



Commercial Space Transportation Advisory Committee (COMSTAC)

Innovation & Infrastructure (I&I) Working Group Range Tasker

USSF and NASA Aggregated Comments

November 5, 2021



Federal Aviation
Administration

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Discussion – Aggregated Comments from USSF

- Eastern and Western Ranges are moving toward more autonomous systems which will allow some “fundamental” shifts in operations
- USSF reviewing options to support increased launch rates -- USSF views a robust launch infrastructure as an “advantage” for the U.S.
- USSF facilitates and encourages the commercial launch industry
- Challenges exist related to the number and variety of customers serviced at both ranges (national security launch, civil launch, commercial launch, ICBMs, SLBMs, Missile Defense Agency, etc.)
- There exists the potential for CCSFS and VSFB designations as “National Spaceports” which are able to attract infrastructure and/or funding without undue burden on the commercial customers



Discussion – Aggregated Comments from USSF

- If range prices rise significantly it could encourage commercial entities to launch elsewhere including OCONUS, which no one wants
- If a degree of autonomy for space launch is achieved by 2025 timeframe which enables ranges to turn around faster, this would allow more throughput, lower launch costs
- But challenges remain with the other range users: ICBM, SLBM and the Missile Defense Agency component upgrades probably will not happen until around 2030



Discussion – Aggregated Comments from NASA

- A core NASA mission is to own, operate, maintain, and sustain the KSC Multi-User Spaceport as critical to NASA's mission and future plans, including Artemis, LSP, CCP, and CRS
- KSC plays a role in every launch from the Space Coast (from both KSC and CCAFS):
 - Gasses/fluids for spacecraft and vehicles
 - Staffing of an Emergency Operations Center
 - Specialized weather instrumentation and expertise
 - Event coordination across all spaceport users
 - Scheduling of RF, digging, and electrical network restrictions across our spaceport
- NASA programs and exploration goals rely on a mix of government and commercial capabilities and vehicles, which in turn are dependent on a healthy and robust multiuser spaceport



Discussion – Aggregated Comments from NASA

- With the Space Shuttle Program's end KSC began strategic planning to transform the Center into the world's premier spaceport
- Agreement made in 2016 with Space Command and the 45th Space Wing (now Space Launch Delta 45) directing that the FAA licensing process be the single process used to satisfy launch obligations for commercial missions from KSC
- KSC is currently in the process of developing a Launch Site Safety Assessment with the FAA which will allow our ground safety authority to reside with KSC
 - So long as commercial partners meet KSC standards, they retain FAA licensing as is
 - KSC retains the right to make safety calls around processing activities (roads, clearings, etc...)



Discussion – Aggregated Comments from NASA

- KSC has streamlined the burden on commercial activities by completely revamping Safety Requirements to accommodate three distinct uses:
 - Dedicated Programmatic
 - Dedicated Commercial, which allows commercial operations to effectively conduct their own operations as though they were not on NASA property
 - Mixed-Use, where there was a need for further specification on how to safely conduct operations in shared spaces
- Looking forward, KSC has developed with federal, state, local and commercial partners and stakeholders, a Future Development Concept for the Multi-User Spaceport over the next 20 years



Discussion – Aggregated Comments from NASA

- The **Future Development Concept** as approved by NASA HQ includes four strategic elements:
 - Flexible Processing and Launch Capabilities
 - Robust Infrastructure
 - Responsible Stewardship of Assets
 - Sustainable Facilities
- The Concept also includes four overarching tenants:
 - The multiuser spaceport, as an important to NASA’s mission of Exploration
 - A commitment to delivering the mission through a multiuser spaceport with proven operational capability and funding
 - A commitment to enable the growth of the commercial space industry
 - A commitment to operate, manage and develop the multiuser spaceport for the foreseeable future



Discussion – Aggregated Comments from NASA

- NASA and KSC described several of ways in which they currently enable the multi-use spaceport
 - KSC has had open for several years a Notice of Availability (NOA) for available land and are responding to various requests from the commercial space community for its use
 - NASA has broad Other Transaction Authority (OTA) which allows KSC to provide a variety of goods and services to government and commercial customers priced at full cost utilizing various authorities including Space Act Agreements
 - KSC provides services related to specific launch and landing activities under Commercial Space Launch Act authority (CLSA) priced at direct cost only
 - KSC can lease Real Property (land & facilities) to commercial customers under their Enhanced Use Lease Authority priced at Fair Market Value



Discussion – Aggregated Comments from NASA

- NASA and USSF have been working together to identify additional authorities under their respective existing authorizations which would enable a more effective evolution of the multiuser spaceport – two examples include
 - Changing NASA support contracts to include capabilities to support commercial launches at no cost to government (USSF already has the statutory authority to procure goods and services for its contractors and partners -- NASA is seeking similar authority)
 - Evaluation of equitable methods to pay for needed infrastructure and capacity increases to support commercial and government launches by either modifying existing authorities or proposing new legislation
- KSC's Chief Counsel and Space Launch Delta 45's Staff Judge Advocate work in close collaboration to find enabling authorities to meet the needs of their partners – each is prepared to coordinate with their respective legislative affairs offices to draft proposed enabling legislation if the authorities do not yet exist



Discussion – Aggregated Comments from NASA

- Every launch from the Space Coast requires the support of both NASA and USSF resources to happen
- Any future spaceport/range strategy will require the support of both entities to be truly viable
- NASA believes COMSTAC serves as a great source of input for issues related to the commercial space industry
- NASA believes an activity with representation from FAA, USSF, NASA, and the commercial sector would be useful to develop these overarching strategies

