Aircraft Equipment Suffix Attachment
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.

It is unclear what the appropriate "aircraft suffix" is for the Ikhana aircraft. This attachment to the WSFM COA application is intended to define the suffix that NASA-DFRC plans to use, and the rationale for using that suffix.

1. **Equipment Suffix** – For the WSFM flights, NASA DFRC will file a flight plan with the "/I" suffix.

   Rationale:
   (b) (3) (A), (b) (3) (B)

   1.5. "/G" is not appropriate because GPS IFR terminal approach capability is not required (the aircraft is expected to take-off and land within Special Use Airspace (SUA) at Edwards, AFB, Ca. under VFR conditions, and no other nominal landing sites are planned).

   1.6. Pre-flight, the pilot will use the FAA RAIM prediction website to determine if there are any RAIM problems predicted. (http://www.raimprediction.net/ac90-100/)

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1.8. **GCS Equipment and Capabilities** – The GCS capabilities are split into two categories, those that come with the manufacturers Pilot workstation, and those added by NASA – DFRC.

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1.8.2. **NASA – DFRC Added Capabilities** – NASA-DFRC has added additional workstations to the GCS to perform various tasks necessary for scientific and research purposes. At least one of these workstations will provide navigational information to the pilot using software which meets AC 120-76A (such as ChartCase Professionsl from FlightPrep, Inc.). During the mission, this workstation will receive real-time, or near real-time aircraft position updating.

References:

1. Federal Aviation Regulations/Aeronautical Information Manual (FAR/AIM) 2007 ASA-07-FR-AM-BK, ©2006 ASA, with current regulation as of August 3,2006, and AIM current through March 14, 2007.
2. AC-120-76A Guidelines for the Certification, Airworthiness, and Operational Approval of Electronic Flight Bag Computing Devices, 3/17/2003
3. TSO website: http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgtso.nsf/MainFrame?OpenFrameSet