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FOR IMMEDIATE RELEASE

SRS-Based Radiological Assistance Program Supports Mars 2020 Launch

AIKEN, S.C. (August 13, 2020) – Members of the Department of Energy's (DOE) Radiological Assistance Program (RAP) Region 3 traveled to Kennedy Space Center to support NASA's Mars 2020

launch ready to work. Their job was to be prepared to respond in the unlikely event of an accident during the launch that threatened public safety. They were standing by, at the ready, as the rocket successfully roared away from the launchpad and began the journey that will take the spacecraft to the Red Planet.

"I had been fortunate enough to see two SpaceX launches during our first two trips to the Kennedy Space Center, but from farther away," said Trent Edwards, the RAP 3 Regional Operations Manager. "For this launch, because of the equipment that my team had, called a mobile Environmental Continuous Air Monitor, NASA's monitoring plan stationed us close to the launch pad, so the view was fantastic. I was proud to be a very small part of what should be a big step forward for science and the never-ending human quest for advancement of our knowledge."

RAP, which is part of the National Nuclear Security Administration's (NNSA) Nuclear Emergency Support Team (NEST), serves as the nation's premier first-response resource in the event of a radiological or nuclear incident. Savannah River Site is home to the RAP 3 team, which is responsible for the region that includes Florida, South Carolina, and three neighboring states. In addition to Edwards, the RAP 3 team is made up of DOE/NNSA federal personnel and Radiological Protection and Health Physics Services personnel from Savannah River Nuclear Solutions and Savannah River Remediation, under the direction of NNSA Regional Program Manager Christina Edwards.

They supported NASA's July 30 launch at Kennedy Space Center because the Perseverance Rover, which the mission is carrying to the surface of Mars, is powered by a Multi-Mission Radioisotope Thermoelectric Generator (MMRTG). The MMRTG, developed by DOE in support of NASA, is a space nuclear power system that converts heat from the natural radioactive decay of plutonium-238 into electricity using no moving parts. Although there are multiple layers of safety built into the MMRTG to help minimize the chance of a release, RAP team members were on hand to help NASA by leading a number of Radiological Monitoring Teams who could collect samples, perform air monitoring, and perform surveys in the unlikely event of a launch anomaly.



RAP 3 has been participating in NASA launches for decades, including Cassini in October 1997, New Horizons in January 2006, and the Curiosity Rover, launched in November 2011, which also went to Mars. “Although all our NASA support missions require years of preparation, they are some of our most exciting activities. RAP 3 has participated in many launches, including all five of NASA’s rover missions to Mars. I’m so proud of the RAP 3 team members and their commitment to excellence in support of NASA,” Christina Edwards said.

The SRS-based team’s work in support of Mars 2020 began long before the July 30 launch with planning meetings that started over two years ago. Then, in 2019, they participated in a DOE/NNSA-led exercise called Cobalt Magnet 2019 that focused on managing the off-site consequences of a radiological or nuclear incident resulting from a hypothetical anomaly during a launch.

More recently, the team traveled to the Kennedy Space Center to participate in a week of training using the specific tools, equipment and instruments they would use during the launch. As a result of the ongoing response to the COVID-19 pandemic, much of the training was modified to accommodate protective measures like social distancing, and some of it was accomplished virtually to minimize potential individual contact. The week concluded with a full rehearsal of the launch deployment to ensure readiness.

As a final preparation, the team traveled back to Florida the week before the launch to support what is called MMRTG Flight Installation, during which the equipment containing the MMRTG and the Pu-238 heat source were lifted up and bolted into place on the rover as part of the payload on the Atlas 5 rocket. While the NASA Health Physics staff was providing radiological protection to that work activity, the RAP team was on standby to back them up and conduct any consequence management activities if an event occurred.

“It was wonderful that everything went exactly to plan,” Trent Edwards said of the launch, “but RAP was there as a contingency for the unexpected. We are always ready to provide our service to other organizations and to the country, so I am glad we were there to do our part.”

Team members of the eight regions of the RAP program, which was created by the Atomic Energy Commission in 1958, are made up of federal and contract employees who regularly work with radioactive material at DOE and NNSA facilities. The regional locations allow the teams to efficiently assist Federal, state, local, and tribal officials in dealing with any crisis involving radioactive materials or devices across the country.

Established by Congress in 2000, the National Nuclear Security Administration (NNSA) is a semi-autonomous agency within the U.S. Department of Energy responsible for enhancing national security through the military application of nuclear science. The mission of the NNSA Savannah River Field Office (SRFO) is to provide operations, programs, and project oversight and contract administration for NNSA field activities at the Savannah River Site, located near Aiken, South Carolina.

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, including the Savannah River National Laboratory, located near Aiken, South Carolina.

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