SPACE CENTER
Roundup
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NASA JSC-2002e27138 Photo by Robert Markowitz

Dress Rehearsal

At the Sonny Carter Training Facility (SCTF), an intricate system of teams works together to teach astronauts how to perform space walks. Here, Suit Technicians Chris Ganung, Kenny Dines and Carl Wright work to help outfit Astronaut Scott Parazynski, MD, before a training exercise at the SCTF's Neutral Buoyancy Laboratory. Parazynski describes the world's largest indoor swimming pool as 'Space minus the views – the ultimate simulator.' To read more about the SCTF, **please turn to page 4.**

BIG THINGS COME IN SMALL PACKAGES

By Joe Fries, White Sands Test Facility Manager

More than 700 miles from Houston, in the foothills of the San Andres mountains just east of Las Cruces in southwestern New Mexico, where the creepy, crawly critters are poised to sting or bite you and the cactus and mesquite are just waiting to stick you, lies the White Sands Test Facility (WSTF). This remote outpost, in the high Chihuahuan desert, is actually a proud member of the Johnson Space Center family.

It was not by chance that this high-tech installation was built in such a location. This is a place where the ancient and natural hazards are overshadowed by human-made space-age dangers, where loud noises, toxic chemicals, occasional explosions and rocket engine exhaust plumes billowing into the sky are a normal part of our everyday work environment. These activities are not at all compatible with a heavily populated urban area like Houston.

WSTF was therefore constructed in this isolated location to allow hazardous testing of propulsion systems on the Apollo Lunar Module and Service Module without endangering the nearby population or environment. Since that time, WSTF has supported every U.S. human exploration spaceflight program, and we continue to play a key role in supporting the shuttle and the International Space Station.

Although the "boom" days of Apollo are long past, the installation has not only withstood the test of time but also changed with the times. This enables us to provide continuing support to NASA's programs, with a highly expanded mission that goes far beyond our early propulsion testing heritage.

With a workforce of only 53 civil servants and about 640 contractors, we do a lot with a little. Our self-sufficiency and the shorter lines of communication and command at this small facility have led to our hard-earned reputation for responsiveness, versatility and adaptability, in addition to the quality and cost-effectiveness of our work.

In addition to conducting static firing tests on rocket propulsion systems in large space-simulating vacuum chambers, resolving space mission anomalies and investigating the behavior of materials and components, the people at WSTF also:

- Perform Depot-level repair and refurbishment of space shuttle propulsion and life support system components
- Design and fabricate spaceflight hardware
- Validate redesigned or improved components to extend service life, enhance performance and improve mission safety

Other fascinating jobs at WSTF include:

- Working with special light-gas guns, which can propel 1-inch-diameter (2.54-cm-diameter) projectiles at velocities more than 4.35 miles/sec (7 km/sec) to simulate the impact of micrometeoroids or orbital debris on spacecraft components
- Creating large-scale controlled explosions to understand the detonation phenomena of solid and liquid rocket propellants
- Conducting tests to see how various materials burn and how fires propagate
- Testing new components that must operate in corrosive or highly reactive environments.
- Operating the White Sands Space Harbor, an alternate orbiter landing site, where shuttle astronauts are trained to perform the critical final approach and landing phase of the mission

Our capabilities for space-simulated vacuum firings of solid and liquid rocket propulsion systems are among the best in the nation. Similarly outstanding are our sophisticated laboratories used for evaluating potentially hazardous materials and components for both Earthly and aerospace applications. However, it is the experience, expertise and passion of the WSTF people that make us what we are today.

In addition to our highly technical test and evaluation role, WSTF also has a vibrant educational outreach program. For example, it was the success of the Science Advisor (SCIAD) Program at WSTF, which began more than a dozen years ago, that prompted JSC management to implement a similar program in Houston to educate and inspire both teachers and students in the fields of math and science.

There are many things that prompt us to stand tall and hold our heads high. WSTF was the first NASA facility to be certified to the quality management standard of ISO 9001, was the first to be certified to ISO 14001 and was recently designated an OSHA STAR site in recognition of the excellence of our safety program.

There are many other accomplishments that make us proud. What motivates us the most and keeps us striving for excellence is our universal belief that what we do does indeed make a significant difference in enabling the safe exploration and use of space. We are excited with the prospects for making future contributions to the American space program.

We feel privileged to be an integral part of the JSC team that is both figuratively and literally reaching for the stars! ❖

Center Director Message

FROM THE DESK OF LT. GEN. JEFFERSON D. HOWELL, JR.

KEEP THE FAITH

We were betrayed.

A safe with lunar and meteorite samples was stolen from our Astomaterials Laboratory. The perpetrators gained access to the Center and entered a secure building to reach the safe. The stolen materials have been recovered and three former employees, a co-op and two interns, are facing criminal charges.

Even with the recovery of the materials, much damage has been done. Almost a lifetime's work, 30 years of research notes and records belonging to one of our scientists, was cast away and lost. Also damaging were the apparent violations of trust by some of our team members, those to whom we had given our full confidence. We are all wounded by this – JSC as an institution, we as individuals. Because total integrity is the fabric that weaves together our professional relationships at this Center, that texture now has a tear in it, and we must ask, "What should be done about this?"

Here's what I'm going to do: I am going to review our security procedures and to make sure that we have appropriate protection of Center property. That is part of my responsibilities as the Center Director. I expect all team members to review and comply with our set procedures for maintaining the integrity of cipher locks/combinations, computer code words, etc.

Otherwise, I'm going to keep the faith. I am convinced that this terrible occurrence was an aberration. I'm also convinced that the great majority of men and women on our team have the highest degree of honesty and integrity. I am not going to punish the many for the sins of a few by creating a series of new rules and regulations that would impede initiative and intellectual collaboration at this Center.

Here's what we're all about: INTEGRITY, PROFESSIONAL EXCELLENCE, RESPECT FOR ONE ANOTHER and COMMITMENT.

Let's stay on course and keep the faith in each other and this great endeavor that we are about.

Beak sends…

Tommy Holloway

By Lisa Tidwell

Thirty-nine years ago, a new NASA engineer named Tommy Holloway stood outside of the old Mercury Mission Control in Florida.

As he watched Mercury 9 lift off with Gordon Cooper inside, Holloway's perspective about the space program forever changed.

"That was the first moment I realized that there was a human in there – a human with a mother, a father, a wife and a child," Holloway said at the STS-111/Expedition 4 postflight event in June.

At that event, the retiring International Space Station (ISS) Manager reminisced about his years of service to the U.S. Space Program. He also was presented the Exceptional Engineering Achievement Medal by NASA Administrator Sean O'Keefe.

Holloway was named ISS Manager in April 1999 after serving as the Space Shuttle Program Manager for nearly four years. He began his career with NASA in 1963, planning activities for Gemini and Apollo flights at what was then known as the Manned Spacecraft Center. He was a Flight Director in Mission Control for early space shuttle flights and became Chief of the office in 1985.

In 1989, he was named Assistant Director for the Space Shuttle Program for the Mission Operations Directorate. He served as Deputy Manager for Program Integration with the Space Shuttle Program and Director of the Phase I Program of Shuttle-Mir dockings before being named Space Shuttle Program Manager in 1995.

While his achievements are exceptional and his awards are numerous, Holloway leaves behind more than those accolades. His legacy is one of genuine concern for people. From that day he watched the Mercury 9 launch to his retirement last month, Holloway never lost sight of the space program's human element.

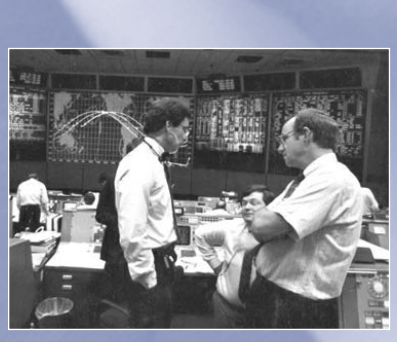
Holloway consistently infused his core values of safety, trust, integrity, respect for people and technical excellence into every aspect of his work.

"Tommy Holloway's unique experience and ability to excel in the performance of human spaceflight is a talent this Agency will miss," said Bill Gerstenmaier, who served as Holloway's Deputy and now heads the ISS Program. "His accomplishments are gigantic, and his honesty and decency are unparalleled."

Throughout his impressive career spanning four decades, Holloway saw many firsts at NASA, such as Ed White's first space walk, Apollo's first lunar flyby, the first human to walk on the surface of the Moon, Skylab, the first shuttle flight, the first docking of the Shuttle-Mir and the creation of the International Space Station.

When named the ISS Program Manager, Holloway was challenged with putting thousands of pieces of hardware into orbit, coordinating the activities of NASA's 16 international partners and managing about 20,000 personnel in the United States.

He met that challenge, as he did so many others in his career, and leaves NASA with an ISS Program possessing an impeccable safety record that successfully flew 24 missions in 24 months under his watch.

Paying tribute to Holloway, O'Keefe described the ISS as the "House that Tommy built." However, at that postflight event, Holloway didn't focus on his own achievements but rather those of the entire NASA family.

"To all of you in human spaceflight, be proud," he said. "You are a great team." ❖