

# WSRC News

Washington Savannah River Company, Savannah River Site

August 1, 2007

## BSRI Wins Construction Team of the Year

Bob Rucker, the Managing Editor of the *Bechtel Globe* sent BSRI his Congratulations for winning Bechtel's Construction Team of the Year award in the small projects category and wrote the following article for the June edition of the magazine.

### Construction Team of the Year Small projects category (Under \$100 million)



Bechtel Savannah River, Inc. (BSRI), MCU project, United States.

Of the many challenges the MCU project team faced, the biggest was how to execute 300,000 job hours within an accelerated schedule, in a small facility, while being exposed to a wide range of weather conditions.

"The quality, workmanship, and safe work practices of this construction team were truly impressive," says **Ben Young**, manager of construction and startup services for BSRI. "MCU is an excellent example of exemplary project performance in a unique facility. The successful delivery is a tribute to the knowledge, experience, and personal commitment of the BSRI construction team."

The construction team devised a modular design approach that allowed 40 percent of the project's electrical and mechanical equipment and materials to be assembled in a controlled shop environment, avoiding possible in-

clement weather at the site. (cont page 2)

## WSRC 'Green Build' House Construction Continues

The Green Build house that WSRC is sponsoring for Habitat for Humanity has been progressing for the last four weekends. Various volunteers from within Infrastructure and Services and across the site have been giving of their time and talent on Fridays and Saturdays.

This house is the first "Green Build" in Aiken County for Habitat. This program aims to reduce the operating costs of this home, conserve water and energy, improve resource-efficiency and minimize construction waste. These are all features that Habitat plans to incorporate into its future home construction projects while at the same time striving to keep the costs affordable for the low income community that serves Aiken.

"We are making a lot of progress, having fun and should be complete in late September, if all goes well," said Missy Byrne, WSRC volunteer coordinator for the house. "On Aug 3rd and 4th we will be dry walling and finishing up the siding on the house. We are especially looking for volunteers willing to give their time for the next three weekends."

To check out the progress, look at the Habitat House link on the Infrastructure and Services home page in ShRINE. To volunteer, contact Missy Byrne, 7-4406.



Chip Jennison and Frank Boyd hard at work

### What Counts?

95 Number of high school students that competed in the 2007 Savannah River Regional Science Bowl Competition

17,600 Number of students in the CSRA that WSRC Traveling Science Volunteers reached

# BSRI Wins Construction Team of the Year *(cont from page 1)*

In preparation for the delivery of the remotely assembled modules, the team used 3D modeling to ensure that penetrations, embeds, block outs, and pipe tie-ins were precisely located. Early module delivery allowed construction to proceed three months ahead of schedule.

The facility's process tanks were fabricated off site, then shipped on site where piping and electrical commodities were installed in a mock-up shop to the exact floor elevations of the facility being constructed. This approach allowed just-in-time installation with minimal rework and reduced the schedule by four months.

Field execution required precise communication during a two-shift operation, with prudent use of overtime among the direct-hire workforce.

The project team completed its work without a lost-time accident despite performing construction on an accelerated schedule and inside an operating radiological waste processing area – much of it in a confined area 20 feet (6 meters) below grade.

To address safety issues associated with toxic vapors from a special coating specified for the project's secondary containment areas, the team designed and built a temporary roof and a ventilation system to remove high styrene concentrations from the work zone.

The project team met all of its major milestones ahead of schedule. The team completed construction in November 2006, four months ahead of schedule and under budget. Six Sigma savings on this project totaled nearly \$6.2 million.

## Three "Firsts" Achieved During Review Of F Tank Farm Closure Project

On July 27, the Washington Group International Project Review Board (PRB) rewarded the hard work of the F Tank Farm Closure Project Team with three "firsts:"

- ⇒ First project review with less than two findings
- ⇒ First project review with no quality assurance findings
- ⇒ First project review with more best practices than findings, concerns and recommendations combined

The Corporate PRB focuses on providing an independent review of 20-30 of the highest value, most challenging Washington Group projects each year. Their penetrating, performance-based review is designed to provide meaningful recommendations on how to ensure project performance and/or reduce risk. According to a corporate PRB member, typically a healthy project, such as the F Tank Farm Closure Project, would have 5-10 findings. The one finding given to the facility was for the lack of a team building plan, which is a requirement of corporate project procedures. This document is being prepared and will be released before the final PRB report is issued next month.

In addition to reviewing the F Tank Farm Closure Project contract commitments, Liquid Waste Operations senior staff requested the PRB to review several areas that would benefit from the experience of the Board. Included in the review was the Documented Safety Analysis/Authorization Basis; technologies for tank closure, transfers and cleaning; behavior-based safety; the timeout process and program risk assessment. Recommendations from their review will help identify future improvement opportunities for the projects.

The PRB also identified 20 best practices during their four-day assessment, which included excellent program or process aspects of project management, engineering, project controls, operations and maintenance, quality assurance, and safety.

Congratulations to the F Tank Farm Closure Project team for their outstanding results from the first ever assessment of an operating facility by the Corporate PRB.



## Construction Designs and Fabricates Personnel Shielding Plate



Wheels make the Shield plate easy to maneuver

Construction has proved again that safety and ALARA come first, and this is especially true when work requires breaching a tank. A need was met when PD&CS field engineering designed a personnel shield plate to support mining over open risers on Tank 13, and supported the Boilermaker craft, who fabricated from “scratch” the shield plate with materials found on site (mostly from Excess). No major parts or components had to be procured from off site, and no existing equipment was modified. All was built from ground up.

Often tank farm employees have to work over open risers from behind temporary shielding erected around the riser opening, while utilizing remote cameras to clear riser openings of obstructions and to perform mining activities to support installation of mixing and transfer pumps. Since the shine field over an open riser on Tank 13 has been calculated by HPT to be 34 REM/HR, a worker could pick up 566 mrem a minute. At this rate, a worker would pick up his annual

dose in just over one minute.

With personnel safety being the most important consideration, the construction team had to figure out how to reduce or eliminate exposure to workers and how to eliminate the potential fall hazard. In addition, for material and equipment placement, they had to protect existing equipment by identifying embedded and underground piping, duct banks, etc. Through structural mechanics, they also had to determine the weight limit for each specific tank, since all loads over 500 pounds must have tank top loading calculations performed by design prior to placement of loads on any tank top. Additionally they had to contend with all of the interferences, such as tank top commodities (conduits, steam, air and transfer piping routed across the tank top) other risers and overhead lines. After considerable research and study, sketches were submitted to the Project Team, RCO, Safety and Design for review for function ability, constructability and cost savings.

Before the shield plate, workers had to erect a chest high frame around the riser to support temporary shielding and work over the top of shielding. Oftentimes, they would have to utilize extend-tools and wear lead lined gloves. The work was hard, the equipment was cumbersome, and the tasks were often very time consuming. While huts are still required as a secondary containment barrier to prevent contamination of the tank top and surrounding areas, the Shield Plate allows work over the riser without the employee picking up unnecessary and excessive exposure, making the work safer, easier, more time efficient and cost effective. HPT calculated the working rate with 8 inches of carbon steel shielding in place at approximately 10 mrem/hour, a much better rate than 566 mrem/min.

Roger E. Davis (Rod) designed the shield plate and closely followed its fabrication. He even designed bands to technically seal the riser if work wasn't finished at shifts-end or if work had to be stopped for inclement weather or other precautions. These bands allow workers to pick up where they had left off the day before. The new technology is useable on virtually any riser in the F or H tank farms.



The Shield plate moves on tracks

### Cell Phone Reminders

- ✓ Have a method to prevent taking cell phones into limited areas
- ✓ Use government-issued phones for business calls only
- ✓ While at work - **NO** cell phone use will driving. Pull over.

Studies indicate that motorists who talk on cell phones while driving are as impaired as drunken drivers with blood-alcohol levels at the legal limit of 0.08 percent.

## Brian Looney Invited to Serve On National Research Council Committee

SRNL's Dr. Brian B. Looney has received an invitation from the Chairman of the National Research Council and the National Academies' Policy and Global Affairs Division to serve as a member of the Committee on Cleaning Up of Radioactive Contamination: Russian Challenges and U.S. Experience. The National Academies are made up of the National Research Council, National Academy of Sciences, National Academy of Engineering and Institute of Medicine. They are private, nonprofit institutions that provide science, technology and health policy advice under a congressional charter. The National Research Council is the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering in providing services to the government, the public and the scientific and engineering communities.



Dr. Looney is a member of SRNL's Environmental Science and Biotechnology Directorate, where he coordinates development and deployment of innovative environmental characterization and cleanup methods; he also serves as an adjunct professor in the Environmental Engineering Science Department at Clemson University.

He was invited to serve alongside Dr. Frank L. Parker, Distinguished Professor of Environmental and Water Resources Engineering at Vanderbilt University, and Dr. F. Ward Whicker, Professor and Head of the Department of Radiological Health Sciences at Colorado State University.

## Golf Tournament Raises \$8,000 for United Way

The Don Smoland United Way Gold Tournament was played June 22 at Houndslake Country Club. There were 144 players (36 teams). The group raised \$8,000 to bring the 10-year total to \$75,000.

**1st Place:** won on a scorecard play-off: Neil Davis, Pete Hill, Mark Keefer and Julie Voegtlen.

**2nd Place:** Gigi Magoulas, Jerry Czarneck, Bobby Hayes and Billy Blackburn.

**3rd Place:** won on a scorecard play-off: Craig Gosney, Kwitkowski, Joe Kanzleiter and Michael Graham.

**4th Place:** Roger Martin, David Griffin, Gary Smith and Scott King.

Other teams finishing with 59's and losing on the scorecard play-off :

Ryan Lentz, Ryan Mcnew, Monte Horn and Jimmie Engledow; Ben Dean, Brandon Dean, Bill Dean and Bobby Wilson,

Last Place and best Sportsmanship With a 73: Steve Foster, Ben Blue, Tim Chandler and Greg McCallum.

## F Area LSIT Introduces Good Catch Observation Program

Beginning in May, Ronald J. Brown, the F Area FALCONS LSIT Chairperson, introduced a "Good Catch" observation program. This program recognizes individuals who have helped to avert potential safety and/or procedural violations. Since its induction, there have been several "Good Catches." In June, there were two "Good Catches."

The first was performed by Donna Redd, Lee Thomas and Chuck Rearden. While performing prerequisites for start-up of 254-13F "A" diesel generator, they observed a negative ground light on a 125-volt battery charger. They immediately stopped and notified the Shift Operation Manager (SOM) of their findings; power to this circuit was isolated per engineering and a load test was able to be performed.

The second was performed by Gregory McFeely. While performing his duties as the "Reader-Writer" for F Canyon TRU Repackaging Project, he reviewed applicable documentation for the target drum for that shift's evolution of repackaging. Greg recognized Plutonium Equivalent Curies (PEC) data exceeded the PEC limit for a single 55-gallon Department of Transportation (DOT) 7A waste container. He immediately notified his First Line Manager (FLM) who directed Greg to confirm a 55-gallon TRU waste container PEC limit with the repackaging project General Certification Officer (GCO). He received confirmation from the GCO that the discovered PEC limit for that container exceeded the maximum PEC limit and all preparations for the repackaging evolution was suspended. Approximately a dozen personnel had previously failed to recognize the exceeded limit. Consequently, Greg's attention to detail and questioning attitude averted F-Canyon TRU Waste Repackaging Project additional violations of safety controls, and he is to be applauded for his well-regarded efforts. Let's keep those eyes and ears open!

## Service Milestones

Congratulations to the following SRS employees, who are celebrating service milestones in **August**.

### 35 YEARS

Herbert L. Fennell  
Sue J. Stephens

George T. Tussey  
Richard B. Weiss  
Russell W. Wright

Willie E. Floyd  
Angela M. Ford  
Michael L. Gilles  
Dan P. Griggs  
Dave N. Hoang  
Cynthia Holding-Smith  
Albert J. Hutko  
Edward A. Kyser III  
Sherry B. Lawver  
Antonio C. Lewis  
Lawrence W. Lunden  
David E. Manders

Debra S. Foutch  
Dennis Harris  
Steven D. Jahn  
Barbara R. Key  
Mark H. Layton  
Eric A. Nelson  
Joel A. Plagenhoef  
Stephen M. Saffron  
Leon Scott, Jr.  
Mark L. Wessel  
Wesley J. Young

### 30 YEARS

Jack L. Allen, Jr.  
Richard E. Babb, Jr.  
Esten C. Bledsoe  
John P. Bodie  
Eddie E. Bradley  
Fred A. Cheek, III  
Patricia J. Cummings  
Vivian A. Edwards  
Michael E. Eller  
Howard S. Etheridge  
Sammie L. Gary III  
Shirley M. Hightower  
Charles S. Holod  
Lenora S. Howard  
Mary D. Jones  
James V. Logan  
Jerry N. Lonon  
Phillip R. McGee  
Joan U. McKinney  
Kenneth L. McTeer  
Howard A. Morgan  
Calvin A. Padgett  
Thomas E. Reece  
Anthony T. Shih  
David S. Simpson  
Roger W. Stephens  
Jeffrey S. Stewart

### 25 YEARS

Arturo P. Corral  
Mahesh N. Gor  
Judith A. Hanzik  
Kathleen M. Melcher  
George Pondexter  
Roger W. Rabon  
Ronald I. Sanders  
Ronie B. Spencer  
Patricia P. Thomas

### 20 YEARS

Alberta H. Anderson  
Kirsten G. Aylward  
Karen A. Barley  
Jerry A. Bolin, Jr.  
Scott E. Booth  
Anthony Bowman  
Frank L. Boyd  
Patricia C. BRIGHTHARP  
Curtis L. Brown  
Patricia H. Buchanan  
Timothy P. Conner  
Donald Dorr  
Ruth J. Douglas  
Kerry A. Dunn  
Vivian M. Evans  
Kenneth R. Faircloth

Anthony Maxted  
Randall E. Morgan  
Jerry M. O'Leary  
Karen N. Palmer  
Dino M. Pierucci  
Christine C. Posey  
Mason N. Richardson  
Eric E. Smith  
Johnny F. Still  
Michael H. Tosten  
Robin W. Wainwright

### 10 YEARS

Donnie A. Edwards  
Donald R. Ludwick, Jr.  
Craig W. McMullin  
Christopher M. Mobley  
John W. Naylor  
Jeffrey J. Thibault  
Dennis W. Vinson

### 5 YEARS

Leonard T. Alexander  
Christopher E. Bagwell  
Heath E. Crutchfield  
Charles C. Foster  
Thomas C. Lane  
Jacob C. Nims  
Elizabeth J. Stockdale  
Serranzo D. Turner

### 15 YEARS

Richard H. Belles  
Richard P. Brown  
Barbara L. Brumbaugh  
Ghada S. Elchoufi  
Gary C. Feenstra  
Emmett D. Ferrell, Jr.  
Robert W. Fields



### Spotlight On Core Values

- ⦿ Safety
- ⦿ Integrity
- ⦿ Teamwork
- ⦿ Results

The *WSRC News* is published by WSRC's Public and Employee Communications Department, Office of the President.

Questions, comments or a submission?

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