

Everyone remembers where they were when they heard about the attacks in New York City and Washington DC on Sept. 11, 2001.

For SRNL's law enforcement technology support personnel, however, the most vivid memories are of the ensuing days:

... The phone calls on the afternoon of Sept. 11 from the National Institute of Justice, asking what assistance the Laboratory could provide.

... The call on Wednesday, Sept. 12, formally requesting SRNL to mobilize to use their robotic and remote systems skills to help the search and rescue efforts in New York City.

... The hurried packing of whatever equipment they thought might be useful for a job they still couldn't define.

... The long, nearly non-stop drive on Sept. 13 from South Carolina to New York, their caravan being handed off from police escort to police escort as they crossed state after state.

... Setting up at Ground Zero at 6:30 Friday morning to work with the Federal Emergency Management Agency and the New York City Fire Department, learning their needs, then quickly adapting the available materials into tools suitable for the job.

While everyone regrets the need for the job they did in those long days, the SRNL team was proud that their innovation and resourcefulness could be useful to the nation in its time of need.

9/11

Visit us on the web at
<http://srnl.doe.gov>



The SRNL law enforcement technology support team who participated in the 9/11 support. Front row: Jim Wong, Bob Fogle, Todd Coleman; Back row: Cassy Robinson, David Martinez, Montenius Collins, Frank Heckendorn

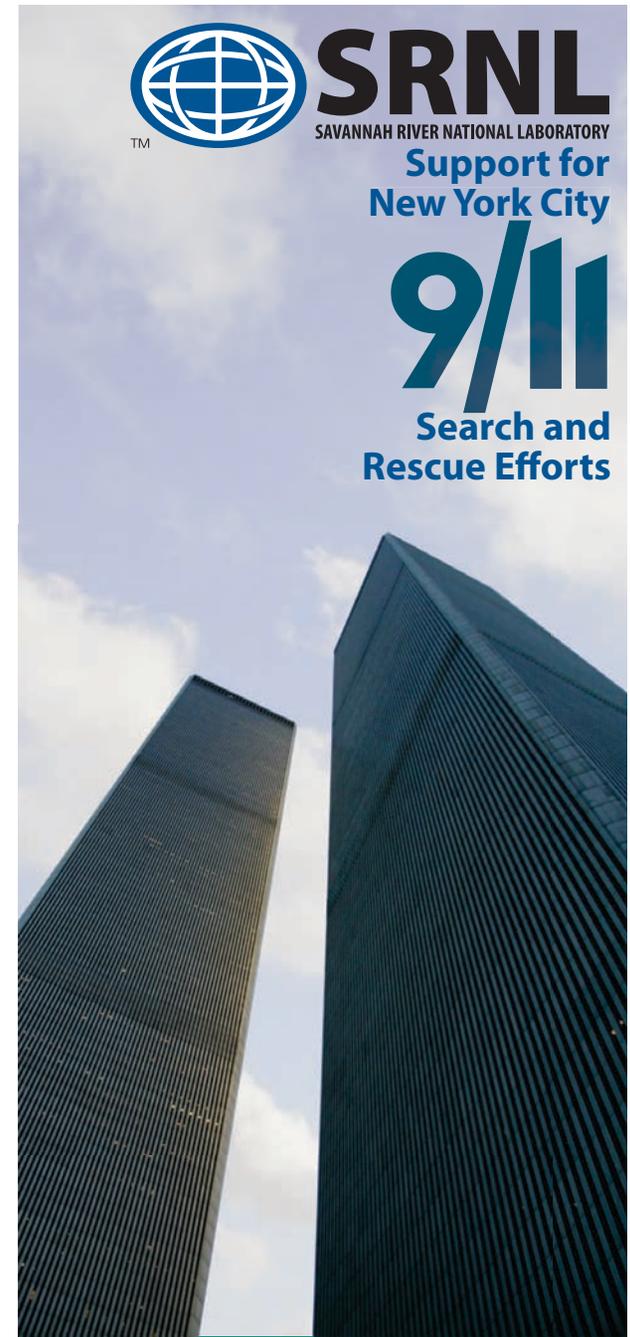
Under an agreement between the U.S. Department of Energy and the Justice Department's National Institute of Justice, SRNL provides a variety of technology support for law enforcement efforts.

SRNL is managed and operated for the U.S. Department of Energy by Savannah River Nuclear Solutions, LLC

We Put Science To Work



Savannah River
Nuclear Solutions, LLC
A Fluor Daniel Partnership, Inc.



We Put Science To Work

On the afternoon of September 11, 2001, the Department of Justice's National Institute of Justice called the Savannah River National Laboratory (then called the Savannah River Technology Center). Could the lab do anything to assist the search efforts in New York City?

The response was quick and positive. At noon on Sept. 13, less than 24 hours after the formal request for support, two trucks left the laboratory, carrying a team of SRNL personnel and a



variety of remotely operated equipment. The team's years of developing and deploying tools for accessing inhospitable areas of the Savannah River Site's nuclear facilities was put to new use supporting the search and rescue efforts at Ground Zero. For the next month, four to six team members remained in New York, rotating personnel every week to 10 days.

Although the robots they took with them did not prove useful for the kind of tasks they found when they arrived, the cameras, videoscopes, and other remote components ... along with the expertise for engineering these elements into unique tools ... enabled personnel to search confined spaces or areas that were inaccessible or too dangerous for humans to enter.

From their base just yards from the World Trade Center location, the SRNL team assisted the Federal Emergency Management Agency's Urban Search and Rescue (USAR) Teams and the Fire Department of New

York by providing much needed on-the-spot design and fabrication of unique technologies. USAR personnel would come to them with a special need, and the team members would come up with a suitable tool on the spot, prepare it for deployment and show the workers how to use it.



They assembled a tool that allowed personnel to search a crater in the debris field from the only safe vantage point – the eighth floor of an adjacent building. The team modified a pan-tilt-zoom camera system, combined it with a microphone, and put it on a long cable. The rescue personnel were able to drop the assembly over the side of the building and lower it into the void. They could then maneuver the camera, using the pan-and-tilt functions, to view all around in the crater, while still remaining at a safe distance.

A "pole camera" was assembled by putting a high-resolution, waterproof video camera with built-in lights onto an extendable pole, allowing viewing of other inaccessible areas, using an operator-carried display.



They assembled video equipment to place on the search dogs that are sent into cavities. The "Riley-cam" (named in honor of the dog on whom they



tried it out) was designed to break away if it got snagged on an obstacle, so the dog would not become trapped.

They also mounted cameras on the surrounding buildings to provide complete coverage of the area, both to assist in the search, and to help protect the safety of the rescue workers.

These cameras gave the Fire Department the capability to search the debris field while remaining at a safe distance.



Long-term impact: In the interim since 9/11, SRNL expanded its "pole camera" concept to develop the Rad Pole Cam, which adds the capability to detect radiation sources. Moreover, improvised tools like those applied at Ground Zero inspired a new interest in critical incident response technologies. The National Institute of Justice engaged SRNL to assess urban search and rescue technology needs, and the findings have led to the development of new technologies and new equipment performance standards. 