

National Aeronautics and Space Administration

LYNDON B. JOHNSON SPACE CENTER
WHITE SANDS TEST FACILITY

THE WSTF OVERVIEW

NASA Johnson Space Center White Sands Test Facility (WSTF) is located near Las Cruces, New Mexico. The WSTF mission is to test and evaluate spacecraft materials, components, and propulsion systems. WSTF also provides depot-level refurbishment of selected components and supports space shuttle crew training.

The remote WSTF site is ideal for testing hazardous materials and components. With over 28 square miles of controlled property and miles of buffer zone, the public is well protected. The moderate desert climate allows for year-round testing, and WSTF is easily accessible to customers by road, rail, or air.

WSTF is a leader in setting standards to improve NASA. In 1992, WSTF adopted a strategic, world-class pre-eminent plan in selected business areas, and was recognized the next year by a NASA committee for finding ways to reduce costs. NASA considers WSTF “a model of what NASA must become.” WSTF was the first government/contractor team to certify to ISO 9001, and the accomplishment was recognized by former Vice President Gore with a “Hammer Award” for breaking the mold and reinventing government. In 1998, WSTF became one of the first NASA facilities to become certified to the ISO 14000 Environmental Compliance Standard, and in 2002, WSTF completed conversion to the ISO 9K2K standard.

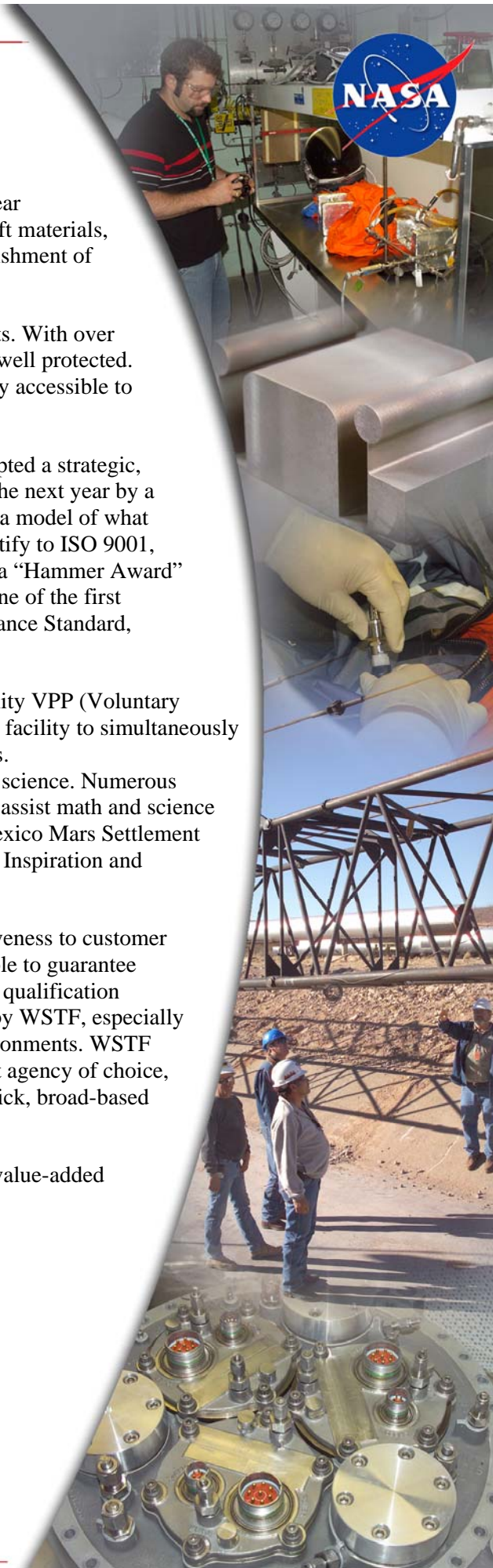
Safety is a key element at WSTF. In 2007, OSHA again awarded the test facility VPP (Voluntary Protection Program) Star status. In 2001, the WSTF team was the first federal facility to simultaneously obtain STAR status for both the federal and site-support contractor employees.

WSTF also supports the NASA goal of increasing public interest in math and science. Numerous NASA and contractor employees volunteer as Science Advisors (SCIADs) to assist math and science teachers in local elementary and middle schools. WSTF sponsors the New Mexico Mars Settlement Design Competition and sends several local teams to the national FIRST (For Inspiration and Recognition of Science and Technology) robotics competition.

WSTF maintains a competitive advantage through accuracy of data, responsiveness to customer needs, and cost-competitiveness. As an ISO 9001 certified entity, WSTF is able to guarantee consistent process control resulting in accurate, repeatable data. Many NASA qualification standards for materials used in space applications were originally developed by WSTF, especially those standards associated with selection of materials for use in extreme environments. WSTF has developed a reputation for quick and accurate responses. WSTF is the test agency of choice, whether for qualifying hardware for use in manned space systems, or for a quick, broad-based research effort needed to pinpoint the cause of a material failure.

WSTF takes pride in providing the services the customer requires and offers value-added solutions where appropriate. WSTF can provide:

- Depot Maintenance and Repair
- Oxygen Systems Hazards Analysis
- Propellant Hazards Assessment
- Explosive Hazards Assessment
- Standard Materials Testing
- Flight Component and Payloads Testing



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- Educational Opportunities for Customer Scientists and Engineers
- Design Review and Consultation
- Realistic Application and Environment Testing
- Failure Analyses

These services can be provided as a complete support package or on an incremental basis, depending on customer need.

WSTF's technical range extends from testing rocket engines with up to 25,000 pounds of thrust under near-vacuum conditions to providing comprehensive chemistry and metallurgy laboratory services. WSTF also provides depot maintenance and repair of selected hardware for the space shuttle and has been chosen to design and qualify for use critical oxygen system components for the International Space Station.

WSTF provides a comprehensive research and simulation capability for space propulsion system mishaps, similar to explosions resulting from a launch event or high-energy detonations, such as those suspected of destroying the Mars Observer. Tests can also be done to determine engineering data on energies required to ignite fuel-air and fuel-oxidizer mixtures.

WSTF generates engineering and scientific data that qualify materials and components for service in extreme environments, including rocket fuel systems and materials compatibility. This type of test data is used for various industrial applications through our technology transfer programs.

WSTF can streamline your business arrangements. U.S. Government agencies can initiate work through a simple funds transfer. Contractors involved with NASA or other government programs can make arrangements directly with WSTF and work through a government sponsor. Non-governmental industry can negotiate a reimbursable agreement with WSTF or can work through local businesses that have prenegotiated agreements for small projects.

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