



# AEROSPACE SERVICES

## Spaceport Planning – Space Launch Facilities



### Solutions for Launch System Providers

Launch systems are complex, operate in harsh conditions, and not easily understood. GP Strategies® experience with launch systems spans more than 30 years and includes design efforts from requirements and preliminary design review (PDR) to final verification and validation. GP Strategies offers world-class solutions that ensure your success.

Our experienced team of engineers thoroughly understand all requirements, codes, standards, and specifications. We have provided countless solutions for ground support equipment that interface with launch vehicles and critical flight hardware, including:

- Precision-fabricated panels and components
- Cryogenic propellant supply and transfer systems
- High-pressure gas systems and controls
- Shop aids and flight-vehicle processing test fixtures and adapters

Our engineering analysis capabilities include static, dynamic, and random vibration stress analyses and thermal, hazard and safety, and cost analyses. GP Strategies can significantly reduce schedule delays and streamline overall facility design for new or modified launch systems by effectively applying knowledge gained from past experience. These services are integrated between the ground facility owner and the launch system providers.

### GP Strategies' expertise includes the following:

- ✓ Fueling system design
  - Cryogenic fluids
  - Lethal service fluids (hypergols and oxidizers)
  - Purge gasses and pressurants
  - Pneumatic gases
- ✓ System fabrication and construction oversight
- ✓ Ground support equipment
- ✓ Mechanical system control integration
- ✓ Development of overall verification and validation acceptance schedules and performance test requirements
- ✓ Verification and validation procedures confirming:
  - Mechanically complete
  - Mechanically integrated
  - Functionally verified
- ✓ Performance testing
- ✓ Operating and maintenance procedures
- ✓ Operating and maintenance staff training program development
- ✓ Configuration management development and warehousing policies and procedures





GP Strategies' experience aligns to your launch vehicle needs. We fully understand the requirements of all specialty launch pad systems. Our professionals have experience working on all types of space launch facilities, including commercial aerospace, National Aeronautical and Space Administration (NASA) and Department of Defense (DoD) customers.

GP Strategies ensures cost-efficient, robust, reliable, and innovative solutions for all of your ground support equipment needs. We offer specialized engineering services for equipment and analysis used in the preparation, processing, and launch at various sites, including Kennedy Space Center, Cape Canaveral Air Force Station, Vandenberg Air Force Base, Wallops Flight Facility, and other locations.

Above all, we want to work with organizations that trust and feel comfortable and confident working with us.

## Our Global Customer Base

GP Strategies helps clients in highly specialized and technical environments optimize their processes, systems, and facilities. Our geographical footprint enables us to support your business on national, regional, and global bases.

## Our Accreditations

In addition to the awards we win, we also pursue accreditations that have meaning to our clients and prove the expertise and skill of our people. Our subject matter experts sit on numerous industry advisory and standards committees.

API and ASNT

ASME U-STAMP

BS OHSAS 18001

CIBSE  
(LOW CARBON ASSESSOR)

ENERGY MANAGEMENT  
PROFESSIONAL

GENERAL CONTRACTOR  
LICENSES

ISO 9001

NATIONAL BOARD  
R-STAMP

SOC I  
(SSAE 16 TYPE II and ISAE 3402)

For more information on GP Strategies' aerospace services

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