

# SRS Heritage Foundation

## NEWSLETTER

March, 2013

### TIME TO RENEW!



**I**t's a new year, **Spring has arrived** and **it's time to show your continuing support** of the SRS Heritage Foundation by renewing your membership, if you haven't done so already. You are an important part of our base of supporters of the SRS Heritage Foundation. We **need** you and **want** you in order to continue to preserving the history of the Savannah River Site and making it available to all.

**Progress continued in 2013.** Interviews for a new video on the Cold War are continuing. We obtained a draft Real Estate Agreement for the Ellenton Trail, (an example of one of the sites on the Ellenton Trail is included in the article on page 2) and we are involved in planning for National Nuclear Science Week activities. The Foundation will also continue with talks to various groups and exhibits around the area. We plan to announce a major new project in the next few months.

Your continuing membership is **very** important to the Foundation. Financial support helps us with projects to preserve Site history. But, member **numbers** are also important to establish a broad base of support and to show to government entities and other sponsors that the Foundation represents a strong segment of the population.

The SRS Heritage Foundation is a 501(c) 3 non-profit organization open to all individuals, businesses and corporations. Membership dues are tax deductible for federal income tax purposes.

The membership term is on an annual basis running from January through December of each calendar year. Dues collected from CONTINUING members in December shall be applied to the following membership year. Dues from NEW members who join as late as October shall be applied to the following membership year. Please renew your membership and continue your support of the SRS Heritage Foundation.

You may complete the membership form and mail it to:

SRS Heritage Foundation  
P. O. Box 2226  
Aiken, SC 29802

If you prefer the convenience of renewing electronically, you may do so by going to [tixonline.com](http://tixonline.com). A small charge will be added for this service. The membership list is confidential and is not released or sold.

If you're a new member, please fill out the membership form on the last page of this newsletter and mail it in with your check to the address above. THANK YOU to all those who have already renewed!!



# A Walk Down Ellenton Main Street

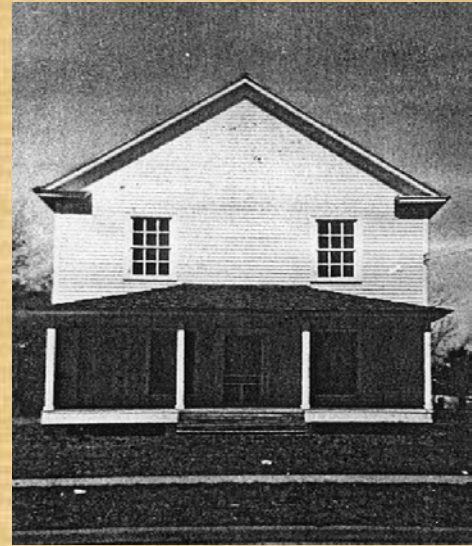
**"Barbeque, rice, hash, two kinds of bread, one salad, one pickle, coffee, and nothing more"...**

Along Main Street in Ellenton, a two-story non-assuming building housed the Ellenton Agricultural Club. Established on March 24, 1894, for the purpose of helping local farmers learn new and better farming techniques, this town landmark--rich in history--had its own constitution and by-laws. As education in a one-room schoolhouse was limited at that time, there was no curriculum to teach better farming methods and Clemson University would not have its first graduating class until two years later. Eager to learn and share developing science techniques in farming, each club member would conduct at least two agricultural experiments on their farm each year and share their results with other members at the meetings. From these discussions, farmers were able to gain knowledge to become better farmers, thus creating better lives for themselves and their families.

Members met the fourth Saturday of each month at the Ellenton Academy until June 1904, when the Club moved into its own new building on Main Street—complete with a barbeque pit in the back. Each member paid annual dues of \$6.00 and furnished dinner for the club on a **rotating schedule. The dinner served "shall consist of barbeque, rice, hash, two kinds of bread, one salad, one pickle, coffee, and nothing more". (Browder & Brooks, 8)**

When the residents of Ellenton and the surrounding area had to move due to the construction of the Savannah River Project, the building was moved to Barnwell and still stands along SC Highway #64.

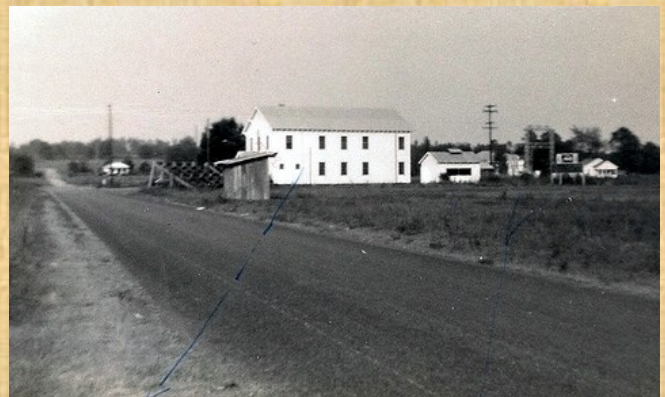
The Ellenton Agricultural Club was one of many civic opportunities for the citizens of Ellenton.



**Ellenton Agricultural Club, Main Street**

Other activities included the Ellenton Garden Club, the American Legion, the Masonic Lodge, and the Lions Club. The town of Ellenton provided lots of entertainment; **those who lived in town didn't have time to get bored. When people weren't attending church, school, and club activities, they spent time with their family and friends—going to the movies, shopping for groceries and clothes, attending sports events, and dining at good places to eat. Those people who lived in the country came to town as often as they could to enjoy the pleasure of Ellenton.**

## **Masonic Lodge and Baseball Diamond**





# SRS at Sixty

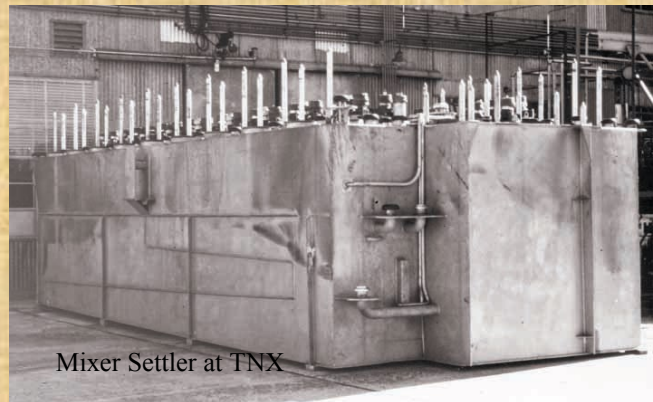
By Art Osborne

In the Spring of 1953 construction of the SRS was in full swing. Thousands of personnel descended on the site daily to design, build and complete the mammoth site and meet the urgent needs of national defense. The chemical separations areas designated as 200F and 200H were nearing completion. Two nearly identical areas were built. The basic design concept was originated by DuPont engineers at the Hanford site during the war years. As stated by W. P. Bebbington in his History Of DuPont At The Savannah River Plant: “ a long straight line series of process steps takes in at one end the slugs of irradiated uranium and puts out at the other adequately purified products.”

Initial research into the separation of irradiated plutonium from uranium and fission products was done during the Manhattan project. A precipitation process using lanthanum fluoride to bind with and precipitate the plutonium was used during the war years to produce the first atomic weapons. The researchers also investigated ion exchange and solvent extraction methods. After the war the solvent extraction method was soon isolated and by 1950 or so selected for as the preferred method the processes at Savannah River.

This method, named the Purex process, was better able to recover plutonium and also uranium. It used a less flammable solvent, was more cost effective and, most importantly, also produced less waste. The solvent used was tri-n-butyl phosphate called TBP. The process used vessels called mixer-settlers. Process streams were directed counter currently and then allowed to rest. The desired products would then settle out based on their chemical selectivity.

The term “Canyon” accurately describes the building. Two three-hundred-acre parcels were cleared for the construction. Each area contained about 50 buildings to support the



giant nearly 1000 foot long, more than four story tall canyon. The most important design criterion for the buildings was to incorporate remote operation, which offered the best means of limiting personnel exposure to radiation.



This meant that all processes were controlled from behind thick concrete walls. Irradiated reactor fuel and target slugs entered the process using a remotely operated crane; canyon equipment was also exchanged using the same crane. The goal was to keep exposure to no more than 1/1000 of a REM per hour in operating areas. These massive buildings have two parallel lines of process cells separated by a central service and personnel

Preserving & Interpreting Savannah River Site History



corridor. The central corridor houses control rooms, sampling ports, and necessary equipment like: HVAC, air compressors, diesel generators and so forth. The corridor also provides space for personnel facilities: safety, restrooms, change rooms, cafeterias, etc. All of the construction was massive Class I featuring thick reinforced concrete walls and stainless steel throughout. The radioactive operations were all done remotely utilizing cranes, optics, and incredibly precise dimensions and measurement. The two process lines were designated as the Hot and Warm sides based upon the radiation levels present.

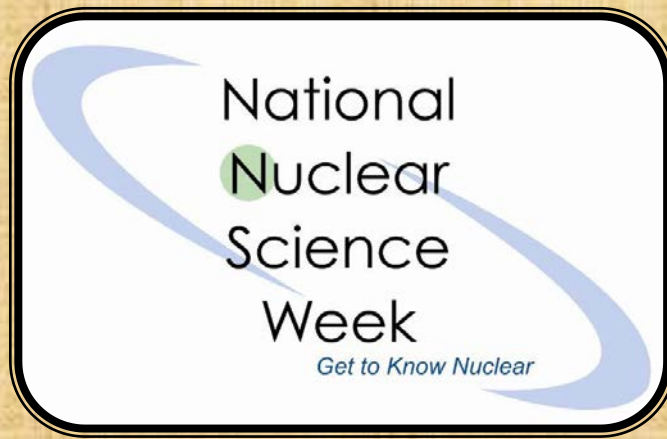
Since no man could, or will ever, set foot into the operating canyon space after they went hot (radioactive service started); everything had to be done remotely. A long straight line of tanks, pumps, valves, piping and other process items stretch the length of these process lines. The lines are also divided into very precise cell lengths to allow for precise identification and measurements. Large concrete covers are removed as required for operation and maintenance. During operations the process lines and vessels are essentially completely covered providing the best personnel shielding possible.

While the canyons were being built, A full Mock-Up-Facility, 717-F, was also being constructed. This facility provided a non radioactive location to precisely duplicate the dimensions, equipment arrangements, floor slopes and every other possible measurement and angle of the actual canyon. Each piece of equipment was mocked up in a non-radioactive setting and then placed into the canyon. Precision as built and placed drawings and dimensions were made and kept for each of the thousands of equipment pieces used. Many of these tanks and vessels are still in use today in the H-Area Canyon.

Among the more elegantly simple structures built, used and still in use today were the sand filters. These giant filters were designed to receive the exhaust air from the canyon, direct it through a channeling tunnel, then sand filters to catch and trap all the radioactive particles and then finally out the exhaust stack.

Construction of the F Canyon began in June 1951 and the equipment was installed by the end of October 1953. The completion of H Canyon was purposely delayed to allow time to learn and incorporate numerous process, safety and cost improvements into the construction. H-Area was completed and went hot in 1955.

**LIKE US ON FACEBOOK!** We will be posting news and tidbits during these exciting times of Foundation progress. The SRS Heritage Facebook page is open for business. Please join us at <http://www.facebook.com/srs.heritage>. And don't forget the news and archives at the website, <http://www.srsheritage.org/>.



The week of October 21-25 has been designated National Nuclear Science Week for 2013. The national focus for the week will be on the Aiken/Augusta area.

The Foundation plans to participate in several events during National Nuclear Science Week (NNSW) in October. NNSW is an annual event led by the National Museum of Nuclear Science and History in Albuquerque, New Mexico. Events during the Week are intended to recognize the contributions of the nuclear science industry and those who work in it every day.

National Nuclear Science Week is scheduled for October 21-25, 2013, and will be focused on the Central Savannah River Area. Locally, NNSW planning is being led by the SRS Community Reuse Organization with committees composed of representatives from local nuclear organizations, including the SRS Heritage Foundation.

**Four separate types of activities are planned for the Week:**

**Nuclear Science Education Day**

Located at the USCA Ruth Patrick Science Education Center with regional hubs at USC Salkehatchie and Georgia Regents University Augusta. Audience...Elementary and Middle School Students

Dates not yet defined

**Nuclear Workforce Development Day**

Located at the Kroc Center in Augusta with talks, panel discussions and exhibits

Audience...College/University/Senior High School Students, Industry Professionals

Tuesday, October 22<sup>nd</sup> from 10: am to 3: pm

**Site Tours**

Georgia Regents University Augusta, Plant Vogtle, V.C. Summer Plant, Savannah River Site

Dates not yet defined

**CNTA Edward Teller Lecture**

Speaker and date not yet defined

Watch for additional information on the events of National Nuclear Science Week in your Newsletter and on the Foundation website, [srsheritagefoundation.org](http://srsheritagefoundation.org).



## SRS Heritage Foundation Introduces New Board Members



Carol Barry, is the Director of Workforce Services for Savannah River Nuclear Solutions (SRNS). In this capacity, she is responsible for SRNS workforce services including benefits, compensation, staffing, labor relations, talent development and education outreach and EEO/diversity.

She has over 30 years of experience in the Human resources (HR) and workforce services fields.

In her current position, Carol manages a staff of 58 employees who provide services in workforce management, development, benefits, staffing and retention, labor relations, employee records, HR policies and procedures, EEO/diversity, and others. She has worked at SRS for 25 years in a variety of positions of increasing responsibility within HR and Workforce Services.



Alana Faye Lewis recently joined the Board of Directors of the SRS Heritage Foundation. Faye worked in the SRNL Technical Library for 29 years, beginning as a Librarian and concluding as Scientific and Technical Information Analyst. She also served as Archival Records Analyst and Derivative Classifier of documents for both DuPont and Westinghouse Savannah River Company.

Since her retirement from SRS, Faye has been employed as a Collections Management Librarian and Instructor at the Paine College Collins-Callaway Library and Archives. Faye brings a wealth of knowledge about SRS records and will be an asset to the Foundation Board.

## Welcome

**THANKS TO OUR  
SRS HERITAGE  
FOUNDATION  
SPONSORS  
2012**

We are particularly pleased that several organizations have such faith in our future that they have made substantial financial contributions to our programs.

Among these supporters are:

**Corporate Sponsor**

Savannah River Nuclear Solutions

**Corporate Member**

Savannah River Remediation, LLC

**Business Member**

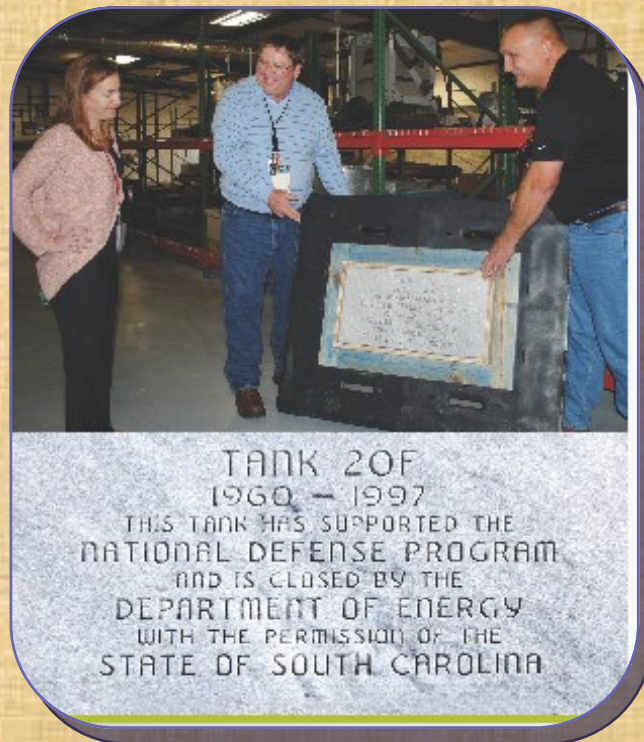
Security Federal Bank

*A special thank you to the individual members for their continued support of the Foundation*

**JOIN THE  
SRS HERITAGE  
FOUNDATION  
TODAY!!  
WE NEED  
YOUR SUPPORT!**

## Curator of Artifact Collection Leaves SRS

Caroline Bradford has left the Savannah River Site to accept a new position with the Warrior Project in Augusta. Caroline was hired in 2007 by New South Associates under their contract with the Department of Energy Savannah River Operations Office. She became the first Curator of the SRS Cold War Artifact Collection and has been instrumental in collecting, preserving and cataloguing the collection of more than 5,000 artifacts, ranging from badges to a complete control room for a test reactor. Recently, she consolidated artifacts from temporary storage locations all over the SRS into the new Curation Facility that was opened officially in 2012.



This recent photograph shows Caroline accepting the historic tank marker commemorating the 1997 closure of Tank 20F. Jim Herbert and Mike Harrell of Savannah River Remediation are shown making the donation.

Caroline has been a good friend to the Foundation and other local historical organizations. We will miss her but wish her the very best in her new assignment.



**If your information hasn't changed,  
you can just put your check in the mail!!!**



## SRS HERITAGE FOUNDATION MEMBERSHIP APPLICATION

*I would like to become a member of the SRS Heritage Foundation in the following level. (Please Check One)*

- |                          |                   |                          |
|--------------------------|-------------------|--------------------------|
| <i>Benefactor</i>        | <i>\$120.00</i>   | <input type="checkbox"/> |
| <i>Patron</i>            | <i>\$ 60.00</i>   | <input type="checkbox"/> |
| <i>Sustaining</i>        | <i>\$ 35.00</i>   | <input type="checkbox"/> |
| <i>Student</i>           | <i>\$ 15.00</i>   | <input type="checkbox"/> |
| <i>Small Business</i>    | <i>\$ 250.00</i>  | <input type="checkbox"/> |
| <i>Corporate Member</i>  | <i>\$1,000.00</i> | <input type="checkbox"/> |
| <i>Corporate Sponsor</i> | <i>\$5,000.00</i> | <input type="checkbox"/> |

*I would be willing to help with Publications\_\_\_\_, Membership\_\_\_\_,  
Fundraising\_\_\_\_, Publicity\_\_\_\_, other\_\_\_\_*

**This membership is valid through December 2013**

Name:
Address:
City, Zip Code:
Phone:
Email (s):
Fax #:

*My check, made out to the SRS Heritage Foundation, Inc. is enclosed. Contributions to the Foundation are tax exempt. Federal ID#20-1629370*

**Please mail to:**  
**SRS Heritage Foundation, Inc.**  
**P.O. Box 2226**  
**Aiken, SC 29802**  
**Phone: (803) 226-0116 or 648-5634**  
**Email: [SRSHeritageFoundation@gmail.com](mailto:SRSHeritageFoundation@gmail.com) or [qualityprt@aol.com](mailto:qualityprt@aol.com)**