

Form 442 Question 4: Government Project Description

Oneida County, New York, a Government entity is requesting a STA for the Federal Aviation Administration's (FAA) Unmanned Aircraft Systems (UAS) Test Site at Griffiss International Airport (KRME) in Rome, NY. Griffiss will deploy a Wide Area Multilateration (WAM) six (6) Remote Unit transmitter (RU5) system at Griffiss International Airport and surrounding Oneida County owned 911 facilities in support of the Range Instrumentation project, which will be deploying multiple sensors to implement a Ground Based Sense And Avoid (GBSAA) system.

The STA is necessary because the WAM system Remote Units (RT) will interrogate on 1030 MHz. The 1030 interrogations are needed to obtain Mode C altitude information and Mode A beacon code information from Mode-S equipped aircraft and UAS in the UAS test range coverage area in order to track and identify these aircraft. These are discrete interrogations (targeted at specific Mode-S addresses) that are transmitted once a squit has been received from an aircraft's transponder. The address from the initial squit is used to periodically schedule the discrete Mode S interrogations.

The 1030 interrogations are also used to obtain Mode C altitude and Mode A beacon codes from Air Traffic Control Radar Beacon System (ATCRBS) equipped aircraft. These are required in order to acquire and track the ATCRBS equipped aircraft and UAS in the UAS test range at Griffiss. The interrogations used for ATCRBS equipped aircraft and UAS use a technique called "*whisper shout*" that has been utilized using the same remote unit equipment and technology used in the FAA's ASDE-X and ASSC programs. This equipment has previously obtained NTIA SPS Certification under Control Number SPS-17234/2, ERP-1129, dated November 30, 2012.

As part of the Federal Aviation Administration's (FAA) Unmanned Aircraft Systems (UAS) Key Initiatives, the FAA selected six UAS Research and Test Site operators across the United States. New York's Griffiss International Airport (KRME) in Rome, NY was approved for operations on August 7, 2014.

Northeast UAS Airspace Integration Research Alliance (NUAIR Alliance) and Griffiss International Airport are deploying a state-of-the-art WAM system for Range Safety and tracking of Unmanned Aircraft Systems (UAS) operations at Griffiss International Airport in Rome, NY and at approved locations in Central and Northern New York, and the New York Mohawk Valley.

The Federal Aviation Administration (FAA) has ruled that UAS must be able to sense and avoid other aircraft. This project will allow NUAIR and its alliance partners to deploy state-of-the-art range instrumentation that can track UAS in the air and provide safety-enhancing sense-and-avoid capabilities, addressing a current challenge faced by the industry due to the lack of an on-

board pilot. This testing capability is the first of its kind at any UAS test site in the country, making Griffiss a strategic location for the emerging UAS industry.

The following information is from the FAA's Press Release dated August 7, 2014 regarding the FAA's selection of Griffiss International Airport Selection and its mission:

...“We are accomplishing two important missions with the launch of this test site,” said Transportation Secretary Anthony Foxx. “The safe integration of unmanned aircraft into the NAS is our number one priority, but the agricultural research performed in Rome also may have far-reaching benefits to farmers in New York and across the nation.”

...The Griffiss team also plans to work on developing test and evaluation processes under FAA safety oversight, and conduct research on sense and avoid capabilities to prevent collisions with other manned and unmanned aircraft.

“The data the Griffiss team plans to acquire and share will help the FAA in researching the complexities of integrating UAS into the congested Northeast airspace,” said FAA Administrator Michael Huerta."

In order to meet the mission identified by the FAA, the authorization of the WAM system to transmit on 1030MHz is critical to the success of the project.