SRNS and Augusta University partner to introduce students to nuclear science careers

AIKEN, S.C. – (Jan. 20, 2022) – Savannah River Nuclear Solutions (SRNS) partnered with Augusta University (AU) to create WORCshop@AU, a unique education outreach opportunity to introduce students to nuclear science careers by solving a real-world problem. The program concluded on December 9, when student teams presented their solutions during a friendly competition.

Beginning in August, SRNS engineers volunteered to mentor students and their teachers while they researched how to cost effectively transport nearly 3,000 construction workers to and from the Savannah River Plutonium Processing Facility (SRPPF) construction work site at the Savannah River Site (SRS). SRPPF is part of the National Nuclear Security Administration’s (NNSA’s) two-site approach to revitalize the nation’s plutonium pit production capabilities in support of the nuclear deterrent. The students presented their solutions to an audience of 150 people consisting of their peers, educators and a three-judge panel.

“We were very impressed with the quality of presentations and took something away from each of them,” said Rick Connolly, SRNS Operations and Maintenance Director – NNSA Capital Projects (NCP), speaking on behalf of the judge’s panel. “You helped solve a problem. Thanks for spending time on this effort and stepping outside of your comfort zone.”

Teams presented solutions that are environmentally friendly and cost effective. They examined options utilizing hydrogen, natural gas or electric buses and encouraged carpooling and parking lot expansions. Students also weighed the safety and security implications of increased traffic, important factors for SRS as it carries out national security missions.

The winning team from Augusta Preparatory Day School earned the title Best Engineering Student Design and received a trophy and a $100 gift card. The team’s teacher James Mason said, “These are hardworking students, with a strong interest in science, technology, engineering and math (STEM) fields, and they really enjoyed working with the talented engineers from SRNS to explore the engineering design process while solving a real-world problem.”
Kathryn Geoffroy, a student on the winning team, said, “This project gave me an opportunity to not only dive into my future aspirations of engineering, but it furthered my problem-solving skills in the world of logistics. Being able to work with people from SRNS opened my eyes to the wide range of jobs offered at the Site. Additionally, the use of Advanced Placement chemistry applications and multiple ideas my teammate Hannah and I brainstormed allowed us to realize the importance of electric transportation during the climate crisis.”

Mary Flora, SRNS Environmental, Safety & Health, Quality and Waste Management Director, and Paul Hunt, an SRNS SRPPF Plutonium Modernization Program Manager, the two other WORCshop@AU judges, both shared their educational and career experiences that led them to their current roles. They were excited to see so many students engaged in this project and a STEM environment.

AU Assistant Professor and Director of Nuclear Science Dr. Joe Newton said, “The student presentations were amazing. Watching these students take ownership over their ideas and solutions was so exciting to see. Partnering with SRNS was a great opportunity to encourage students to stay in STEM disciplines and expose them to local career opportunities like those at the Site.”

Commenting on the event and mentor volunteers, SRNS Education Outreach Programs Specialist Taylor Rice said, “I am thoroughly impressed with the innovative solutions presented by each team. Nineteen SRNS volunteer mentors assisted these students and teachers throughout the school year as they developed plausible solutions to an authentic problem. This project was a great way to connect industry with classrooms in the region.”

NNSA announced funding for the WORC II grant program in 2020. The $5 million investment supports the development of the future workforce to carry out vital missions at SRS. The Savannah River Site
Community Reuse Organization administers and oversees the distribution of the grant to academic partner institutions, including AU. A small portion of the grant was used to develop WORCshop@AU. Growing NNSA missions at the Site in support of the nation’s nuclear deterrent prompted NNSA to enhance its efforts to develop an enduring workforce that will carry out these long-term missions.

WORCshop@AU teacher and student teams were:

- Augusta Preparatory Day School teacher James Mason and students Kathryn Geoffroy and Hannah McDonough (first place winner of Best Engineering Student Design)

- Evans High School teacher Courtney Bernal and students Ha’ani Ismael, Yumeka Katonka, Georgia Walden, and Velmiuel Smith (second place winner of Best Engineering Student Design)

- Richmond County Technical Career Magnet School (Team 1) teacher Carla Biley and students Tamea Dunnom, Jaidyn Moore, Rashad Wright, Amarie McNeal, and Leila Cortez (third place winner of Best Engineering Student Design)

- Hephzibah High School teacher Jeremy Dingman and students Xavier Argyle, Blayne Gates, Reuben Griffin, and Ariel Rineer

- Richmond County Technical Career Magnet School (Team 2) teacher Nathalie Pace and students Travis Lee, Hannah Rhodes, Laila Anthony, Melannae Zamor, and Alana Potter

- Edmund Burke Academy teacher Kim Tsakonas and students Braelyn Reeves, Dennis Eberly, Trey III Johnson, Braddock Wilson, Luck Poma, Darcy Rich, Ava Timms, Noah Christian, and Jordan Giles

Savannah River Nuclear Solutions, a Fluor-led company with Newport News Nuclear and Honeywell, is responsible for the management and operations of the Department of Energy’s Savannah River Site located near Aiken, South Carolina.