The Dream Team: Experienced employees handpicked for hazardous facility cleanup

Aiken, S.C. Sept. 7, 2016 – The men and women working to clean up the inactive Plutonium Fuel Form (PuFF) facility are an elite team of experienced professionals. Called “the Dream Team” by facility management, the crew was handpicked to take on one of the Site’s riskier environmental management cleanup activities.

As the field activities associated with the cleanup of the inactive Plutonium Fuel Form (PuFF) facility in Building 235-F enters its second year, the risk reduction approach is paying off. To reduce the risk of a facility fire, the team has been able to safely and efficiently remove and control fixed combustibles, upgrade the fire detection system, and de-energize unneeded electrical circuits. To aid removal of materials from the cells and support material characterization, the team is draining and cleaning shield cell windows after their partial disassembly, installing lighting and mechanically isolating the cells.

The 18-member crew was chosen primarily for their experience in handling radioactive materials, which - for most of the crew - came during the SRS transuranic waste (TRU) campaign. TRU wastes typically consist of protective clothing, tools, rags, equipment and miscellaneous items contaminated with small amounts of plutonium.

“We knew that we would be facing a lot of unknown challenges, and we needed a team who could handle them,” said Jeff Hasty, 235-F Risk Reduction Manager. “In my 29 years of experience, this is the only handpicked crew I have seen.”
The PuFF facility was used to make spheres and pellets out of plutonium (Pu)-238 that served as the heat source in radiolytic thermal generators used to electrically power deep space missions. The work left behind about 1,500 grams of Pu-238. Facility cleanup is challenging as workers face tight spaces with limited accessibility and very fine Pu-238 particulate dust that is easily disturbed. The biggest health threat from plutonium is inhalation, so workers must work carefully to not stir up the dust.

“Some of us were asked if we would come to this project after TRU was over,” said Ronnie Farmer, 235-F Risk Reduction First Line Manager. “We said yes, but only on one condition: you let us get the people who we want for this job. We were looking for people with the right temperament and experience, and upper management let us pick the people we needed to do this job correctly and safely.”

Inside the PuFF facility are nine cells of thick concrete walls with shielded windows. In these cells, employees worked with Pu-238 using remote manipulators from outside the cell. Material entered the PuFF in cell one, then traveled through the other cells to be made into spheres and pellets.

Teamwork and self-motivation are the hallmarks of the team’s success. “If you sit back and watch them, they all know each other’s job and work together so well, it is sometimes hard to tell who is who,” said Hasty. “They are all willing to pitch in for the job.”

The team also has a strong commitment to the safety excellence promoted by SRS. They regularly pause and call “time outs” as needed to reassess situations and determine safer alternatives. Radiological Protection Department Inspector Pete Smith described a situation in which a 550-pound cell window was not as easily removed as expected. “We called a time out, got the rigging supervisor, and figured out the best and safest way to complete the job.”

The cleanup mission is estimated to complete by 2021. Any Pu-238 that is removed, along with any contaminated equipment, will be safely packaged and stored for eventual shipment to the Waste Isolation Pilot Plant in New Mexico.

“The fact is that the combination of experience, respect, management support, humor and comradery is what makes this team great,” said Hasty. “They care about each other and it shows.”

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SRNS- 2016 – 494