

Flight Aircrew Qualifications Description

NASA DFRC Ikhana Local Area 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 and renamed it “Ikhana” (pronounced ee-kah-nah, a Native American word from the Choctaw Nation meaning intelligent, conscious, or aware).

The Ikhana Local Area maintenance flights may require that outside/contractor pilots be used for some parts of the flights. Chase/observer duties will be performed by NASA DFRC or outside/contractor pilots and observers. A contract or contracts will be in place to provide chase /observers and any additional pilots.

1. **UAS Pilot Qualifications** – NASA DFRC may be using several types of pilots in the NAS for the Ikhana Local Area maintenance missions.

- 1.1.1. **NASA DFRC UAS Pilot Qualifications** – All NASA DFRC UAS pilots must comply with the following requirements:

All candidates must meet the minimum qualification standards set forth per the U.S. Office of Personnel Management (OPM) General Schedule Position, GS-2181: Aircraft Operations Series. Refer to the OPM standards for the full text. In summary, the following qualifications apply:

The basic education requirement is successful completion of a standard professional curriculum in an accredited college or university and have been awarded a bachelor’s degree or higher. In addition, candidates must possess an FAA commercial pilot license with instrument, single engine land rating, or possess a pilot and instrument rating from the armed services. At the time of initial appointment, candidates for all pilot positions must possess a current first or second-class medical certificate; both meet the intent of the requirement. Selected candidates must also meet the security requirements of the position.

The minimum flight hour requirements for DFRC are 1200 hours of total time, of which 250 hours must be pilot-in-command time, 50 hours of night flying, and 50 hours of instrument time. At least 5 of the required instrument hours must have been logged in actual instrument weather. The balance may have been acquired in a flight simulator or as other types of instrument flight time, e.g., hood instrument. Candidates must have logged at least 100 hours of time in the previous 12-month period.

1.1.2. NASA DFRC UAS Pilot Currency/Proficiency Requirements – All
NASA DFRC UAS pilots will comply with DOP-O-301 NASA DFRC Flight Crew UAS Flight Operations Manual - The requirements meet or exceed FAA Part 61 and 91.

1.1.2.1. Currency requirements – Figure 2 DOP-O-301 Baseline Currency Requirements contains the current currency requirements for NASA DFRC UAS pilots.

REQUIREMENT	PILOT	CRUISE PILOT
Flight Physical	FAA Class I (6 Months)	FAA Class I (6 Months)
Flight Evaluation	12 Months	12 Months
IRC	12 Months	12 Months
Basic Sortie	1/45 Days	1/45 Days
Instrument Approach (GLS)	1/45 Days	N/A
IR Camera Landing	1/60 Days	N/A
MQ-9 Takeoff	1/45 Days	N/A
MQ-9 Landing	1/45 Days	N/A

Figure 2 DOP-O-301 Baseline Currency Requirements

1.1.2.2. Duty Day Requirements – A DFRC UAS crewmember duty day is limited to 12 hours when the vehicle is flown with a single qualified pilot and 14 hours when flown with two qualified pilots.

1.2. Other Government Agency or Contractor UAS pilots – Other government agency or contractor UAS pilots may be used to support Ikhana Local Area maintenance flights. NASA DFRC will review the training and currency records of prospective pilots to ensure compliance to the pilot's home organization proficiency and currency requirements (these are expected to be DOD/USAF or General Atomics requirements). NASA DFRC will also evaluate the prospective pilots and their proficiency/currency requirements against DFRC requirements to determine if any additional proficiency/currency work will be required prior to the pilot flying Ikhana.

2. Chase/Observer – The Ikhana Local Area flights will require chase/observer support when ferrying the aircraft outside R-2508/R-2515 Complex but within the Local Area boundaries and for maintenance check missions within the Ikhana Local Area boundaries.

2.1. NASA or Contractor Chase/Observers – NASA DFRC will review the training records of prospective chase/observers to ensure compliance to the chase/observers' home organization proficiency requirements (other than NASA organizations are expected to be DOD/USAF or General Atomics requirements).