

## **G. Stennis Space Center (SSC)**

SSC developed and released SPR 8715.7, SSC Range Safety Program, which defines the requirements and parameters of range safety at SSC. Several activities have been initiated in calendar year 2012 aimed at improving range safety process effectiveness.

- To enable tracking and communication, the Application for Air Range Information and Notification (AARIN) was developed to allow pilots inside and outside of Stennis to request access to the airspace.
- The Stennis CIF awarded an analysis of technologies available for potential surveillance systems and their application at Stennis. Technologies as well as available existing resources will be reviewed and rated according to ease of use, availability, and cost. The recommended technology will provide valuable information for the decision for what system to use for Stennis airspace.
- In addition to reducing risk through surveillance, the risk associated with potential locations for military training operations is being analyzed. The risk assessments of potential locations based on the possible aircraft and operation types will be used to streamline response to requests for use of land, water, and air by military tenants. This risk analysis will provide operational alternatives that allow increased confidence in the level of risk SSC is assuming to its onsite facilities.
- NASA SSC and the Naval Special Warfare Command (NSW) are proposing modifications to special use airspace associated with the Space Center. The purpose of this action is to provide containment capabilities conducive to protecting the general aviation community while supporting engine testing and tenant missions at the Center.

### **1. Engine Testing**

As a safety precaution to general aviation in the immediate airspace, Restricted Airspace R-4403 is activated during engine testing. During 2012, the test stands operated 7 projects resulting in approximately 152 hot fire tests. R-4403 was activated for 26 tests, like the one shown in Figure 47, for a total of 6,564 seconds.



**FIGURE 47: TEST STAND AT STENNIS SPACE CENTER**

## **2. Center Innovation Funding**

The Center Innovation Funding provided an evaluation and identification of unauthorized aircraft entering Restricted Airspace R-4403 located within the SSC Fee Area. Potential solutions were investigated, systems level set of requirements were reviewed, and the impact the technology to the Center were identified.

## **3. Application for Air Range Information and Notification (AARIN)**

The Range Safety Manager provides de-confliction and Center oversight for the flight training operations and certification activities conducted at Stennis Space Center. Aerial access to the Center is requested in AARIN. Fifteen requests were submitted to the AARIN system, eight of which were approved and the remainder were denied.

## **4. Special Use Airspace**

NASA, SSC, and the NSW are proposing modifications to special use airspace associated with SCC, specifically modifications to Restricted Airspace R-4403. The purpose of this action is to provide containment capabilities conducive to protecting the general aviation community while maintaining priority of engine testing and supporting tenant missions at the Center. Additionally, protection to the surrounding communities from noise and aerial impacts (i.e., turbulence) is critical to maintaining engine testing capabilities at SSC. For mission success within the Federal City and to protect the public including the general aviation community from future testing, Special Use Airspace R-4403 is being modified.

## **5. Unmanned Aircraft Vehicles - Certificate of Authority**

Currently, the DoD Special Operations Command (SOCOM) is the only agency operating UASs at SCC. The COAs for SOCOM are:

**a. Raven 2012-ESA-28-COA-R**

Raven 2012-ESA-28-COA-R, effective from July 20, 2012 through July 19, 2014. Operation of the Raven UAS in Class G airspace at or below 1000 feet AGL, except in the northern airspace area under the Picayune Class E airspace where the Raven will remain at or below 500 feet AGL. Night flight is acceptable.



**FIGURE 48: RAVEN UAV**

**b. Puma 2012-ESA-29-COA-R**

Puma 2012-ESA-29-COA-R effective from July 20, 2012 through July 19, 2014. Operation of the Puma AE UAS in Class G airspace at or below 1000 feet AGL, except in the northern airspace area under the Picayune Class E airspace where the Puma will remain at or below 500 feet AGL. Night flight is acceptable.



**FIGURE 49: PUMA UAV**

**c. Wasp 2012-ESA-1-COA**

Wasp 2012-ESA-1-COA effective from March 22, 2012 through March 21, 2013. Operation of the Wasp in Class G airspace at or below 500 feet AGL.

While SOCOM applies for the COAs, maintains the vehicles, and operates the UAVs, the Stennis Space Center Range Safety Manager provides de-confliction between the Special Forces flights and NASA missions.



**FIGURE 50: WASP UAV**