

SRS HERITAGE

SRS Heritage Foundation Newsletter



JULY 2009

The Chairman's Corner

Since becoming Chairman this year I find that a daunting task is just keeping track of all the good things that are going on. But, I often remind myself that the job of doing must not get in the way of remembering why we are doing it all.

The SRP/SRS history/heritage is a wonderful, and largely untold, story. And, it is very encouraging to see that many volunteers, DOE-SR, local and national heritage agencies, and elected officials are eager to help us tell that story.

Several years ago at a national meeting of the American Nuclear Society a senior manager from a national laboratory asked me what the SRP/SRS role in the cold war had been. I was stunned that he did not know. But in retrospect we can see why. DuPont did not run the site to make a profit, and they were not interested in promoting their activities there. In fact, DuPont did not even have a public relations (PR) person on site until very near the end of their contract when Jim Felder was assigned here. And, in the early days AEC/ERDA/DOE was not interested in PR either.

Now it falls to us to document and tell that history. It is a privilege to do so. It is immediately obvious that the story touches thousands of lives and, for many is highly emotional. Many people devoted their lives to the site's task for decades, as Walt Joseph and I did. Mostly, the work was secret. But, the task was a grand one, and it was done very, very well. There is no doubt that the site played a major role in winning the Cold War. The people who did it, and the DuPont Company, have every right to be proud of what they did.

The response to our "Displaced" movie demonstrated that emotional attachment very clearly. At the premiere showing many tears were shed, and the families who were displaced from the site felt that their story was finally being told. Teachers in South Carolina are eager to include an abbreviated version of that movie in their 2009-2010 curriculum. The follow-up movie that we are planning will be equally well received.

We have a lot of exciting plans for the future that you will be hearing about shortly.



Thanks for your support.

*By Mal McKibben,
SRS Heritage Foundation Chair*

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SRS HERITAGE FOUNDATION SPONSORS THANK YOU

The SRS Heritage Foundation is a relatively new organization but, thanks to our strong base of supporters, we are growing steadily. We are particularly pleased that several organizations have such faith in our future that they have made substantial financial contributions to get our programs started. Among these supporters are:

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A special thank you to the individual

ROBOTS ARRIVE!!

Three SRNL robots recently were transferred to the SRS Cold War Artifact Collection.

After the robots were relocated to Building 742-A, they were reunited with another SRNL alumnus, Clyde Ward. Clyde has retired after working extensively with robotics applications at SRS. He currently is involved with robotics programs at several schools and has offered to help restore the former SRNL robots to operability. With his help, Alvin and Simon soon will be going through their paces for the public. Hornet is considered to be too powerful for public demonstrations and may be relegated to static display.



Caroline Bradford, Curator of the SRS Cold War Artifact Collection, David Wilkerson of SRNL and Clyde Ward, retired from SRNL with Alvin and Simon.

Three Old Friends Leave the Lab

Alvin...has left the building.

So have two of his friends, to keep ROBIN company in his new home in the later years of his well-deserved retirement. In 1998, the Robotics Lab's ROBIN entered the Cold War Artifact Collection in in Building 742-A, to be joined this past April by ALVIN, SIMON, and a Mark II Hornet. Once again, they'll someday be entertaining visitors just as they did in the Robotics Lab.



SRS Curator Caroline Bradford, 2-7327, with ALVIN (center) and SIMON.

ALVIN, the Autonomous Laboratory Vehicle with Intelligent Navigation, and SIMON, the Semi-Intelligent Mobile Observing Navigator, are both K2A Navmasters built by Cybermotion, Inc. ALVIN did his bit for SRNL by being irradiated, to see if the machines could take it. SIMON scurried around SRNL on a programmed route looking for floor contamination—scurried at an inch per second, that is. ALVIN was SIMON's forerunner, but was re-outfitted and at least parts of him may be newer than his brother.

ROBIN (ROBotic INsect), currently disassembled and crated, is a six-legged ODEX III, with a telescoping manipulator arm, a 7-foot fiber optic umbilical cord, and a 3-camera TV system. This one and the Hornet, which moved on tank-like tracks with a camera and gripper arm could go into hazardous

areas and perform tasks, thereby preventing unnecessary hazard to living workers.

That, of course, was the general mission of Robotics (formed in August 1982)—to create means of performing essential work that human beings could not or should not do in person, whether because an area was inaccessible, or dangerous, or both.

ROBIN's claim to fame was the ability to walk on level surfaces or inclines and "kneel."

Among the Hornet's first tasks was video surveillance of sand filters in Separations.

The career of all three of the recently-moved robots at the Site started between the late 1980s and 1991. They and the other denizens of the Robotics Lab not only represented ingenious solutions to unique problems (we can't forget the feats of the various pipe and tank crawlers, for example), but they also uncomplainingly performed for hundreds of visitors to SRNL.

Luckily for these guys, they didn't have to travel to 742-A at an inch per second. Then again, they're retired—they had the time.



The Hornet, otherwise called a Twenty-First Century Robotics TSR-70

Plagiarized shamelessly from a story by Bruce Cadotte in SRNL News.

Ellenton Heritage Trail

By Gayle Bumgarner

The Ellenton Heritage Trail Committee continues to be "fired up" in anticipation of being able to host visitors to the Ellenton Heritage walking trail. The committee, comprised of members from DOE-SR, the USDA Forest Service-SR, the USC-SR Archaeological Research Program, former residents, and former and present SRNS employees, have come a long way since receiving the letter from DOE-SR Manager, Jeffrey Allison, committing to a real estate agreement with the Foundation. Current activities include the drafting of the safety portion of a Safety and Security Plan for the trail. Subsequent meetings are planned to identify security, railroad, and highway concerns. Other activities underway are the preparation of a more detailed footprint of the tour route to facilitate the preparation of a Site Use Permit and the development of tour messages for signage and other uses.

Parodio Maith, DOE-SR Office of Acquisition Management, is a new committee member and represents the Historic Preservation of the trail. Linda Brophy, a Realty Specialist in DOE-SR Integration Planning, is also a new member. They bring a sharper focus and improved communication between the Heritage Foundation and the DOE-SR and the willingness to expedite resolution of any outstanding issues to the construction of the walking trail.

"ALBERT" BEATS THE RAP!!



"ALBERT" JACKSON'S MOST FEROCIOUS RESIDENT!

A brief conversation with Faye Bernardi at the premiere of "Displaced" led to disclosure of the unusual tale (tail) of a Nubian lion that lived near Jackson, SC before the coming of the Savannah River Project.

Robert L. Moyer operated a store on the Jackson-Ellenton highway and raised dogs and game-cocks. In 1933 he was given a lion cub which he named Albert. Albert was raised as a pet; he lived in a cage inside Moyer's roadside cabin and ate 10-12 pounds of meat per day. Moyer trained the lion to do tricks and several months each year they would travel with a circus through the south and southwest. "Captain" Moyer amazed audiences by placing his head inside Albert's gaping jaws.

Disaster struck in 1936 when O.F. Lazar of Augusta got off a log truck, apparently under the influence of alcohol. Lazar entered the house through an unlocked door and approached the lion's cage. Moyer heard a disturbance and ran to discover Lazar, badly mauled, lying outside the cage. Lazar was taken to University Hospital where he died from shock and loss of blood.

Moyer was arrested and charged with manslaughter but acquitted after a sensational trial. The newspaper headline read "Albert not Guilty". Public threats of retaliation forced Moyer to stand guard with a shotgun near Albert's cage.

Faye Moyer Bernardi and her brother Robert O. Moyer recently loaned papers and photographs to the Aiken County Historical Museum for a proposed exhibit about Captain Moyer and Albert.

Walt Joseph,
Executive Director

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MEMBERSHIP BARGAIN

This issue of the Newsletter contains an insert page with an appeal for members. One side of the insert includes a membership message and application. The reverse side is designed to be used as a poster that can be posted on bulletin boards in your workplace or school after you have sent in your membership application. Please take advantage of this feature and help us get the word out about the SRS Heritage Foundation.

Please note that by joining today new members will be signed up through December 2010...17 months of membership for the price of 12. Also note that our membership prices have not increased since the Foundation was formed five years ago.

As Mal McKibben mentioned on page 1, exciting events are on the horizon for the Foundation. We need your support to make these plans reality.

SRS Exhibit at Historical Museum Completed

The expanded and upgraded SRS exhibit at the Aiken County Historical Museum (ACHM) has been completed. The exhibit now occupies three rooms featuring early history of the Site, impact of SRS on neighboring communities and current and future projects. The new ACHM exhibit is the most complete description of the Site currently available to the public in this area and is well worth a visit.

"Displaced" Goes to School

The Education Committee, led by Bea Crawford, is preparing to distribute 30-minute educational editions of the video "Displaced" to middle schools. The video will be used in 8th grade Social Studies classes where the Cold War and South Carolina history are taught. The Committee has completed a lesson plan to accompany the video with discussion questions, suggested assignments and references to the appropriate objectives in the South Carolina curriculum. Selected references for the book, "Savannah River Site at Fifty", have been selected to supplement the video and the lesson plan. All the material will be packaged attractively for distribution to middle schools during in-service meetings for 8th grade teachers.

The material has been tested with two groups of 8th grade teachers and was very enthusiastically received. Initial distribution is planned to begin in Aiken County in January, so the material can be used during the spring semester. Distribution will be expanded to Barnwell, Allendale and Edgefield Counties.

SRNL Exhibit Planned

The Foundation was recently invited to provide an exhibit in the lobby of the Savannah River National Laboratory Building 773-A. The exhibit is designed to promote interest in the Foundation and highlight SRNL history. Mimi Jones designed a series of brief descriptive panels combined with period photographs from the SRS Cold War Artifact Collection mounted on a backdrop that is 80 inches high and 10 feet long. The materials are currently in the printshop and the exhibit should be ready for installation in July.

Caitlin's Back

Caitlin Buxton is home for the summer from Wofford University and is volunteering with the Foundation again. Last year Caitlin worked with the Ellenton Heritage Trail Committee, collecting and organizing information on selected properties in the former community, in preparation for creating exhibits that will tell the story of life in the vanished community.

This summer, Caitlin is taking on the task of rejuvenating the Foundation website at srsheritage.org. The site has been out of service for several months and urgently needs expanding and updating. The Publications Committee has recommended several new features that Caitlin will be installing over the next several weeks.

In addition to her computer work, Caitlin will be providing some assistance to Jim Iwert and the Ellenton Trail Committee.

Welcome back, Caitlin.

John Strack and Caitlin Buxton select material for inclusion in the updated and upgraded Foundation website.



Featured Artifact—Induction Furnace

An induction furnace uses the property of induction to create heat. Electromagnetic induction was discovered by Michael Faraday in 1831. However, induction melting was not performed at the commercial scale until 1917, and up through the middle of the 20th century manufacturers were still exploring the art.

Induction melting is advantageous because it produces few noxious byproducts, it's fast, both production cost and maintenance costs are low, working conditions are improved, and it produces alloys that can be produced no other way. Lithium-aluminum and uranium-aluminum alloys had been produced prior to the use of induction furnaces at SRP, but it was difficult to get the very light lithium to mix properly with mid-weight aluminum. Uranium is heavy and has the opposite mixing problem. Induction creates its own stirring action and helped workers at SRP to produce better-mixed alloys.

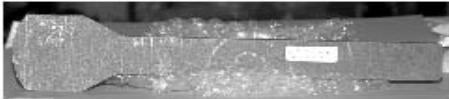
Induction heating relies on currents produced internally within the metal elements to be melted. These are called eddy currents, and they produce heat.

This low frequency induction heating furnace was made by Ajax Magnethermic Corporation, circa 1975, for use in 321-M.



321-M casting area, 1986. At left, a crucible and funnel have been set in front of the furnace for a pour, and, at right, a worker supervises the loading of an ingot of solid metal.

And again that [induction furnace] was a lifesaver because prior to that the furnaces were in hoods. . . . And the guys running them would actually work through a small window inside of the hood. And so that guy would stand there with a graphite paddle and stir it this way. And you could wear your arm out and you'd hardly ever get it thoroughly mixed. But once we got induction stirring, it worked like a charm.
~Sherwood Bridges, personal interview



Graphite paddle for stirring molten metal.

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