup> Century Challenges? (December, 1999)

Emory D. Collins, Senior Technical Advisor, Chemical Technology Div., Oak Ridge National Laboratory

Topic: Radioisotopes: Production & Use in Industry (March, 2000)

Dr. James A. Lake, President Elect, American Nuclear Society

Topic: The 4<sup>th</sup> Generation of Nuclear Power: Emerging Priorities for Nuclear Energy (April, 2000)

Ambrose Schwallie, Former President Westinghouse Savannah River Co. Topic: Who We Are and Where We Are Going (May, 2000)

Dr. Dennis Erickson, Director of ES&H, Los Alamos National Laboratory

Topic: Los Alamos and the Grand Cerro Fire: Lessons Learned for SRS (August, 2000)

Mr. William Magwood, IV, Director, Office of Nuclear Energy, Science & Technology, U.S. Dept. of Energy

Topic: Prospects for Nuclear Science, Technology and Power in the U.S. (October, 2000)

Dr. John R. Cameron, Founder of Radiation, Science & Health, Inc. Topic: The Good News About Radiation (February, 2001)

Dr. Robert Addis, Ph.D. from the University of Virginia in Environmental Sciences Topic: Global Warming: Is It Real? (March, 2001)

Dr. Ruth Weiner, Adjunct Professor of Civil Engineering at the University of New Mexico Teaching a graduate course in radioactive waste disposal.

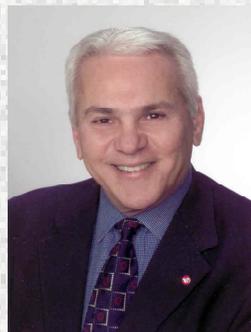
Topic: Radioactive Materials Transportation: Mobile Chernobyl? (April, 2001)

Dr. Paul Robinson, President, Sandia Corporation and Director, Sandia National Laboratories Topic: Preserving Peace in the 21<sup>st</sup> Century (May, 2001)

Dr. Andres Kadak, Professor Nuclear Engineering Dept., Massachusetts Institute of Technology Topic: The Politically Correct Reactor (August, 2001)



General John Gordon, Under Secretary for NNSA. 2002



Dr. Ralph DiSibio, Executive VP, Washington Group International 2002



John Conway, Defense Nuclear Facilities Safety Board 2002



South Carolina Congressman Gresham Barrett 2003



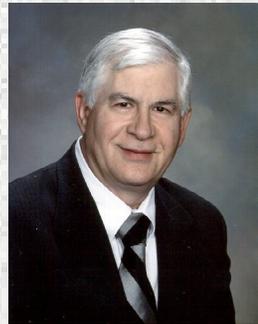
Senator Strom Thurmond and Hazel O'Leary at the North Augusta Reception in 1993.



Tom Christopher, President, Framatone ANP 2004



Daniel LaFontaine, Director SC Inspection Dept. 2004



Pres Rahe, President WGIE&E Unit 2004



Dr. Paul Bertsch, Director of SREL 2005



Dan Keuter—Entergy Nuclear 2005



Mike Campbell—General Atomics 2005



Jerry Paul, Principal Deputy Administrator NNSA-2005



Dr. Dale Klein, Assistant to the Secretary of Defense. 2005



Dr. Ned Sauthoff, ITER program. 2005



Ambassador Linton Brooks, Administrator, NNSA—2006



Dr. Alan Waltar, Sr. author of Radiation & Modern Life, 2006



Bernie Beasley, CEO-Southern Nuclear Co. 2006



Deputy Associate Lab Director, Idaho National Lab. 2006



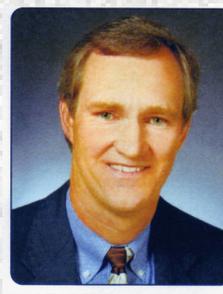
James Rispoli, Assistant Secretary for Environmental Management, 2007



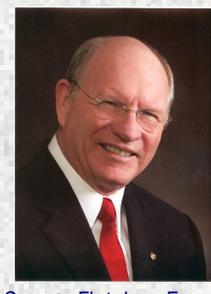
William Ostendorff, Deputy Administrator for NNSA, 2007



Thomas D'Agostino, Acting Administrator of NNSA, 2007



Stephen Byrne, Sr. VP Nuclear & Fossil Hydro SCE&G, 2008



George Fletcher, Exe. Director of South Carolina Council on Competitiveness, 2008



Garry Flowers, CEO & President of SRNS, 2009



Thomas Reed, Author & Historian, 2009



Tom Sanders, Past President of ANS. Leader of Global Nuclear Futures. 2009



Dr. Dorothy Davidson, VP for Nuclear Energy, Renewable & Science for AREVA Federal LLC. 2009



Dr. Susan Winsor, President of Aiken Technical College and Dr. Tom Hall, Chancellor of the University of South Carolina Aiken. 2009



Mark Fecteau, Managing Director for Westinghouse Electric Co. 2010



Tom Tynan, VP Southern Nuclear Plant Vogtle 2010



Dr. Nils Diaz, former head of NRC. 2010



Val Christensen, CEO of Energy Solutions 2011



David Olson, President & Proj. Mgr of Savannah River Remediation, LLC 2011



Dr. Susan Winsor, David Deal, Mindy Mets, and Jo Anne Robinson presented the "Nuclear Industry Skills: Partnerships, Programs and Progress to Meet Regional Needs" in June, 2011.



David Moody, Manager of US DOE Savannah River Operations Joint dinner CNTA & ANS 2011 Dinner



Lake Barrett, independent consultant in the energy field. Fukushima Event 2011



October, 2007 Up & Atom Dinner with guest speakers Dr. Catherine Chang from MCG & James Lathren from The Leadership Institute sitting with Mal McKibben, Executive Director of CNTA at Doubletree Hotel.

# CNTA 20 Yr Anniversary Remarks

By Steve Sheetz

I want to take you back 20 years. 1991 may not exactly stand out in your mind, so let me give you some reminders of what it was like.

The cost of a gallon of gas was \$1.12.

Operation Desert Storm was executed by the U.S.

The internet was made available to unrestricted commercial use.

The most popular movie at the box office was Terminator 2: Judgment Day.

Three of the most popular musicians were Pearl Jam, Whitney Houston and Michael Jackson.



The Dow Jones average topped 3,000 for the first time.

Three Mile Island and Chernobyl were recent memories and had all but stagnated the American

nuclear industry. Few credible voices available to discuss facts about the industry.

In the wake of the Berlin Wall coming down in late 1989 and German reunification in late 1990, Mikhail Gorbachev resigned as president of the Soviet Union in 1991...and the Soviet Union officially ceases to exist.

It was in this environment...as the world was changing all around us...that the Citizens for Nuclear Technology Awareness was born. However, it was established not just to parrot what the nuclear industry requested, but set its sites on bringing nuclear support through solid, sound science. CNTA was not just after head-nodding approval, but real, informed support.

Frustration in timely response to anti-nuclear and anti-SRS sentiments in the regional press. For background—at the time official responses had to come from DOE and had to go through HQ for approval. The three week turnaround made for an ineffective communication strategy. There was no reason a grassroots citizen's group couldn't respond.

Often the decision makers, both business and political, did not have a basic understanding of nuclear and did not have access to a resource.

The press needed a place to ask questions or get an opposing point of view from the anti's.

It all started with a vision two decades ago.

When you reflect on who was here to see the need and had the vision to make it happen, there were several who stepped up to ensure pro-nuclear voices could be heard. Some of

them included Fred Davison, a great advocate for nuclear and a scientist of world renown; and Bill Reinig, whose nuclear research and work brought about great public understanding. There were corporations involved, such as the Savannah River Site's contractor, Westinghouse Savannah River Company, along with Bechtel Savannah River Inc.

Basic premise is that an informed public is typically supportive of all aspects of the nuclear industry. By providing educational opportunities we could at least make people less fearful of the "unknowns" about the atom.

But CNTA was built on the grassroots support of the Central Savannah River's nuclear friendly communities, thanks to the safety and work conducted at Plant Vogtle, a nuclear power facility in Richmond County, Georgia, and the Savannah River Site, a U.S. Department of Energy Site in Aiken County that produces and recycles nuclear materials for the weapons stockpile while safely dispositioning legacy radioactive liquid waste and closing waste tanks. Don't forget to include the Medical College of Georgia and nuclear medicine as a stakeholder.

Today, 20 years later, the world is still changing. Twenty years later, CNTA has new partners, new leaders, and new technologies...but a vision that remains constant: To bring understanding and perspective the public and stakeholders on nuclear issues. And their understanding is where the CNTA future rests.

CNTA got off to a rousing beginning 20 years ago with the first Edward Teller Lecture. And who better to come and discuss the nuclear genie but the Lecture's namesake.

From there, speakers who followed him included Senators, Congressmen, Scientists, Authors and leaders in the nuclear industry.

CNTA established awards along the way to recognize the outstanding work of scientists and students.

The Distinguished Scientist award that began in 1996, is given to a scientist whose research has made significant contributions to the advancement of the broad field of nuclear technology including extending its benefits to health and environmental protection or remediation. This award was later named the Fred C. Davison Distinguished Scientist award in memory of Fred Davison, who became CNTA Chairman of the Board in 1993.

In addition, in 2002 the Robert Maher Memorial Scholarship was established by Washington Savannah River Company, which has been bestowed upon 12 colleges juniors and seniors.

Since its founding, CNTA has worked hard to involve students and teachers as a way to ensure the future generation has the opportunity to learn more about nuclear technology. CNTA now sponsors annual essay contests for high schools, provides information displays for you people to see, and holds workshops for teachers to learn about ways they can teach nuclear technology.

One way we do that is to reach out to young people. Take a few minutes to get on the CNTA website and check-out the You-Tube videos.

CNTA continues to be advocates of the nuclear industry, but knows that the nuclear workforce of the future is critical to ensure there are enough trained workers. That's why students and teachers are involved in this vision.

A recent study from the Savannah River Community Reuse Organization, called the Nuclear Workforce Initiative, survey local nuclear contractors to understand the workforce needs in the nuclear industry. The results showed that by 2015, those industries estimated that more than 10,000 workers would be needed...just in this area.

### Talk about nuclear renaissance!

Thanks to CNTA, the Savannah River Site Heritage Foundation was established. The group is charged with ensuring the Site's nuclear history will not be forgotten.



Since the end of the Cold War, Americans have grappled with the path for nuclear technology. But nuclear has proven itself through the nuclear navy, nuclear

clear medicines and patient tests, food protection, and its ability not to impact global warming.

In the past 20 years, Americans are more accepting of nuclear. Just 20 years ago, some in Green Peace campaigned religiously against the nuclear industry. Today, after learning more about nuclear industry and seeing all that is can accomplish, some have changed their stripes.

CNTA is one of many groups that have helped build the wave of acceptance of the coming nuclear renaissance. Two decades of effort by CNTA has been effective...but we have more—a lot more—work to do.

We are still a grassroots organization, striving to mine the future workers while bringing the truth about nuclear technology to a wide range of audiences.

We are about ferreting out the facts, and demonstrating through real-world work that nuclear is the future of the world.

We are all about reaching others and ensuring that the support afforded to the nuclear industry is informed, prepared and ready for the next 20 years.

Continued on the next page....

And what does the future hold for CNTA?

For starters, we will continue bringing quality nuclear speakers with significant voices to the Teller Lecture and our Up and Atom Breakfasts...and we will continue reaching out to students. In the area of nuclear debate and issues discussion...we will advocate...we will demonstrate...and you will see us participate.

Specifically, we plan to bring new programs and fresh perspectives to the public arena. We will continue to bring our third-party voice to the news media...and we will bring more supporters into our big tent as others begin to understand nuclear is destined to be a safe and necessary part of our future in many ways.

Now, let me pose a few final questions: Are you onboard with nuclear or do you want to know more?

If you haven't joined CNTA, I urge you to join today, I encourage you to bring enlightenment to those who need to understand that nuclear is a clear choice, a safe choice and a responsible choice. Or you can join because you want to know more.

There is no better time for you...and there is no better time for CNTA. Two decades have shown we are on the right path. We look forward to many more opportunities to bring the nuclear message home.

On behalf of CNTA, I appreciate your time.

Steve Sheetz is the Program Manager for Mission Development at Savannah River National Laboratory.



Steve Sheetz giving a presentation to the AARP group.

**CNTA Speaker's Bureau**

Our CNTA Speaker's Bureau is alive and still giving quality presentations to professionals, civic clubs, schools and organizations reaching a couple thousand people to date. Give us a call if you would like to arrange to have a presentation to your group. Just call the office at 803-649-3456 to make arrangements.



### **FUTURE RADIOCHEMISTS?**

Students from Aiken Middle School participating in the Basics of Radiation presented by Bill Wabbersen. Bill gave presentations to about 200—6th grade students.

*They look like they are enjoying it.!*



## Educating Young People about All Things Nuclear By Dr. Susan Wood

The central objective of CNTA's mission is education; to share facts, correct misunderstandings and enhance awareness of all aspects of the nuclear sciences and their associated applied technologies. To this end, the CNTA Speakers' Bureau has been, and continues to be, a key resource whose library of talks, given by knowledgeable volunteers reaches out to all types of community groups. The Speakers' Bureau has also played a role within the CSRA schools by providing in-classroom speakers and materials. But, a little over three years ago, it became apparent that a separate initiative was needed to provide a more comprehensive and focused educational effort aimed at middle and high school students. Not only was it desirable to educate these young people about nuclear science and technology, but also to make them aware of the many career opportunities (both regional and national) in the nuclear industries. The results of the Nuclear Workforce Initiative study by the Savannah River Community Reuse Organization delineated these upcoming workforce needs and spawned the idea of "growing one's own", that is, helping ensure that local students were prepared to participate in the Nuclear Renaissance.

Thus, in September, 2008, the CNTA Educational Committee was formed. The objective developed at the kick-off meeting was:

"To educate more young people about energy issues, particularly with respect to nuclear technologies, with the ultimate goals of enabling more career choices and creating positive attitudes about nuclear power".

The discussions of that first meeting coalesced into the concept of developing a workshop for teachers and guidance counselors as this could rapidly multiply the number of students benefitting from the initiative. Our geographical area is fortunate to have a large resource of knowledgeable scientists and engineers who are willing to donate their time and within a year, "Bringing Nuclear into the Classroom" was born. First presented on March 5, 2010, with a full enrollment of twenty-five attendees, this teacher workshop was co-sponsored by CNTA and the Ruth Patrick Science Education Center (RPSEC). It was also supported by the American Nuclear Society and the Health Physics Society with speakers affiliated with the Department of Energy, Medical College of Georgia, Southern Nuclear, Energy Solutions, The University of Florida, Shaw AREVA MOX Services, Savannah River Nuclear Solutions and Aiken Technical College. In short, the success of this project was entirely due to the collaboration of a superb resource base and

organizational teaming on a scale not previously attempted by CNTA. The organization had begun a new era of community support.

Participant feedback from this first workshop was used to re-work and improve the presentations and to increase the number of hands-on activities for the second workshop held on June 25, 2011. This one received excellent grades from participants! Also, word has spread and for 2012, the first workshop will be held for Allendale and Barnwell Counties at USC-Salkehatchie with others following in the spring for Aiken and Columbia Counties, with even more districts expressing interest. The ability to network and build contacts has outstripped the ability to fund the program so a parallel grant writing effort is underway which targets both national and regional agencies and foundations. We are hopeful of success given the alignment of their objectives with the Teacher Workshop initiative. We will keep you posted!

A personal "THANK YOU" to all who have helped to make this happen: and to those who would like to help: WELCOME ABOARD- WE NEED YOU! Educating young people will continue to be an important mission for many years to come.

### THE INTERACTIVE NUCLEUS EXHIBIT



June, 10, 2010 unveiling took place at Fort Discovery in Augusta. CNTA members, Bill Wabbersen and Jay Bilyeu made this exhibit possible along with sponsors ANS, SEAPM, and CNTA. The exhibit is now housed at the Ruth Patrick Science Education Center after Fort Discovery closed 2011.



Teacher's Workshops

## CNTA Technology Update

By George Wicks

I received the CNTA's Distinguished Scientist Award back in 2005 and during my acceptance talk discussed exciting technologies developed in the nuclear complex that had great potential in many other fields and marketplaces. In 2007, I gave an "Up and Atom Breakfast talk" focusing on one of these areas, joint medical initiatives with the medical community, based on 'multi-use technologies' originally developed for nuclear based operations, and introduced a new technology our team was working on involving tiny "Porous Wall Hollow Glass Microspheres" (PWHGMs), originally developed at SRNL for tritium applications.

Since that time, PWHGMs have resulted in new products and initiatives, including about a dozen new programs in each of the Directorates at SRNL and in other areas, including the medical field. In 2008, the PWHGMs appeared on the cover of Ceramic Bulletin along with the caption "SRNL's Breakthrough Opens New Realms for Energy, Environment, Medicine and Security". The technology was also highlighted in a series of DOE publications including DOE Pulse and a report to Congress. The technology was patented starting with a series of SRNL patents and later included joint IP with Toyota (for Hydrogen vehicles) and the Medical College of GA (as a new drug delivery platform for cancers). In 2009-10, it was licensed to MoSci Corp. and this year, in 2011, the SRNL work was once again highlighted on the cover of a prestigious publication, the International Journal of Applied Glass Science, which also included an article by L.L. Hench entitled "Glass and Glass- Ceramic Technologies to Transform the World"..... that included the PWHGMs. Recently, on Oct 13, 2011, the PWHGM team received an R&D 100 Award at a black tie event in Orlando, FL, attended by almost 1,000 researchers from around the world. The PWHGM team from SRNL (George Wicks, Kit Heung, Ray Schumacher, Steve Serkiz, David Peeler), Toyota (Rana Mohtadi), GA Health Sciences Univ. (Bill Dynan), and MoSci Corp. (Ted Day), received the award for their PWHGM technology, which signifies the technology as..... "one of the 100 most technically significant products to enter the marketplace in 2011"..... a technology originally developed for nuclear applications and now also being considered for use in other important fields.

# CNTA Golf Tournaments



This first CNTA Golf Tournament was held on October 3rd, 2003 at Houndslake Country Club. In 2005, it was held in the Spring and continues to be held in May each year. Thank you to B&W Technical Services, our Tournament Sponsor almost from the beginning. This is a fun event with great prizes, food and lots of laughs! If you haven't given it a try, plan on joining us this coming May!



Ron Schroder, Golf Committee Chair and the committee members: Craig McMullin, Gary Hazlewood, Lyddie Hansen, Mark Bolton, and Mel Buckner do a great job each year making this annual event exciting and fun!!



Our golf tournaments are one of our fundraisers each year. The 2011 tournament raised \$13,500 to keep on raising awareness!



2011 Tournament First Place Prizes—Nice bottle of wine and curved glass trophies & of course, a box of golf balls! Winning team was DOE-SRS w/Doug Hintze, Ray Fulton, Ron Bartholomew and Lewann Belton with a score of 53.8.

## Distinguished Scientist Awards



1996—Dr. Edward Albenesius—Research Chemist for Health Physics program at Savannah River Plant.. Employed at the site from 1951 to 1992. Dr. Albenesius was the first to receive this award.



1997—Dr. Carol Janzten— Senior Fellow Scientist at Savannah River Technology Center's Waste Treatment Technology Department



1998—Dr. Al Boni—Manager at Savannah River Technology Center's Nonproliferation Technologies Section. Dr. Boni was involved with national and international non-proliferation of nuclear weapons.



1999— Dr. Carl Fliermans— Pioneering leadership in the field of microbiology. What microorganisms can "do to you", followed by what microorganisms can "do for you".



2000—Dr. McIntyre (Mac) Louthan, Jr.— Consulting Scientist at Savannah River Technology Center and is internationally recognized for his expertise in materials science & engineering with the focus on corrosion, hydrogen embrittlement & irradiation effects.



2001—Dr. Whit Gibbons, Professor of Ecology at the University of Georgia's Savannah River Ecology Laboratory (SRELO).



2002—Dr. Susan Wood—Director of the Savannah River Technology Center. She was instrumental in achieving the recognition and sponsorship for the lab's success in "putting science to work for its customers.



No Photo available for Dr. Paul Hebert

2003—Dr. Major Thompson and Dr. Paul Hebert co-recipients. Dr. Thompson for his technical leadership to broaden the technical interests and capabilities of SRTC & expanded appreciation of "the lab". Dr. Hebert as an internationally recognized technical expert and leader of the technical excellence at SRTC.



2004—Dr. Ned Bibler—Senior Advisory Scientist at the SRNL, recognized as a international expert on radiation chemistry, with emphasis on effects of radiation on materials.



2005—Dr. George Wicks—Consulting Scientist at SRNL. His area of work in radioactive waste management, environmental remediation, sensor development, corrosion of materials, hydrogen storage, actinide immobilization and many other areas of technology.



2006—Dr. Brian Looney— SRNL, outstanding work in environmental remediation, site characterization, contaminant geochemistry and modeling.



2007—Dr. Haydn Williams—Associate Professor of Radiology at Medical College of Georgia. Educator and leader in applications of nuclear technology in medicine and a prolific researcher.



2008—Dr. Frank Avingone—Carolina Endowed Professor of Physics and Astronomy at the University of South Carolina.



2009—Dr. Alfred Garrett - Scientist, researcher and manager at SRS. His career provided sound technological solutions to a wide array of problems ranging from reactor safety and emergency response to remote sensing & nonproliferation.



2010—Dr. Robert Sindelar—Senior Advisory Scientist in Materials Science & Technology. Key nuclear technologies: structural integrity & life management/extension in systems for nuclear material production. Bob and his wife, Dawn.



2011—Dr. Travis Knight—Assistant Professor of Mechanical Engineering at the University of South Carolina. He has built a state-of-the-art laboratory for the study of advanced fuels and continues to work with carbide fuels for gas-cooled reactors.

# CNTA Essay Contest

On April 12, 2006 Bill Wabbersen, Mary Ann Cavanaugh, Barbara Smoak, Mal McKibben and Karen Bonavita met to discuss a proposed High School Essay Scholarship. It was determined at the first meeting that a set of points that would be followed:

- Juniors and/or Seniors can participate
- There would be three topics identified, each year, students would pick one of the three topics.
- An award of \$1,000 to the student and \$500 to the student's school.
- Deadline for submitting essays would be the end of February the following year.
- Georgia & South Carolina, three counties; Aiken Richland, Columbia. Perhaps Allendale, Edgefield and Barnwell in the future.
- The 'winners' are invited to the annual Edward Teller event, along with their parents. Winners are recognized at the event.
- Press release and photo are submitted to local papers.

2007 Winner—Amy Varallo, Aiken High School, daughter of Tom Varallo (only one award given, sponsored by CNTA)

2008 Winners—Cecelia Wyrick, Lexington High School, daughter of Steve Wyrick (three award given, sponsors: CNTA, Parsons & Tom Varallo family).

Bryce Cartledge, Evans High School

Isaac Guffey, Evans High School

2009 Winners—Patrick Hauer, Aiken High School (three awards given, sponsors: CNTA, Parsons & Tom Varallo family)

Michael Ridlehoover, Evans High School

Cody Pope, Evans High School

2010 Winners—Jackie Rodriguez, Evans High School (5 awards given, sponsors: CNTA, Clint Wolfe family, Susan Wood, & Tom Varallo family)

Aubrie Fleming, Evans High School

Christina Snider, Evans High School

Monica Ridlehoover, Evans High School

Genna Wyrick, Lexington High School, daughter of Steve Wyrick)

2011 Winners—Sierra Hovet, Evans High School (three awards given, sponsors: Clint Wolfe Family, Susan Wood & Tom Varallo family)

Richard Bragg, Grovetown High School

Sterling Tran, Lakeside High School

The current CNTA High School Essay Committee are: Bill Wabbersen, Chair, Dr. James Rawson, Jeff Allender, Mike May, and Steve Sheetz

# Robert Maher Scholarship

In October, 2002 CNTA's Chairman Fred Davison appointed a committee to develop an appropriate way to honor Bob Maher for his years of outstanding service to SRS and to CNTA. In November, Bob Pedde, President of WSRC confirmed that CNTA's suggestion to honor Bob was very appropriate and they (WSRC) would sponsor a \$5,000 award each year. This award was announced at the 2002 Edward Teller Lecture/Banquet and was first given in 2003. The award is now sponsored by Savannah River Remediation. The Scholarship Committee is: Susan Wood, Chair, Dean Campbell, Susan Winsor, Tom Hallman and Walt Joseph.

2003 Winner—Christopher J. Fong, Georgia Tech, majoring in nuclear and radiological engineering.

2004 Winner—Kara Beharry, Engineering, South Carolina State University

2005 Winner—James Weather, Nuclear Engineering student at Georgia Tech.

2006 Winner—Emily Colvin, Nuclear Engineering Major, Georgia Institute of Technology

2007 Winner—Matthew Presson, Engineering, University of South Carolina

2008 Winner—Andrew Petrarca, Engineering, University of South Carolina

2009 Winner—Rea Cauthen, Engineering, Clemson University

2010 Winner – Candice Hampton, Nuclear Engineering, South Carolina State University & Ryan Harris, Mechanical Engineering, Clemson Univ.

2011 Winner—Dillon Inabinett, Mechanical Engineering, University of South Carolina

# SRS Heritage Foundation

By Walt Joseph, Executive Director



First Banner in 2005

**My first** interaction with the CNTA Board of Directors came in 2003. Todd Crawford and I had learned that DOE was taking photographs and collecting drawings of SRS buildings that were being dismantled during the D&D program but that building contents were going to the dumpsters. Todd and I decided that if SRS was ever going to have a visitor center or museum, some of these contents would have to be preserved for future exhibits. Todd was on the CNTA Board and had led an earlier effort to create a visitors center in 1995; he suggested that we bring this issue to the Board for their suggestions.

We brought our concerns to the Board and, after listening attentively, they appointed Todd and me as a committee to solve the problem. Two years later the committee morphed into the SRS Heritage Foundation. The separation was amicable and the Foundation and CNTA have continued to work together as both organizations prospered.



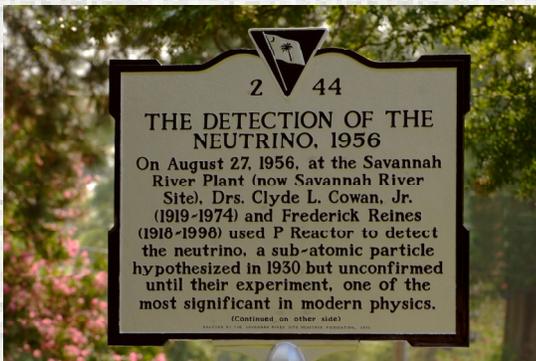
1st version of the SRS Heritage Foundation logo (2003)



Logo updated in 2008

- Preserving the Heritage of the Savannah River Site
- Commemorate the sacrifices & Achievements that Helped Win the Cold War
- Explore the Frontiers of Science with the Savannah River National Laboratory
- Educate Future Scientists and Engineers
- Boost the Economy through Heritage Tourism
- Contribute to the Quality of Life

# Neutrino Celebration

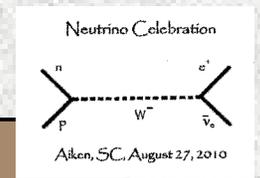


In 1956 Drs. Fred Reines and Clyde Cowan conducted an experiment in "P" Reactor at SRS in which they detected the existence of the postulated "neutrino". A sub-atomic particle with no charge and almost no mass. It has been called "the nearest thing to nothing that is still something."

This work was eventually recognized with the awarding of the Nobel Prize for Physics. It is thought to be the only Nobel Prize winning work ever performed in South Carolina. On Friday Aug. 27, 2010 The SRS Heritage Foundation, USC-Aiken, and Citizens for Nuclear Technology Awareness (CNTA) sponsored a day-long celebration of the event.



Feynman Diagram →



## Neutrino...

A neutrino (Italian pronunciation (neu'tri:no), meaning "small neutral one". Is an elementary particle that usually travels close to the speed of light, is electrically neutral, and is able to pass through ordinary matter almost undisturbed. This makes neutrinos extremely difficult to detect. Neutrinos have a very small, but nonzero mass. They are denoted by the Greek letter  $\nu$  (nu).

## A Couple of Anecdotes from 30 Years of Microbiological Research at SRL By Carl Fliermans

### I. Research on Legionnaires' Disease Bacterium.

The attractiveness of “working” at SRP was the excitement of comparing microbial systems of natural hot spring habitats like Yellowstone National Park (where I conducted my Ph.D. research) with the man-made thermal habitats initiated by the hot water discharged from SRP’s operating nuclear reactors. I was brought on board to develop a microbial ecology laboratory and to study the effects of the SRP reactors on the microbial systems of SRP. Through my years of research at SRP there was always an excitement about coming to “work”. The history of my career was one of new adventures, new findings, new avenues, new discoveries, and new obstacles to overcome, but never was there tedium in the work.

The actively operating reactors at SRP provided thermal discharges that matched the temperatures of Yellowstone’s 10,000 thermal features and hot springs and provided the thrust of the microbiological research. My research efforts began in the area of what microorganisms can “do to you”, followed in the later years of my career as to what microorganisms can “do for you”. The results continue to be stimulating and applicable even today for those who stand on my shoulders.

Research at SRP extended the environments where microorganisms could live and their role in nature. Detection systems that were the vanguard of microbial research were developed at SRP and led to the detection of the natural habitats that supported and fostered the growth of the bacterium that causes Legionnaires' Disease. Because the bacterium had physiological and genetic characteristics that suggested it liked thermal environments, we looked at SRP’s hot water systems.

The Centers for Disease and Prevention (CDC) in Atlanta contacted my lab to determine if we could help them define the ecology of the bacterium and sort out the “ins and outs” of the bacterium and its lethality. The first time the bacterium was ever found other than from a hospital patient was in the thermal effluents of P-reactor canal. Even the hot springs of Yellowstone did not foster the growth of the bacterium, as did the SRP systems. This led to a “nationwide” search (primarily the southeast) to see if SRP were the focal point of the 1976 outbreak that occurred in Philadelphia since many of us traveled to Wilmington, DE on a daily basis through Philadelphia.

We had just taken ownership of “MMEL the Blue Goose”. It was a 38-foot Mobile Microbial Ecology Laboratory built for SRL by Bluebird Bus Lines Wander Lodge division outfitted so that I could conduct microbiological research in the field. We traveled extensively around The South sampling hundreds of lakes, streams, as well as warm and hot springs looking for the *Legionella* bacterium. The research was seminal and showed that the bacterium was present at some concentration density in every aquatic habitat we sampled. It must be noted that the SRP management was much relieved to know that SRP was neither the home base nor the distribution site for *Legionella*, since the bacterium is ubiquitous.

Because of the omnipresence of the bacterium and the habitats that foster its growth, 25,000 to 50,000 cases of Legionnaires' Disease continue to occur each year in the United States alone.

Out of our early research efforts came national and international guidelines that are still in effect today protecting global populations and cooling systems, which are still the worst cultivators and disseminators of the bacterium.

### II. Bioremediation of Subsurface Environments

In 1985 the United States Department of Energy’s Office of Health and Energy Research began a comprehensive program to study subsurface microbiology at the Savannah River Site, which I directed. The goal was to determine whether microorganisms were present and active deeper than the root zone of plants. Such a spatial distribution had been the conventional scientific wisdom for over 100 years. The program involved the cooperation and coordination of over 100 investigators from around the United States. During this program four boreholes were drilled, and the sediments were sampled from surface to bedrock using specialized recovery and sampling techniques. These investigations demonstrated that very active native bacteria were present in the sediments and provided resources for *in situ* bioremediation. This has had significant implications for remediation of organic and hazardous wastes in subsurface aquifers and groundwater environments. These studies enabled us to evaluate the use of microorganisms to degrade hazardous organic wastes at depth in the ground.

Following these seminal investigations, the United States Department of Energy and the Institute for Ecology of Industrial Areas of Poland contacted our lab to conduct a demonstration project using bioremediation techniques for the clean up of acidic petroleum sludge impacted soils at an oil refinery in Czechowice-Dziedzice, Poland. The waste was composed of high molecular weight paraffinic and polynuclear aromatic hydrocarbons, with benzo(a)pyrene and BTEX compounds identified as the contaminants of concern. Approximately 3,300 m<sup>3</sup> of contaminated soil (TPH ~ 30,000 ppm) was targeted for treatment.

At this time the Berlin Wall was a recent memory and our discussions on the project were under a Polish government that found itself free of Communistic dictatorial directives. As we discussed the mechanisms of the task of remediating the contaminants, we spoke of air and water permits as well as sludge disposal permits when unexpectedly the Minister of the Environment interrupted us. In her very clear and emphatic English she asked, “What is this permit stuff? What permits? I permit you!” And that was the end of the permitting process. We all realized more clearly why we were there.

The remediation was clearly successful. Costs were significantly lower when compared with other treatment processes all because we were “permitted”. The site was transformed from a 100-year-old petroleum sludge pit that had been bombed during both World Wars and was an environmental disaster and health hazard for nearby apartment complexes. In less than 20 months more than 81% (120 metric tons) of petroleum hydrocarbons were biodegraded to CO<sub>2</sub>, salts and water, and the area was turned into grazing for cattle and deer through the use of microorganisms. It was the power of the small to affect the big.



## Current CNTA Corporate/Business Sponsors

- Savannah River Nuclear Solutions
- Southern Nuclear Company
- Shaw AREVA MOX
- Savannah River Remediation
- WSI-SRS Team
- Arthur Rich
- Energy Solutions
- SRP Federal Credit Union
- URS
- Economic Development Partnership
- SCE&G
- SRS Community Reuse Organization
- Merrick Company
- Longnecker & Associates
- MAS Consultants
- Allegra Printing
- Aiken Pest Control
- RCS Corporation
- Wells Fargo Securities
- Worley-Parsons

Thank you to our corporate/business and to our membership for their continued support!



The Savannah River Site's 50th Anniversary kick off will begin at the Aiken County History Museum on February 18th, 2000.

A series of events are planned for the year,

- The Legacy of Marie Curie: 100 yrs of Science Innovation, July 12,2000
- Public Tours on September 9 & 23
- November 28th began with a breakfast kick-off, Reunion luncheon, Marker presentation, Public events, CNTA Teller Lecture/Banquet with reception, music and fireworks

24 area corporation and businesses sponsored this year long event.



Do you remember this Bumper sticker ?

## WINNERS ANNOUNCED for the slogan contest:

Bill & Lauren Wabbersen get 1st place: their submittal was "The Path to Knowledge Begins with Awareness"

2nd place winner: Charles Neill he submitted "Nuclear, Your Informed Choice"

Theme: "20 Years of promoting the benefits of nuclear technologies through the eyes of the citizens."

- Winner: One year benefactor membership in CNTA
- Runner-up: One year sustaining membership in CNTA



## From Where I Sit:

By Wayne Rickman, Vice Chair, CNTA

As a member of the Board of Directors for just over one year and as a member of the 20yr celebration committee, I have had a unique position to view the results that CNTA has made over the last 20 years. As I reviewed the efforts and the work that was completed by the early organizers, Friends of SRS and the work by all of the First Board of Directors, it was amazing to me the amount of success they were able to generate in a very short amount of time. Their hard work has enabled those that followed to continue that success.

I was not at that original Teller Lecture, but Dr. Teller message rings as true today as it did in 1992. His admonishment concerning the fear of nuclear technology was **"The U.S. used to have the highest respect for technology and progress, but that is being replaced by fear of technology and progress. If that fear is allowed to grow, then the future will belong to those countries that do not have those unreasonable fears."**

I think the challenge is as great today as it was in 1992. Our organization with its education activities has been very successful and other communities have contacted CNTA members in an effort to emulate these successes.

However, as the local power companies start operation of the new plants; as small modular reactors are developed and start testing at SRS, I envision that this fear of technology will become more vocal.

I see that CNTA must continue to educate our citizens sufficiently to reduce that fear nuclear technology. In association with American Nuclear Society, CNTA is making good strides in adding positive information regarding things nuclear within the local school system. CNTA, with the help of young engineers at SRS is starting a new program to educate citizens through U-tube videos. We are challenged to provide this education to all the newer residences that have retired and are moving into our area. What is the best way to reach them?

Our mission is to educate. We provide factual, objective information on nuclear subjects for the public, teachers, students, public officials, and at public hearings. We do this to improve public knowledge on the real benefits and comparative risks of nuclear activities, including nuclear production of electricity, nuclear medicine, food irradiation, nuclear weapons production, and nuclear waste management.

We must continue to find new ways to educate the public and to celebrate the successes with nuclear technology from nuclear electrical power generation to medical technology.

Citizens for Nuclear Technology Awareness has been located in 4 locations:

- Michael Butler Public Relations, Columbia, SC
  - Houndslake Corporation Offices
  - 1204 Whiskey Rd, Ste F, Aiken
  - 1204 Whiskey Rd, Ste B, Aiken
- (We have been in Suite B since 9/1/06)

In 1993, Membership fee was \$15.00 There was only one level of membership available. Later membership fees were available in three levels:

- **(\$125) Benefactor-included a ticket to the Edward Teller Lecture**
- **(\$70) Patron**
- **(\$35) Sustaining.**
- **(\$15) Student level was included in 2009**
- **Our current membership is at 400**

**1st** Executive Director was Mike Butler until December 1999.

**2nd** Executive Director was Mal McKibben from January 2000 to Dec. 2007

**3rd** & Current Executive Director is Dr. Clint Wolfe, who took over the reins in January, 2008.

## Current Board of Directors:

Dr. Susan Wood, Chairman

Paul Rideout, Treasurer

Jeff Allender, SRNL

Rick Arkin, Consultant

Mark Bolton, WSI-SRS Team

John Gregory, AREVA Federal Services

Charles Hansen, Parsons

Fred Humes, EDP

Casey Kenney, Shaw AREVA MOX Services

Karen Patterson, Tetra Tech

Dr. James Rawson, Medical College of GA

Ron Schroder, SRNS

Brad Swanson, Energy Solutions

Dr. Major Thompson, Retired

Ex-officio Members: Fred Cavanaugh, Ed Presnell

Retired Rear Admiral Wayne Rickman, Vice Chair

Clint Wolfe, Executive Director

Jimmy Angelos, URS

Mel Buckner, Consultant

Dean Campbell, Savannah River Remediation

Dr. Tom Hallman, USCA Chancellor

Lyddie Hansen, SRNS

Walt Joseph, SRS Heritage Foundation

Craig McMullin, SRNL

John Pavaglio, Retired

William Reinig, Retired

Steve Sheetz, SRNL

Art Stackpole, Bechtel-SRS

Dr. Susan Winsor, Aiken Technical, President

Executive Director Emeritus, Mal McKibben

# CNTA Member's Mixer

We've had two very successful Member's Mixers so far and hope to continue having one or two each year. It's a great way for us to thank are members who support our mission to provide education and information to the public. We couldn't do it without you.....do keep on sending in your dues and supporting our events .



Thank you for Sponsoring

Thank you for Sponsoring



And many thanks to our  
20th Anniversary Committee:

Wayne Rickman, Chair  
Bill Reing  
Craig McMullin  
Fred Humes  
Karen Patterson  
Mel Buckner  
Mike Butler  
Susan Wood  
Eric Thompson  
Walt Joseph  
Karen Bonavita

Published and compiled by article contributors and the CNTA office staff, November 9, 2011 in celebration of our 20th year Anniversary Celebration.