CNTAware

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Spring Edition 2005

WHAT'S INSIDE

NUCLEAR POWER RESURGENCE: SRS CAN LEAD THE WAY

Early in President George W. Bush's first term he created a joint Department of Energy (DOE)/Nuclear Regulatory Commission (NRC) program called Nuclear Power 2010 (NP-2010). The objective was to begin construction of a new, improved nuclear power plant by 2010, which would be the nation's first in 25 years. This reactor would demonstrate new NRC licensing and construction procedures to bring reactors online faster and cheaper than in the past. It is widely believed that if this demonstration is successful the door will open for a resurgence of nuclear power in the U.S. The entire Southeast, but especially South Carolina, will benefit if the Savannah River Site (SRS) is selected as the site for this demonstration.

The program will occur in two steps. The first step, well underway, is for companies or consortia, to prepare and submit to DOE a Combined Operating License (COL) report recommending new, improved reactor designs and potential sites for the reactor. Three entities have indicated that they may submit COL reports. As our March Up & Atom Breakfast Dan Keuter of Entergy Corp. told us of the activities of NuStart, the largest consortium, with nine utilities and three nuclear reactor vendors. SRS is one of several sites that may be recommended for the reactor. The SC Dept. of Commerce, elected officials, the Chamber of Commerce, the Economic Development Partnership, CNTA, and others are working to make SRS the site of choice. The advantage of SRS are many. Construction could start by 2010, with operation by 2014. The reactor construction cost would be about $2 B and about 500 operating personnel would be needed. More to Come!

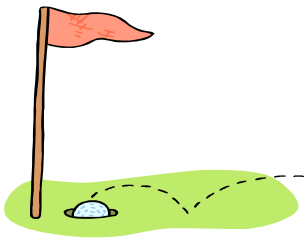
2005 MEMBERSHIP DRIVE IN FULL SWING

MEMBERSHIP FORMS WERE SENT OUT IN JANUARY. WE'D LIKE TO THANK ALL WHO SENT IN THEIR DUES.

IF YOU HAVEN'T SENT YOURS IN YET...WE WOULD APPRECIATE YOU DOING SO, YOUR SUPPORT IS SUCH A HELP.

If you have any questions about your membership status, please call the office. Thank you.

COME PLAY A ROUND OF GOLF WITH US!



The date is set and so is the location!

WHERE: THE GOLF CLUB AT CEDAR CREEK

DATE: SEPTEMBER 30TH

The Golf Club at Cedar Creek is a 4 Star Rated Semi-Private 18 Hole Championship Course Designed by Arthur Hills.

Mark your calendars for this event.
It was a great time last year!

PRIZES GALORE, GOLF, FOOD AND FUN FOR ALL!

WELCOME NEW BOARD MEMBERS

Brett Cederdahl—Senior Project Manager, SRS, Bechtel Savannah River Inc..

Joyce Hopperton—Wackenhut Services Inc., SRS

Kathryn Wade—Field Representative for Congressman Gresham Barrett

Craig Martin—Manager, SRS Operations Planning—Craig has accept the Chairman position for the Membership Committee.

UP & ATOM BREAKFAST NOTE:

OUR NEXT UP & ATOM BREAKFAST TO BE HELD ON MAY 17TH — Dale Klein, Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs will be our guest speaker for this breakfast. We expect a sizeable crowd, so get your reservations in early.

IN THE BEGINNING—WITH THANKS TO THE CITIZENS FOR NUCLEAR TECHNOLOGY AWARENESS

by I. Lehr Brisbin, Jr.

At first glance, it may not seem logical that the interests of a laboratory founded for and devoted to studying the general principles of ecology would have strong support from an organization such as the Citizens for Nuclear Technology Awareness (CNTA). However that is just what happened when the Department of Energy announced through its proposed budget for fiscal year 2006, that the Savannah River Ecology Laboratory (SREL) would receive no DOE funding and thus cease to operate as of the first of October 2005.

There is no doubt about it - you in the CNTA were "there for us" from the start in our times of trouble. But perhaps that just what you would expect from an organization such as the CNTA which is committed to improving public awareness and understanding of the fate and effects of radioactive materials in our environment? And improving that understanding is a large part of what the research and education programs of the SREL are all about – and have been all about since the time more than fifty years ago when Dr. Eugene P. Odum, first came here to the site of what was then called the Savannah River Plant? He came to the site to hear the Atomic Energy Commission explain to representatives of universities from throughout the southeast, that over 300 square miles of land here would be closed to public access to provide a site for nuclear industrial production and research. Dr. Odum's response to this announcement was to immediately apply for and receive a small grant of $10,000 per year to study basic ecological processes at the site, focusing on the concepts of ecosystem structure and function while at the same time addressing both the fate and effects of radioactive materials that would eventually come to be released into those ecosystems. And now, fifty-four years later, that small start-up grant has become the Savannah River Ecology Laboratory, and Eugene Odum's concept of using the basic principles of ecology to study the fate and effect of radioactive materials in the environment has become the internationally recognized subdiscipline known as "radioecology". As first envisioned by Eugene Odum, and as practiced today at the SREL and throughout the world, the field of "radioecology" has two component parts: (1) ecology, and (2) radiation science. The point is that attempts at understanding the fate and effects of radioactive contaminants in the environment cannot be successful unless we have properly done our homework in developing an understanding of *both* of these component parts. Thus, it is important to understand the basic ecology of the plants, animals and other environmental components of the natural ecosystems into which the contaminants either have been or might be released. Thus for example, in order to thoroughly understand and be able to predict the effects of radioactive releases upon turtles living in a lake or stream on the SRS, we need to know the chemical characteristics of the contaminants themselves (e.g. how soluble they may be, in what chemical form(s) they may either dissolve into the water column or precipitate out and be covered by sediments, etc. But we also need to know about basic turtle population biology, food habits, genetics and reproduction – all fascinating and most unusual stories for such a long-lived creature, and stories that have been well studied over the years at the SREL. In future articles SREL, will be telling the stories of many of our radioecological investigations at the SRS – all studies that have had a tangible impact on plant operations and environmental management activities. But in all of these cases, the brilliance of Eugene Odum's approach to this work has been to realize that if designed properly, radioecological studies can not only contribute to solving problems of actual or potential environmental contamination, but can and should also *contribute significantly to our understanding of basic ecology as well.* It was indeed this latter theme that was developed time and again in his now famous text, *Fundamentals of Ecology*, which, through its several subsequent editions, has served as the cornerstone upon which much of basic ecological thinking has been developed over the years.

And what now for the future? At this point we can only hope that the efforts of CNTA and the many other sources of support for our cause that have now come forth will be successful and we can once again look forward to a time when both our Savannah River Ecology Laboratory and the CNTA can settle-down to the job of assuring that the Savannah River Site maintains its position as *the* premier site in the nation to promote research, education and public outreach in the field of radioecology.

Editor's Note: Dr. I.Lehr Brisbin is a Senior Ecologist on the faculty of the Savannah River Ecology Laboratory where he also holds adjunct faculty appointments with both the University of Georgia Institute of Ecology and the University of South Carolina School of Public Health. He has worked at the SREL for over 37 years, having come to work there in 1967 after obtaining his doctorate in Ecology under the direction of Dr. Eugene Odum at the University of Georgia. From 1973-1975, Dr. Brisbin took a leave of absence from his position at the SREL to serve as a Population Ecologist in the Washington D.C. headquarters of the Atomic Energy Commission. He then returned to the SREL where he now has joined the CNTA and taken an active role in promoting the interests of the filed of radioecology within our organization. As part of his efforts in this area, he will coordinate SREL its interactions with the various undertakings of the CNTA.

The CNTA continues to have an effect on new missions for SRS. In the pursuit of the university research reactor there is new and encouraging news. Known as the SUNRISE Consortium (Southeast Universities Nuclear Reactors Institute for Science & Education), a team of 17 universities, SRNL, ORNL, and industrial partners, including CNTA, is growing and is slowly gaining ground on a new university research reactor, a new training reactor, and supporting laboratories, and they want them at SRS.

Partially as a result of CNTA and SUNRISE efforts, DOE-NE has recently issued a Request for Expressions of Interest (EOI)-University Research Infrastructure Enhancements. SUNRISE will submit an EOI. Broad enough to cover new reactors, the EOI's will be used by DOE as the basis for requests for proposals; and successful proposals bring money. In the meantime Mel Buckner, Joe Kelley, and Mal McKibben will continue to work toward the success of SUNRISE.

Dr. Odum & Oak Ridge Scientists at Field 3-412

In the late 1950's, Dr. Eugene P. Odum (standing far right) brought nuclear technology to what was then the Atomic Energy Commission's Savannah River Plant, to be used as a tool to study and understand basic principles of the new discipline he was championing known as "ecology". Training with other scientists at the Oak Ridge Institute of Nuclear Studies, Dr. Odum returned to the site to initiate research in which radioactive Phosphorus-32 and other isotopes were injected into individual plants in the SRS' now famous research site known as "Field 3-412". Here, the uptake of the isotopes by insects and other grazing members of the field's food chain, was used to identify and study the functioning of intact food webs under natural conditions. The Field 3-412 research site is still protected as one of the Savannah River Ecology Laboratory's network of "Research Set-Aside Areas", which remain available for scientists from throughout the nation to use in their studies.

WESTINGHOUSE SAVANNAH RIVER COMPANY ROBERT MAHER MEMORIAL SCHOLARSHIP

This annual award is awarded to a student who has demonstrated outstanding college level academic achievement in nuclear science/engineering.

- Candidates must be enrolled as a junior or senior in a university or college within the sates of South Carolina or Georgia.
- Candidate must have a "B: average overall grade and a "B" average in science/engineering and mathematics, as a minimum, for college level course work.
- Candidate must be pursuing a B.S. degree in nuclear science, nuclear engineering, or an engineering or science discipline, which is directly related to the nuclear field. Examples include: chemistry or chemical engineering, environmental science or environmental engineering, nuclear materials, etc.
- Candidate must be a U.S. Citizen.

If you are interested in applying for this scholarship, please call the CNTA office or email your request to cnta@bellsouth.net. Applications must be received by May 28, 2005 at the CNTA office, 1204 Whiskey Rd, Ste F, Aiken, SC 29803

DID YOU KNOW?

Did you know that nuclear energy has been a vital part of the Central Savannah River area for more than 50 years—first in defense applications and now as a major source of electrical power?

Did you know that nuclear energy generates over 55 percent of the electrical energy in South Carolina and about 20 percent in Georgia?

Did you know that in 2003, even in the "Post-911" era, WSRC reached more than 70,000 students in the CSRA through the Traveling Science Demonstration Program, the WSRC Mini-Grants Program, the Department of Energy Savannah River Regional Science Bowl, National Engineers' Week, Science Education for Public Understanding Environmental Program, the School-to-Work Program, the Science Fair Program, CSRA College Night, and its Research Internship Program.

Did you know that WSRC donates just under one million dollars to community-based organizations such as the United Way, The Tri-County Alliance, Augusta Forward Together, North Augusta 2000, Golden Harvest Food Bank, the Augusta Symphony, and local chambers of commerce.

Did you know that the Savannah River site has created thousands of jobs in the Central Savannah River region and developed cutting-edge nuclear and non-nuclear technology in areas such as nuclear medicine, space expedition, national defense and private industry? The Site now faces major challenges as new missions are identified and a new course is charted for the 21st Century. What does the future hold?

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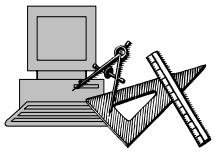
Check out our new and improved website at WWW.C-N-T-A.com

TELLER LECTURE/BANQUET

We've already started working on the 14th Annual Edward Teller Lecture/Banquet. In fact, we have a date—October 26th.

Our speaker is Mr. Skip Bowman, President & CEO, Nuclear Energy Institute You won't want to miss this one!

CNTA WELCOMES NEW BUSINESS MEMBERS:



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