

Aircraft System

Communications: Mission Commanders shall ensure reliable VHF communication is established between the UAS pilot/operator, the ground observers and Range Operations prior to launch. Additionally, telephonic communications will be established with the Operations Director and Tower as a backup in case of radio failure. The UAS pilot/operator shall remain in contact with the ground observers and Range Operations for the duration of the mission.

Communications procedures:

Mission Commanders shall ensure reliable UHF or VHF communications are established between the UAS pilot/operator, the ground observers, Range Control and Radio Control prior to launch. Additionally, telephonic communications will be established as a backup in case of radio failure. The UAS pilot/operator shall remain in contact with ground observers, Range Control and Radio Control for the duration of the mission. UAS flights are not authorized when Radio Control is closed.

NMNG SOP Communications Requirements

The following are excerpts from the NMNG Unmanned Aerial Systems (UAS) Standard Operating Procedures (SOP)

1-6. RESPONSIBILITIES.

(8) Notify State of New Mexico's National Guard "Boot Heel" UAS Airspace Complex, New Mexico Army National Guard Flight Operations (505) 474-1125, at the start and completion of UAS flight operations in the NMNG Boot Heel COA area.

e. UAS Flight Support will:

(1) Schedule airspace coordination with the New Mexico National Guard, Santa Fe, New Mexico (POC names and phone contact numbers are listed in Appendix F).

(2) Coordinate with the Federal Aviation Administration (FAA) on all UAS CD operations within the State of New Mexico "Boot Heel" UAS Airspace Complex.

(3) Relay UAS launch and recovery messages from UAS units to the New Mexico National Guard, Santa Fe, New Mexico for Operations and Control (see Appendix F).

(4) Post Airspace NOTAMs for CD Operations being conducted in the State of New Mexico "Boot Heel" UAS Airspace Complex via NMNG Army National Guard Aviation Operations/Airfield Management Operations through/ for Albuquerque Center when the airspace is active.

(5) Coordinate with Albuquerque Center for CD Operations being conducted within the State of New Mexico "Boot Heel" UAS Airspace Complex Zones Alpha and Bravo; Tombstone Military Operations Area (MOA).

f. Air Traffic and Airspace (AT&A) Coordinator will:

(1) Approve NOTAM as necessary.

(2) Establish a standardized local area orientation briefing for UAS units.

g. The Operations Coordinator will:

(6) Coordinate with the controlling ATC agency for continued operations in the State of New Mexico's National Guard "Boot Heel" UAS Airspace Complex.

(7) Ensure all UAS information is forwarded to Albuquerque Center/ International Airport Authority Base Operations for inclusion in NOTAMs.

i. Operations Coordinator of each activity operating an UAS will:

(6) Provide operational data to The El Paso Airport Authority Base Operations NLT 48 hours prior to scheduled operations for inclusion in local NOTAMs.

(9) Ensure the pilot/observer uses only authorized Up-link and Down-link frequencies.

j The Operations Coordinator will:

(5) Ensure all UAS information is forwarded to the NMNG Army National Guard Flight Operations, Santa Fe, NM for inclusion in NOTAMs.

CHAPTER 2

2-1. State of New Mexico's National Guard "Boot Heel" UAS Airspace Complex UAS Operating Area.

e. All UAS operators at NMNG Boot Heel UAS Airspace Complex will request a NOTAM NLT 24 hours prior to planned operations. For extended operating periods (i.e., Counterdrug support missions that require multiple mission periods in any one 24-hour period) the NOTAM request should cover the entire operating period.

2-2 PLANNING.

a. New Mexico National Guard, Santa Fe, New Mexico or the controlling ATC agency will, upon notification, make those operations known via NOTAM and avoid them to the maximum extent possible.

b. The New Mexico National Guard, Santa Fe, New Mexico shall notify The Albuquerque Center Operations three business days prior to using the aforementioned areas. Notice of activity will be given to the Albuquerque Center of the FAA Manager Airspace and Procedures Branch by telephone between 0800 – 1630L Monday thru Friday at 505-856-4530. Notification will include times, dates and location of scheduled operations.

2-3 GENERAL PROCEDURES.

c. Communications must exist between the controlling ATC agency for the COA airspace and units operating the UAS for the entire duration of the UAS flight. If communications are lost the UAS will be immediately recovered via the approved recovery route and altitude.

2-4 RAVEN COMMUNICATIIONS PROCEDURES.

a. Units will make initial contact with New Mexico Army National Guard Army Aviation Flight Operations via cellular phone, satellite phone or via VHF/UHF communications NLT 30 minutes prior to Raven launch and provide the flight log information specified in 2-3, f. above.

b. New Mexico Army National Guard Army Aviation Flight Operations will grant the unit clearance to take-off at a designated time and operate at in the approved airspace. If required, New Mexico Army National Guard Army Aviation Flight Operations will then contact Albuquerque Center for broadcast of a ROZ activation warning NLT 5 minutes prior to the scheduled launch time to inform any aircraft operating within the area

c. The following reports by the NMNG CD Ops Raven Teams to New Mexico Army National Guard Army Aviation Flight Operations are mandatory:

- (1) Take-off and actual departure time.
- (2) Arrival at mission altitude or mission area (unless conducting launch and recovery training).
- (3) Wheels down and time.

d. When launch and recovery is the primary training objective the launch and recovery area will remain active for the duration of the UAS mission.

e. The Raven UAS will climb to mission altitude as quickly as possible and report when established and verify their operational altitude. Normally, Raven lateral maneuver will be unrestricted within the confines of the State of New Mexico “Boot Heel” UAS Airspace Complex.

f. Raven UAS will be conducted within the boundaries of the launch and recovery area.

g. The standard lost link point is the takeoff point landing strip in the operations area. Upon notification of lost link, New Mexico Army National Guard Army Aviation Flight Operations will attempt radio contact with units and/or aircraft training to relay information. The UAS platoon will dispatch a vehicle immediately to the lost link point in the event of a lost link.

2-5 RAVEN UAS PROCEDURES.

a. New Mexico National Guard, Santa Fe, New Mexico UAS Units will coordinate with Field Support and the NMNG CDC for a ROZ where they desire to operate the Raven UAS. Ravens will only operate in the State of New Mexico “Boot Heel” UAS Airspace Complex. Communications will be established by SAT phone with New Mexico National Guard, Santa Fe, New Mexico, as well as the controlling ATC agency.

b. Raven radio operators will contact New Mexico National Guard, Santa Fe, New Mexico (Army National Guard Aviation Operation/ Airfield Management Operations) to activate their ROZ prior to launching a Raven UAS. Raven teams will not launch a UAS until their ROZ is activated and clearance to launch is granted by the NMNG Santa Fe, New Mexico.

c. Raven radio operators will notify New Mexico National Guard, Santa Fe, New Mexico (Army National Guard Aviation Operations/ Airfield Management Operations) and the controlling ATC agency when they have concluded flight operations and no longer need an active ROZ.

d. The NMNG Santa Fe, New Mexico (Army National Guard Aviation Operations and Air National Guard Aviation Operations/ Airfield Management Operations) standard lost link point is the takeoff point annotated on the flight plan in the designated ROZ. Upon notification of lost link, the UAS unit will attempt phone or radio contact with units and/or aircraft training to relay information. The UAS platoon will dispatch a vehicle immediately to the lost link point in the event of a lost link.

2-7 MULTI-PLATOON UAS OPERATIONS:

Multiple UAS platoons may conduct training utilizing the same launch and recovery area provided the following minimum conditions are met.

a. Platoons must have conducted coordination and agree on site location(s), frequency usage, and other established deconfliction standards and procedures deemed appropriate.

CHAPTER 3 SAFETY

3-1. GENERAL SAFETY PROCEDURES.

a. No UAS operations will be conducted within the NMNG Boot Heel UAS Airspace Complex airspace unless positive and reliable communications between the UAS launch/control center and NMNG Counterdrug Operations and Army National Guard

Flight Operations is maintained. If communications are lost, the activity will cease until communication is restored.

3-2. POLICY.

a. Mission Operations and Training of UAS in the NMNG Boot Heel UAS Airspace Complex COA will be validated and approved by the NMNG Counterdrug Coordinator (505-867-07361), and the coordinated (flight plans filed) through the NMNG Army National Guard Flight Operations (505-474-1125) prior to mission execution.

b. Scheduling for use of the COA will be for a specific period of time. Activity will not begin prior to, or extend beyond, the scheduled time period.

e. Prior to their first flight all UAS operators will attend the UAS mission operations brief, receive a flight weather brief, ensure NOTAMs are valid, and file the flight plan through the NMNG Army National Guard Flight Operations that UAS operations are about to take place.

3-3. MULTIPLE UAS OPERATIONS. Multiple UASs may conduct operations within the COA area, provided the following conditions are met:

a. Each UAS must have discrete Uplink/Downlink frequencies active.

3-5 FLIGHT FOLLOWING

a. All NMNG CD SUAS Operations will execute Flight Following. Pilots/Observers will provide notification of status every 30 minutes after launch time to the NMNG Army National Guard Flight Operations via satellite phone, cellular phone or via VHF/UHF communications.