

Rover UAV VISUAL SURVEILLANCE/DETECTION CAPABILITY

Summary: This describes the Visual Surveillance plan used for the Rover UAS flight.

Location and Role of Observers:

In addition to the Pilot-in-Command (PIC), should the flight be on the edge of the PIC visual range, it may be necessary to employ two additional spotters. One spotter will accompany the PIC and act as assistant, monitoring the radio and recording flight data, in addition to assisting the PIC and acting as observer.

The second and third spotters will be placed downrange approximately 0.2 miles from the launch/recovery area. In this way, they will begin observing the UAS at the furthest point from the PIC and other spotter. This second and third spotters will be in line with the PIC, and all members of the team will be positioned in a line that dissects the center of the flight path. This provides observation of the UAS to the left and to the right.

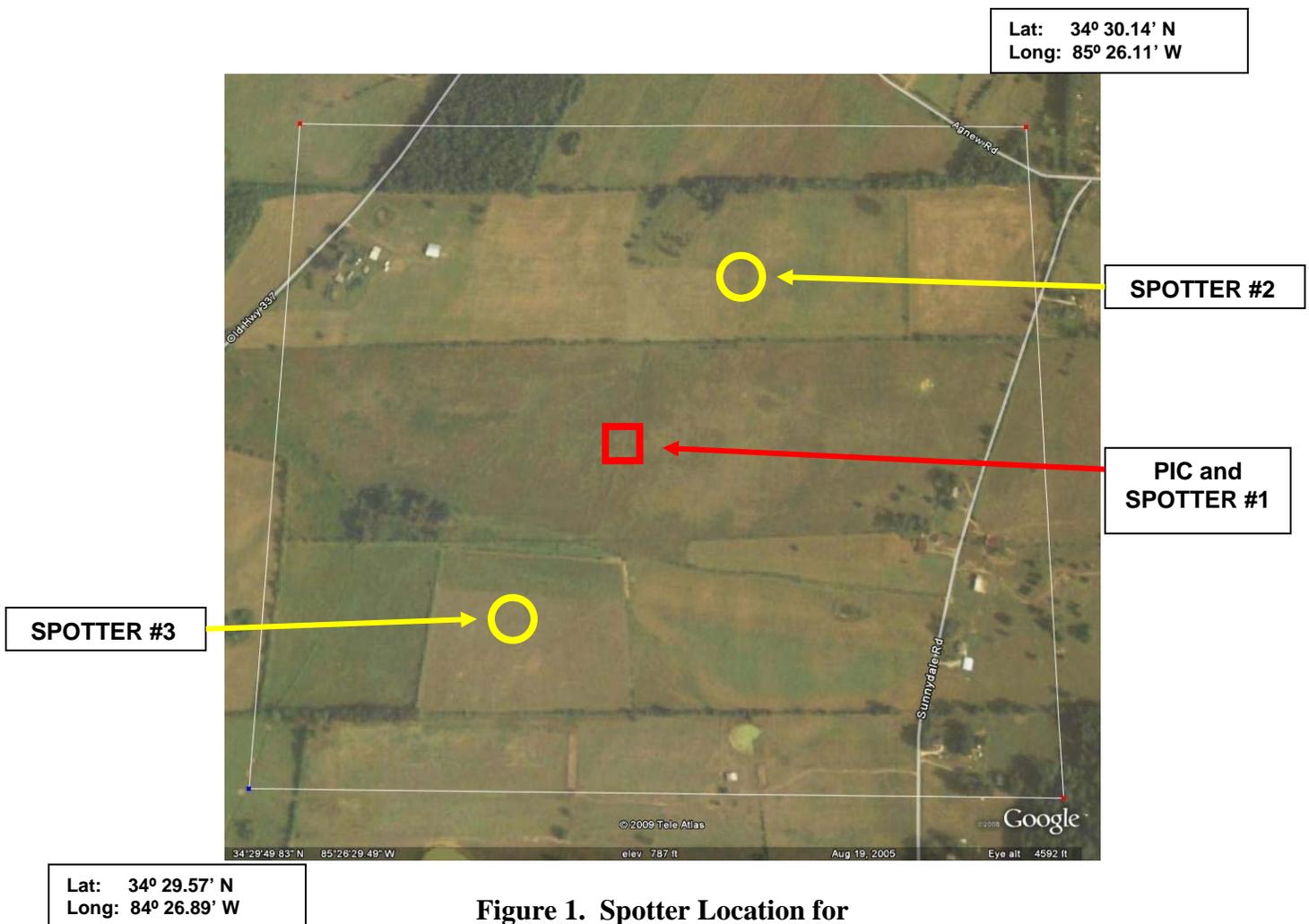


Figure 1. shows an example of the locations planned for PIC and two additional downrange spotters. Note that the downrange spotters can observe the UAS on both left and

right. The map is approximately 0.5 sq. mi. area. The spotters are placed at the optimum point for keeping the aircraft under continuous observation.

Latitude and longitude of the NE and SW corners of the map are labeled on the map image.

Typical Flights do NOT require Remote Observers:

Note that nearly all of the Rover UAV flights will NOT involve the PIC operating the Rover further than 500 ft from the launch/recovery site. This will be well within the visual range of the PIC and will NOT require remote observers/spotters.

Detection Capability

The Rover UAS possesses NO onboard detection capability due to its limited size. GTRI is working to develop a “sense and avoid” system for small and micro-UAVs but this is not yet operational. Detection will be done by the use of spotters.