

Communication and Lost Communications Description

NASA DFRC 2008 Fire Mission UAS COA Application Attachment

NASA Dryden Flight Research Center (DFRC) has procured from General Atomics – Aeronautical Systems Incorporated, an MQ-9 Reaper aircraft and a Ground Control Station (GCS). DFRC has assigned the number “NASA 870” to the aircraft, registered it as N870NA, and renamed it “Ikhana” (pronounced ee-kah-nah, a Native American word from the Choctaw Nation meaning intelligent, conscious, or aware).

“Track changes” is used in this document to highlight the significant differences in the attachment between the 2008 plans versus last years’ 2007 WSFM plans. Change tracking (and hence “change bars”) have been suppressed for editorial and non-philosophical changes.

This attachment covers the communication between the Ikhana pilot in the GCS, and ATC. The NASA 2008 Fire Mission - Mission and Lost Link Procedures Description attachment covers communication/lost communication (“lost link”) between the Ikhana pilot in the GCS and the aircraft.

1. **Communication Procedure** –

- 1.1. All flights will be in communication with ATC.
- 1.2. Voice communications between the pilot and ATC shall be as directed by the responsible ATC facility.
- 1.3. Direct voice communication between the pilot and ATC will be accomplished through the UHF/VHF relay system on-board the aircraft with the backup being a land phone line between the GCS and ATC. The relay system on board the aircraft may introduce a few seconds delay in voice communications.
- 1.4. NASA DFRC and the FAA HQ UAS office will prepare a phone list pre-mission that includes prime and backup phone numbers for the FAA facilities involved and for the pilot/GCS.
- 1.5. ATC directed frequency changes will be performed in the same manner as manned aircraft operations.

2. **Loss of Communication Procedure** – In the event of a loss of voice communications with ATC, it is the intent of the pilot to reestablish contact with ATC as quickly as possible to ensure the safety of other aircraft in the NAS.

- 2.1. The pilot/GCS will first attempt to contact the appropriate FAA facility using the pre-mission developed phone list.
- 2.2. If the pilot/GCS is able to successfully contact the appropriate FAA facility, the pilot/GCS and FAA facility will determine a course of action, to continue the mission, or terminate the mission. The pilot/GCS and FAA facility will remain in contact via phone if radio contact cannot be reestablished.
- 2.3. Otherwise, the pilot shall continue the flight and land as soon as practicable.