WSTF Background

• Constructed 1962-64 to Support Apollo Project
• Component Facility of NASA Johnson Space Center
• Occupies 28 square miles of the SW Corner of White Sands Missile Range (WSMR)
• Annual Budget ~$85 Million (FY18)
• Headcount – 662
  • 47 NASA
  • 19 JSC matrixed
  • 596 Contractor
WSTF Background (Con’t)

• Large Buffer Zone and Controlled Remote Property for Hazardous Testing

• Moderate Desert Climate Ideal for Year-round Testing

• Environmental Permits in Place for Hazardous Testing
Customer Base

• **Johnson Space Center** - International Space Station, Payloads, Crew Training, and Special Projects

• **NASA Headquarters** and Other Field Centers; Orion, SLS, Commercial Crew

Customer Base (Con’t)

• **Commercial Industry** -
  • Aerojet, Armadillo Aerospace, ASTM G4 Community, Blue Origin, Boeing, Cobham, National Center for Manufacturing, Orbital Sciences Corp, Pratt & Whitney, Scaled Composites, Inc., SpaceX, and WHA International
International Space Station (ISS)

- Flight Components
- Propulsion Systems
- Orbital Debris Impact
- Hydrazine Detector (Gold Salt)
- Materials Compatibility
- Oxygen Monitors
- NORS (Nitrogen/Oxygen Recharge System)
- ORCA (Oxygen Recharge Compressor Assembly)
Orion

Crew Cabin Materials and Experiment

Engine Testing

Payloads

Propulsion Thruster Maintenance and Repair

Hypervelocity Impact Testing (Orbital Debris Impact)

Materials Compatibility

Offgassing

Composite Overwrapped Pressure Vessels
Space Launch System (SLS)

- Engine Testing
- Composite Overwrapped Pressure Vessels
- Materials Compatibility
- Offgassing
- Payloads
Core Capabilities

• Rocket Propulsion Testing and Evaluation
• Oxygen Systems Testing and Analysis
• Propellants and Aerospace Fluids Testing and Analysis
• Hypervelocity Impact Testing
• Composite Pressure Systems Testing and Analysis
• Flight Acceptance Standard Test
• Spaceflight Component Services
Rocket Propulsion Testing and Evaluation

Boeing CST-100 Service Module on Test Stand 301A in Preparation for Hotfire Testing

Boeing CST-100 Launch Abort Engine (LAE) Acceptance Testing

Reaction Control System (RCS) Boeing CST-100 Acceptance Altitude Testing
Oxygen Systems Testing and Analysis

Promoted Ignition of a Copper Rod in 1000 psi Oxygen

Ignition of a Teflon Hose in 1000 psi Oxygen
Propellants and Aerospace Fluids Testing and Analysis
Hypervelocity Impact Testing

ISS Soyuz Vehicle Descent Module Test Article

COPV Target

Gun Lab

Whipple Shield
Composite Pressure System Testing and Analysis

Broken COPV Fiber

Mechanical Impact Testing

Thermal De-Ply Analysis

Post-Test COPV MMOD Burst Test Article
Flight Acceptance Standard Test

- Odor
- Offgass Toxicity
- Upward Flammability
- Heated Promoted Combustion
- LOX Mechanical Impact
Spaceflight Component Services (SCS)

OMS Engine Setup and Test Preparation

R40b Thruster
Test Facilities

• Rocket Engine System Test Stands with Vacuum
• Long-duration Large-altitude Simulation System
• Full-scale Hypergolic and Cryogenic Propulsion Test Systems
• Chemistry and Metallurgical Laboratories
• Flight Component Repair, Refurbishment, and Test Facilities
• High Energy Blast Facility
• Oxygen-enriched Atmosphere Test Facilities
• Hypergolic Materials and Components Test Facilities
• Remote Hypervelocity Test Laboratory Impact Test Facilities
Enabling Capabilities
Chemistry and Materials Laboratories
Enabling Capabilities
Technical Services

- Precision Cleaning of Flight Critical Items
- Measurement Standards and Calibration Lab
- Industrial and Scientific Imaging and Documentation
Enabling Capabilities

Machine

Weld

Valve Repair
Enabling Capabilities
Safety & Mission Assurance

• Performance and Configuration Mgt
  • Work Coordination, Asset Mgt, Project Leads, Drawing Control, Logistics

• Operations and Design
  • Design, Facility Maintenance, Electrical, HVAC, Heavy Equipment, and Plumbing
Enabling Capabilities
Safety & Mission Assurance

- Quality
- Safety
- Emergency Management Services
Environmental Compliance

Propellant Wastewater and Container Management

Environmental Restoration

Plume-Front Groundwater Treatment System
WSTF Training Courses

- Oxygen Systems: Operation & Maintenance
- Fire Hazards in Oxygen Systems
- COPV Damage Detection Course
- Composite Pressure Systems and Structure NDE
- Hydrogen Training
- Hypergolic Propellants Training
- Standard Testing Course
• Doing Business with
  • Jacobs Technology
    • at the
  • NASA White Sands Test Facility
Jacobs Partnership with WSTF

• Jacobs Technology Inc. is the prime test and evaluation contractor to NASA Johnson Space Center White Sands Test Facility (WSTF) located in southern New Mexico. Although our partnership with NASA began in 2006, WSTF has supported every U.S. human exploration space flight program since Project Apollo in the early 1960s.

• Jacobs at WSTF plays a key role in the nation’s space effort through synergy to test and evaluate spacecraft materials, components, and rocket propulsion systems to enable the safe human exploration and utilization of space for NASA Centers, other government agencies and commercial industry. Our next goal? Explore Moon to Mars.
jacobs purchasing for wstf

• our commitment to small business
  • it is jacobs’ policy to promote the participation of small business in supplying materials and services and is essential for us to meet our contractual commitment to nasa wstf. we also recognize the advantages in using small businesses in our day-to-day performance across the nasa complex.
WSTF / Jacobs Information

• Site Awards & Certifications
  • ISO 9001:2015 & 14001:2015 Certified
  • OSHA Voluntary Protection Program (VPP) Star Site
  • 2016 GreenGov Purchasing Power Award
What We Buy

• **Materials**
  • Aerospace materials and components
  • Ammunition
  • Automotive Parts
  • Chemicals / Solvents
  • Communications Equipment
  • Computers and Peripherals
  • Construction Materials/Concrete
  • Deionized Water System Supplies
  • Equipment Rental
  • Electrical/Mechanical/Electronic Components
  • Paint
  • Rupture Disks / Relief Valves
  • Stainless Steel Tanks
  • Safety & PPE Equipment
  • Tubing/Piping
What We Buy

• **Services**
  • Architectural & Engineering
  • Construction
  • Consulting
  • EDM Equipment
  • Equipment Calibration
  • Janitorial
  • Pest Control
  • Safety-Related Training Courses
  • Special coating application
How To Do Business with our Facility

• NASA White Sands Test Facility (WSTF) Procurement:
  • WSTF is a remote test facility for Johnson Space Center (JSC)
  • Procure major prime and agency-wide contracts
  • Procure propellants and other cryogenic fluids (nitrogen and oxygen)
  • For more info:
    • NASA procurement info at FedBizOpps: www.fbo.gov
    • NASA OSBP website: https://osbp.nasa.gov/ or mobile app
    • NASA Vendor Database: https://vendors.nvdb.nasa.gov
    • WSTF: www.nasa.gov/centers/wstf to learn more about WSTF

• Jacobs Technology Procurement:
  • Procure a wide variety of products & services, as shown on the previous slides
  • Complete and submit the Jacobs Exhibit X (Seller Abstract) form to be added to our small business database
  • Visit www.jacobs.com to learn more about Jacobs
• QUESTIONS?

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