COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

This manual implements Air Force Policy Directive (AFPD) 10-9, *Lead Command Designation and Responsibilities for Weapon Systems* and AFPD 11-5, *Small Unmanned Aircraft Systems (SUAS) Rules, Procedures, and Service*. (**Note:** AFPD 11-4, *Aviation Service* does not apply to non-rated SUAS operators.) It establishes the USAF Small Unmanned Aircraft System Operator (SUAS-O) training program for Air Force military and civilian personnel, personnel from other services and foreign personnel assigned or attached to USAF units, and for contracted SUAS-Os as stipulated in contracts. This publication may be supplemented at any level, but all Supplements must be rooted to the Office of Primary Responsibility of this publication for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847 from the field through the appropriate functional chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management,* for a description of the authorities associated with the tier numbers. Submit request for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the requestors commander for non-tiered compliance items. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual 33-363, *Management of Records*, and disposed of IAW Air Force Records Disposition Schedule located in the Air Force Records Information

Management System. Failure to observe the mandatory provisions in **paragraphs 2.11.5** and **2.22** of this instruction by Regular Air Force military members, Air Force Reserve military members on active duty or inactive duty for training, and ANG members in Title 10 status is a violation of Article 92 of the Uniform Code of Military Justice. ANG members in Title 32 status performing full-time National Guard duty or inactive duty for training, who violate the mandatory provisions of this instruction, may be held accountable through similar provisions of their respective State Military Codes. Civilian employees are subject to administrative and/or disciplinary action for violations of the mandatory provisions of this instruction IAW Air Force Instruction 36-704, *Discipline and Adverse Actions*, or Air Force Manual 34-310, *Non-appropriated Fund Personnel Program Management and Administration Procedures*, as applicable. Government contract employees are expected to uphold the requirements of this manual IAW their statement of work. All contracts shall include language mandating compliance with this manual. **(T-1).**

SUMMARY OF CHANGES

This document has been substantially revised and needs to be completely reviewed. Major changes include: updates tier waiver authorities; encompasses groups 2 and 3 SUAS; no longer differentiates between commercial off the shelf (COTS) and governmental SUAS; removes duplicated material; updates medical requirements to reflect changes in Section U, *USAF Medical Standards Directory*; gives commanders option to mandate a standardization and evaluation program for groups 1 and 2 SUAS; incorporates punitive provisions that are enforceable under Article 92 UCMJ; and includes the AF implementation guidance for the domestic use of unmanned aircraft systems in the U.S. National Airspace.

Chapter 1

OVERVIEW, ROLES AND RESPONSIBILITIES

1.1. General. This AFMAN provides guidance for Air Force civilian and military personnel, and DoD contractors employing or testing Small Unmanned Aircraft Systems (SUAS) Groups 1, 2 and 3. See **Attachment 2,** *DoD UAS CATEGORIES,* for various SUAS groups. The guidance contained in this AFMAN recognizes that SUAS operations are typically assigned to non-aviation units. **Note:** Government off-the-shelf, Mission Design Series (MDS) or non-MDS SUAS not available to the public and commercial off-the-shelf systems (COTS) purchased with government funds are all referred to as SUAS.

1.2. Roles and Responsibilities.

1.2.1. Deputy Chief of Staff for Operations (AF/A3). Delegates Office of Primary Responsibility for this manual to Air Force Special Operations Command Operations Division (AFSOC/A3O).

1.2.2. MAJCOMs. MAJCOM Direct Reporting Units and ANG Director of Operations (A3) are considered MAJCOMs for the purposes of this instruction. They will:

1.2.2.1. Identify a MAJCOM SUAS Office of Primary Responsibility responsible for SUAS program oversight. MAJCOMs will provide point of contact information to their subordinate units.

1.2.2.2. Quantify Formal Training Unit (FTU) student requirements for initial training (IT) and manage training allocations received.

1.2.2.3. Post unclassified Read File items to the Small Unmanned Aircraft Systems Manager (SUASMAN) web application.

1.2.2.4. Conduct staff assistance visits to subordinate units when requested by the unit commander.

1.2.2.5. Determine unit of attachment for MAJCOM staff personnel in SUAS-O positions and allow them to fly SUAS to maintain currency and certification.

1.2.2.6. Review all unit IT courseware and forward to Lead Command (LC) for approval before it can be used for training. See SUAS Unit Training Topics Checklist in **Attachment 10**.

1.2.2.7. Provide staff coordination and control of all Flight Crew Information File (FCIF) items issued from the MAJCOM or Numbered Air Force, as appropriate.

1.2.2.8. Coordinate and process all AF Form 847s.

1.2.2.9. Coordinate, as required, with safety offices/agencies conducting SUAS mishaps investigations.

1.2.2.10. Review unit air space requests and forward to LC for processing.

1.2.2.11. Report combat losses to LC for system accountability.

1.2.2.12. MAJCOM/Direct Reporting Units supplements will not be less restrictive than this manual.

1.2.3. Air Force Special Operations Command (AFSOC). Lead Command. AFSOC will:

1.2.3.1. Work with MAJCOMs to develop guidance for the conduct and execution of SUAS operations and training.

1.2.3.2. Review and approve formal training unit (FTU) or vendor syllabi, difference training (DT) and conversion training. AFSOC Unmanned Systems Branch (A3OU) may delegate approval authority for IT syllabi to MAJCOMs.

1.2.3.3. Conduct formal course reviews. Annually review formal training programs and syllabi for currency, applicability, compliance and effectiveness.

1.2.3.4. Provide access to inventory and status reporting of all Air Force SUAS via SUASMAN.

1.2.3.5. Support staff assistance visit and training assessments when requested by a MAJCOM.

1.2.3.6. Authorize the use of training devices or simulators.

1.2.3.7. Manage the SUASMAN web application.

1.2.3.8. Convene conferences and working groups, as necessary, to review SUAS policies and procedures.

1.2.3.9. Process all unit Federal Aviation Administration (FAA) Certificate of Waiver/Authorization (COA) applications.

1.2.3.10. Manage the cyber security exemption process IAW **paragraph 2.4**.

1.2.4. United States Air Force Academy (USAFA)/Air Force Institute of Technology will establish equivalent levels of command oversight for SUAS activities.

1.2.5. Installation commanders (or designated representative) will:

1.2.5.1. Ensure compliance with this manual by subordinate units. Provide staff support and assist those units in managing the training program to meet the unit's Mission Essential Task List (METL) requirements. **(T-2).**

1.2.5.2. Determine the need to designate an installation level SUAS Program Manager (PM) or SUAS Instructor (SUAS-I), if required to provide assistance to Squadron/Unit PM's. The two functions may be performed by the same individual. **(T-2).**

1.2.5.3. Forward coordinated AF Form 847s to MAJCOM. **(T-2).**

1.2.5.4. Conduct staff assistance visits to subordinate units as required. **(T-2).**

1.2.5.5. Approve or delegate installation approval authority for applicable domestic use of SUAS IAW **Attachment 8**, enclosure 2. **(T-2).**

1.2.6. Group/Squadron/Unit Commanders/or equivalent will:

1.2.6.1. Designate, in writing, a squadron/unit-level SUAS Program Manager (PM). The SUAS PM should be a SUAS-I with the most SUAS experience, if possible, and is responsible for oversight of the unit's SUAS training program. **(T-3).**

1.2.6.2. Designate, in writing, all unit SUAS-Is and SUAS Examiners (SUAS-Es). Commanders may designate SUAS-Is who are not assigned to the unit when necessary to meet unique unit requirements. Commanders will select SUAS-Is based on their background, knowledge, experience, maturity, and ability to instruct. Flight hours alone should not be the primary criterion for nomination of an individual for SUAS-I upgrade training. **(T-3).**

1.2.6.3. Develop and maintain a unit SUAS training program. The training program will specify training events tailored to meet the unit's METL requirements and theater-specific operations plans and orders. **(T-2).**

1.2.6.4. May develop unit currency guidance that exceeds the minimum currency guidance in this manual. See **Table 3.1** for minimum currency requirements.

1.2.6.5. Establish the unit FCIF program. **(T-2).**

1.2.6.6. Approve candidates for SUAS FTU training. **(T-3).**

1.2.6.7. Implement corrective actions for unit SUAS training and equipment deficiencies. **(T-3).**

1.2.6.8. Ensure SUAS flight publications and operator manuals are available. **(T-3).**

1.2.6.9. Identify an equipment custodian. **(T-2).**

1.2.7. Squadron/unit SUAS Program Manager (PM) will:

1.2.7.1. Develop and incorporate unit-specific SUAS mission training (MT), CT, and SUAS-I upgrade training programs IAW commander's guidance. List all training tasks for IT/MT certification on AF Form 797, *Job Qualification Standard Continuation/Command JQS* (or equivalent). **(T-2).** See **Attachment 12** for an example of a SUAS-I Upgrade Training Program.

1.2.7.2. Monitor and maintain FCIF library. **(T-2).**

1.2.7.3. Ensure SUAS-Os and all required personnel have a SUASMAN account. **(T-3).** Requests for SUASMAN access can be made at **https://suasman.us.af.mil** or by Email: **AFSOC.A3OU.SUASMAN@us.af.mil**. **Exception:** Air Force Materiel Command (AFMC) Research Development Test and Evaluation (RDT&E) and USAFA RDT&E may use a single SUASMAN PM to log unit information.

1.2.7.4. Provide in electronic format, SUAS operator's manuals not posted in the SUASMAN library, to the SUASMAN helpdesk. **(T-3).**

1.2.7.5. View, via SUASMAN, course availability and coordination procedures for FTU training requests.

1.2.7.6. Manage training and certification records of all assigned or attached SUAS operators. Use SUASMAN to maintain SUAS-O training records. **(T-2).** Use of supplemental paper-based records is at the discretion of the unit commander. **Exception:** AFMC RDT&E and USAFA RDT&E are not mandated to use SUASMAN for records management.

1.2.7.7. Track each individual's training status, identify training shortfalls, and monitor unit read file currency. **(T-3).**

1.2.7.8. Schedule and coordinate ranges and airspace for SUAS operations. **(T-3).** May be delegated as required to SUAS-O level.

1.2.7.9. Submit all unit-developed training programs through unit chain of command to MAJCOM for review and approval. **(T-2).** MAJCOMs may delegate review and approval authority to wing or operations group commander level.

1.2.7.10. Submit waiver requests through chain of command to MAJCOM/A3. **(T-2).**

1.2.7.11. Conduct a records review on all SUAS-Os. **(T-3).**

1.2.7.12. Ensure in-processing for SUAS-Os includes a records review. In-processing will include completion of at least one SUAS local area familiarization flight under the supervision of a SUAS-I. **(T-3).**

1.2.7.13. Report training and equipment deficiencies to the commander. **(T-3).**

1.2.8. Squadron/unit SUAS Examiners (SUAS-E) will:

1.2.8.1. Conduct and document evaluations IAW **Chapter 7**, Standardization and Evaluation Program. **(T-2).**

1.2.8.2. Maintain certification as an instructor. **(T-2).**

1.2.8.3. Immediately correct breaches of flying safety or flight discipline during an evaluation. **(T-3).**

1.2.8.4. Administer evaluations only on SUAS for which they are certified and current. **(T-2).**

1.2.8.5. Administer evaluations only on those mission/skill sets in which they maintain certification. **(T-2).**

1.2.8.6. Prior to the SUAS-E certification the candidate will demonstrate thorough knowledge and understanding of STAN/EVAL requirements and processes, including the use and completion of the SUAS Evaluation Tool. **(T-3).** See **Attachment 3**.

1.2.9. Squadron/unit SUAS-I will:

1.2.9.1. Instruct LC-approved unit level IT, SUAS re-currency, biennial certifications, MT, DT, and conversion training. **(T-2).**

1.2.9.2. Be knowledgeable of the contents of this manual, unit MT plans, range and flying procedures, unit concept of employment (CONEMP), and SUAS operating manuals. **(T-3).**

1.2.9.3. Prior to each training mission, ensure all trainees are current on read file requirements, have no medical issues that would hinder SUAS employment and control, and all relevant task certification requirements have been accomplished. **(T-3).**

1.2.9.4. Maintain SUAS certification and currency requirements for the tasks for which they are instructing. **(T-3).**

1.2.10. Individual SUAS-Os will:

1.2.10.1. Be cognizant of safety of flight during all SUAS operations. **(T-3).**

1.2.10.2. Review and understand read file prior to conducting any SUAS operations. **(T-3).**

1.2.10.3. Fly only those SUAS for which they are certified. Do not conduct training events for which they are not certified or current unless under the supervision of a SUAS-I. **(T-2). EXCEPTION:** AFMC RDT&E and USAFA RDT&E, with commander or designated representative concurrence, may certify SUAS-Os based on Group rather than by individual systems**.**

1.2.10.4. Complete requirements and maintain currency as required by this manual. **(T-2).**

1.2.10.5. Maintain current flight log in SUASMAN. SUAS-Os will log operator time only. **(T-3).** Flight logs will be used to track flight hours for all SUAS. **(T-3). Exception:** AFMC RDT&E and USAFA RDT&E may maintain flight logs on MAJCOM approved system.

1.2.10.6. Train visual observers in basic see-and-avoid techniques to safely assist in operations. **(T-3).**

Chapter 2

COMMON REQUIREMENTS FOR GROUPS 1, 2 AND 3

2.1. Airworthiness. AFMC Air Force Life Cycle Management Center Director of Engineering (AFLCMC/EN-EZ) is the USAF technical airworthiness authority (TAA). The TAA independently assesses airworthiness and issues airworthiness approvals, if appropriate, for all air systems the Air Force owns, contracts, leases, operates, uses, designs, or modifies. The TAA may delegate airworthiness authorities to specific certified personnel. Contact information: USAF Airworthiness Office, AFMC AFLCMC/EZSA, **usaf.airworthiness.office@us.af.mil**.

2.1.1. Units will obtain a TAA-issued airworthiness approval for each SUAS prior to flight. **(T-2).** The TAA has delegated airworthiness authority to specific AFSOC/A3OU personnel for USAF Group 1 and 2 SUAS. Contact information: AFSOC Airworthiness Office, AFSOC/A3OU, **AFSOC.A3OUI@us.af.mil**.

2.1.2. USAF Group 3 SUAS airworthiness assessments are provided by AFLCMC/EN-EZ. **Exception:** AFMC/RDT&E units may use AFMC delegated airworthiness authority processes.

2.2. Flight Approval Authority. An individual who has been delegated authority in writing by the unit commander (or equivalent) to approve SUAS flights. Flight approval authorities must consider mission validity, SUAS-O certifications, training status, and risk mitigation before issuing flight authorization. **(T-2). Note:** SUAS operations do not parallel manned aviation. AFI 11-401, *Aviation Management,* is not applicable to SUAS operations.

2.2.1. Lead SUAS-O and additional SUAS-Os will be identified on Risk Management (RM) worksheet and flight authorization. **(T-2).** See **Attachment 6**.

2.2.2. Flight authorization may be granted for a single event, a period of time, or mission/test.

2.2.3. Pre-Flight 'only' activities or missions that do not include flight do not require flight authorization. The use of SUAS frequencies requires approval through the nearest spectrum management office. **(T-2).**

2.3. Airspace Coordination and Approval. SUAS operations are conducted only in authorized airspace. Units must comply with approved FAA COA, unit CONEMP, or Special Use airspace rules, as applicable. **(T-0).** Without a certified "Sense and Avoid" capability, separation from other aircraft is accomplished by using visual observers. SUAS operations outside of restricted and warning areas may require an FAA COA. Operations conducted within restricted or warning areas (or within a theater of operations under combat airspace control measures) require coordination between responsible organizations. SUAS-Os will be appropriately certified or directly supervised by an instructor in order to conduct operations within the class of airspace authorized for operations. **(T-2).**

2.3.1. SUAS-O will not place the aircraft, people, other aircraft, or real property in jeopardy or create a hazard by flying over populated/residential areas, assemblies of people, or along heavily trafficked roads, unless operationally required and authorized by approved FAA COA, concept of employment or test plan. **(T-0).**

2.3.2. CONUS Operations.

2.3.2.1. SUAS operations outside of restricted and warning areas require FAA coordination IAW FAA/DOD guidance/agreements. Units requesting to operate outside restricted and warning areas will: **(T-0).**

2.3.2.1.1. Complete the AF SUAS COA application request checklist, see **Attachment 7** and email to MAJCOM POC for coordination. MAJCOMs will forward to **AFSOC.A3OU.WF@us.af.mil** for processing. AFSOC/A3OU will review the FAA COA application to ensure the request meets all FAA and DoD requirements. **(T-2). Exception:** AFMC/A3O will process all COAs for AFMC RDT&E units. **(T-2).**

2.3.2.1.2. The FAA normally takes approximately 60 business days to process a new COA application. Times vary depending on the classification of the involved airspace and the complexity of the request.

2.3.3. OCONUS Operations. Refer to specific host nation agreements and International Civil Aviation Organization (ICAO) standards and recommended practices to accomplish coordination. SUAS operation in Alaska, Hawaii, and U.S. territories and possessions, follow the CONUS guidance in **paragraph 2.3.2**. **(T-0)**

2.3.4. Combat/Contingency Operations. Refer to Joint Publication 3-52, *Joint Doctrine for Airspace Control in the Combat Zone*, and theater air operations directives.

2.4. DoD COTS UAS Cyber Security Exemptions. COTS UAS operations pose a cyber-security risk for the Department of Defense. Prior to purchase or use of COTS UAS, Air Force Acquisition, Technology and Logistics (SAF/AQ) and Air Force Deputy, Chief Information Officer (SAF/CN) approval is required for operations in benign and controlled environments. Operations in uncontrolled environments require Under Secretary Of Defense for Acquisition and Sustainment (USD (A&S)) and Department of Defense Chief Information Officer (DoD CIO) approval. The definitions of a COTS UAS, benign, controlled, and uncontrolled environments are contained in the Deputy Secretary of Defense memo (*COTS UAS Implementation Guidance*, dated 16 November 2018. Memo can be found at: **https://org2.eis.af.mil/sites/12594/A3T/S/GuidanceMemorandums/16%20Nov%202018%20 Delegation%20of%20Authority%20for%20Services%20to%20Approve%20for%20COTS %20UAS%20Exemption%20Requests.pdf**). The Air Force Deputy Chief of Staff for Operations (AF/A3) appointed AFSOC/A3OU as the lead for processing exemption requests for USAF units. Contact AFSOC/A3OU for the exemption template and processing instructions. Forward the completed template thru MAJCOM to AFSOC/A3OU (**AFSOC.A3OU.WF@us.af.mil**) for processing.

2.5. Domestic Use Guidance. In order to ensure accountability and promote transparency in the protection of privacy and civil liberties, the Secretary of Defense issued a policy memorandum; *Guidance for the Domestic Use of Unmanned Aircraft Systems in U.S. National Airspace*. The policy memorandum designates approval authorities and delegation levels when conducting SUAS operations in the national airspace system. See **Attachment 8**.

2.6. Concept of Employment (CONEMP). All Air Force units operating SUAS must have a unit-specific installation commander approved CONEMP when operating on or off military installations. **(T-2).** See Sample CONEMP in **Attachment 11.** AFMC RDT&E units and USAFA RDT&E may use an approved test plan in lieu of a CONEMP. MAJCOMs may have to cross coordinate tenant unit SUAS operations.

2.6.1. Unit commanders ensure all operations are within the bounds of the approved CONEMP or test plan. An installation-level legal review of the CONEMP will address acquisition/collection/retention/dissemination of information and imagery IAW applicable law and policy. **(T-2).**

2.6.2. CONEMP and Test Plans must address, at a minimum: Statement of mission and objectives; training and certification requirements; currency requirements; personal protective equipment; cyber security; domestic privacy concerns; electromagnetic and radio frequency emission spectrum approval; coordination requirements with all applicable agencies; operational area description; flight approval procedures; night operations; dropping of objects (if applicable); risk management; communications; deconfliction; contingencies; and statement of compliance with applicable federal law and policy, applicable state and local law, applicable host nation law, and international agreements. **(T-2).**

2.7. SUAS Equipment Custodian. All Air Force units, including AFMC RDT&E and USAFA RDT&E equipment custodians, will keep SUAS status updated and current in SUASMAN. **(T-2).** This enables AFSOC to fulfill the Office of the Secretary of Defense tasking to track and report the mission capable status of all AF SUAS. **Note:** AFMC RDT&E units and USAFA RDT&E may account for and aggregate vehicles based on Group rather than by individual systems**.**

2.7.1. The unit commander will appoint a SUAS equipment custodian in writing. **(T-2).** The SUAS equipment custodian will secure and account for assigned equipment as dictated by its classification level. **(T-2).**

2.7.2. SUASMAN. Equipment custodians will maintain an account in SUASMAN and keep all equipment inventory and operational status up-to-date. Equipment custodians will track each system by the manufacturers' serial number and/or system number. Mission capable status will be determined by the complementary readiness of the following selected major subcomponents: Air Vehicle, Ground Control Station, Remote Video Terminal and payloads. **(T-2).**

2.7.2.1. The following terms will be used to categorize systems; fully mission capable (FMC), partially mission capable (PMC) and non-mission capable (NMC). **(T-2).**

2.7.2.1.1. FMC; means all SUAS are operational.

2.7.2.1.2. PMC; means at least one SUAS is mission capable (day or night).

2.7.2.1.3. NMC; means no systems are mission capable (day and night).

2.7.2.2. Accountable Property System of Record (APSR). In addition to the SUASMAN requirement in **paragraph 2.7.2**, SUAS equipment will be entered into the APSR IAW AFI 23-111, *Management of Government Property in Possession of the Air Force*. **(T-1).** The APSR is the government system used to control and manage accountable property records; a subset of existing organizational processes related to the lifecycle management of property; the system that is integrated with the core financial system. The accountable property system of record may also control and manage non-fiduciary accountable records. Currently the APSR for the Air Force is the Air Force Equipment Management System. Air Force Equipment Management System soon to be replaced with the Defense Property Accountability System.

2.8. Multiple Certification. SUAS-Os may be required to maintain certification in two or more distinctly different SUAS. The unit commander is the approval authority for multiple certifications. SUAS-Os will receive a biennial certification in each SUAS in which they maintain certification. **(T-2).** If certification is lost for a specific SUAS, certifications for other SUAS are not affected. **Exception:** AFMC RDT&E and USAFA RDT&E may choose to certify/decertify SUAS-Os at the SUAS Group.

2.9. Flight Crew Information File (FCIF). Units will establish and maintain a library in SUASMAN. **(T-3).** This library will consist of current read files, Air Force/MAJCOM/Numbered Air Force/local directives, MAJCOM supplements, SUAS Operator's Manuals/Checklists/Crew Aids, and other documents the commander deems appropriate. **(T-3). Exception:** AFMC RDT&E and USAFA RDT&E does not have to use SUASMAN to maintain their FCIF library.

2.9.1. Current Read File. Messages containing information temporary in nature, directly pertinent to the safe conduct of flight, and will be read before flight by all SUAS-Os. **(T-2).**

2.9.2. When issuing FCIFs, use the standard **Attachment 9** format.

2.9.3. All publications in the library should be current, complete and accessible for concurrent viewing by multiple SUAS-Os. Documents will be made available for deployments by the SUAS PM. **(T-3).**

2.9.4. Procedures for maintaining, updating, and backup to prevent loss or corruption of the electronic data will be outlined in the unit supplement/addendum. **(T-2).**

2.9.5. MAJCOM may approve individual units to maintain hardcopies of required library items.

2.10. Flight-Related Special Interest Item (SII). SIIs are items of emphasis for existing procedure(s), designed to mitigate or eliminate specific risks or trends. SIIs do not add to or amend established procedures. SIIs are based on analysis of risks and trends from a variety of sources to include: Safety Investigation Board findings/recommendations, safety related incidences, trend analysis, deployed area of operations, and potential problems with equipment/procedures.

2.10.1. Issue an SII with the same process used to release an FCIF. Correctly written SIIs contain the following elements:

2.10.1.1. Specific MDS applicability.

2.10.1.2. References (document, Safety Investigation Board, etc.).

2.10.1.3. Risk factors and trend details.

2.10.1.4. Specific emphasis actions to reduce/eliminate the risk or trend that generated the SII.

2.10.1.5. Effective date of rescission.

2.10.1.6. SME/POC for further information.

2.10.2. SII(s) should normally be of limited duration (i.e., not to exceed 90 days).

2.10.3. An SII may be issued from the AF, MAJCOM, Numbered Air Force or unit level. An SII may be rescinded by the level that issued it or higher, but not lower, in the chain.

2.10.4. Units will place all issued SIIs into the FCIF or the Current Read File, for dissemination to operators. **(T-2).**

2.10.5. All current flight-related SUAS MDS-specific and Crew Resource Management/RM related SII(s) will be briefed by the designated lead SUAS-O during flight briefings for the duration of the SII(s). **(T-2).** Flight-related SII(s) need only be briefed on those missions for which the SII is relevant.

2.11. Go/No-Go Procedures. Units will establish a positive control system that ensures SUAS-Os have completed all required items prior to flight. **(T-2).** As a minimum, the Go/No-Go process will cover:

2.11.1. Currency (certification, ground/flight currency items, etc.). **(T-2).**

2.11.2. SUAS-O medical status/condition/issues. **(T-2).**

2.11.3. Review of FCIF library items. **(T-2).**

2.11.4. Operational Risk Assessment/Risk review. **(T-2).**

2.11.5. Alcohol Consumption. SUAS operators will not consume alcoholic beverages within 12 hours of flight operations. **(T-1).** Failure to observe the mandatory provisions of this instruction by Regular Air Force military members, Air Force Reserve military members on active duty or inactive duty for training, and ANG members in Title 10 status is a violation of Article 92 of the Uniform Code of Military Justice. ANG members in Title 32 status performing full-time National Guard duty or inactive duty for training, who violate the mandatory provisions of this instruction, may be held accountable through similar provisions of their respective State Military Codes. Civilian employees are subject to administrative and/or disciplinary action for violations of the mandatory provisions of this instruction IAW Air Force Instruction 36-704 or Air Force Manual 34-310, as applicable. Government contract employees are expected to uphold the requirements of this manual IAW their statement of work. All contracts shall include language mandating compliance with this manual. **(T-1).**

2.12. Compliance. SUAS-Os will comply with the following:

2.12.1. MAJCOM guidance. **(T-1).**

2.12.2. Federal Aviation Regulations applicable to SUAS when operating within the United States, to include the airspace overlying the waters out to 12 miles from the US coast, unless the FAA has excluded military operations. **(T-0).**

2.12.3. International Civil Aviation Organization (ICAO) standards and recommended practices applicable to SUAS in international airspace over the high seas, military mission permitting. **(T-0).**

2.12.4. Host nation agreements. **(T-0).**

2.12.5. Flight Information Publications: Area Planning; General Planning; Foreign Clearance Guide; Procedures and special notices in Flight Information Publications; and Notice to Airmen. **(T-0).**

2.12.6. Aircraft technical orders/operator's manual. **(T-1).**

2.12.7. Air Traffic Control (ATC) instructions. **(T-1).**

2.13. Mishap Reporting: All mishaps and unintentional non-determined loss of link will be reported to unit safety representatives so the underlying cause can be determined. Loss of link will be recorded for trend analysis in SUASMAN and/or Air Force Safety Automated System as applicable. **(T-2).**

2.13.1. Mishaps that result in minor damage (does not apply to consumable or normal wear and tear parts) that can be repaired at home station and do not meet Class A, B, C or D thresholds will be reported to the unit safety representative who will determine if an Air Force Safety Automated System report is warranted. If the unit safety representative determines the mishap exceeds the above thresholds, the unit safety representative will provide the SUAS crew guidance and determine what documents, data and/or equipment will be preserved. System malfunctions or anomalies that result in loss of control or damage will be reported through the unit safety office to the MAJCOM Safety office within 7 duty days. **(T-2).** **Exception:** AFMC RDT&E intentional, anticipated, or expected damage to DoD equipment or property during authorized testing is exempt from mandatory reporting.

2.13.2. FAA COA or Class G operation. Mishaps resulting in fatal or serious injury, property damage (other than the unmanned aircraft), deviation from COA or ATC clearance, any non-determined system malfunction causing damage to SUAS from uncontrolled flight, or safety of flight issues requires a mishap report prior to conducting any additional flights. Report mishaps to AFSOC/A3OU via email (**AFSOC.A3OU.WF@us.af.mil**) or phone (850-884-4064/4074/5462; cell 850-902-7041). AFSOC/A3OU will advise when flight can resume. **(T-3).**

2.13.3. Combat losses will be reported to MAJCOMs who will forward to LC for system accountability. **(T-2).**

2.13.4. Use standard security markings and classified handling procedures for classified reports. Do not enter classified information into Air Force Safety Automated System or SUASMAN.

2.13.5. Refer all public inquiries about SUAS mishaps to the appropriate Public Affairs office.

2.14. Communication with ATC. SUAS-Os will establish and maintain two-way radio communications with the proper ATC facility or Flight Service Station IAW the procedures appropriate for the class of airspace as outlined in Aeronautical Information Manual. **(T-0).** ATC provides mandatory separation between instrument flight rules and visual flight rules (VFR) aircraft operating within Class B and C airspace. In Class D and E airspace, ATC provides traffic advisories for VFR aircraft on a time-permitting basis. Outside the national airspace system, consult ICAO and country specific guidance outlined in the Foreign Clearance Guide and Aeronautical Information Manual. **Note:** ATC can deny SUAS operations if it is perceived to be a risk to other aircraft operations.

2.14.1. For SUAS operations in controlled airspace, two-way radio may be the primary means of communications between the SUAS-O and ATC. Alternate means (example- cell phone) may be requested/authorized via a local Memorandum of Understanding between unit and controlling agency.

2.14.2. Upon clearance into controlled airspace, maintain contact with the range or airspace controlling agency.

2.14.3. SUAS-Os should notify the controlling agency when flight operations terminate.

2.15. Aircraft Lighting. SUAS-Os will ensure aircraft equipped with operational lighting are utilized IAW airspace authorizations and/or CONEMP. **(T-2).**

2.15.1. Reduced Lighting or Lights-out. Range authority may authorize operations with reduced lightening or lights out in restricted areas or warning areas. OCONUS operations require host nation approval.

2.15.2. Position Lights. If equipped with position lights, the SUAS-O will ensure they are utilized IAW airspace authorizations and/or CONEMP. **(T-2).**

2.15.3. Anti-collision and Strobe Lights. Anti-collision lights are the primary flashing light system on the aircraft intended to attract the attention of others to enhance see and avoid operations while strobe lights are systems such as wingtip strobes or other similar strobe light installations.

2.15.4. Anti-collision and strobe lights must be on from takeoff to landing, if equipped. **(T-2).**

2.15.5. The SUAS-O may turn off anti-collision lights when it is in the best interest of safety or for brief moments during training in operational areas if authorized.

2.16. Flight Data Capture.   Each flight will be recorded by the SUAS-O using the system's data recorder in order to capture both telemetry and video data. **(T-2).** If a system is incapable or limited by payload to record both telemetry and video data then one or the other is sufficient. Dispose of recordings as directed by MAJCOM Directorate of Safety. Data from incidents involving manned aircraft or violation of ATC procedures will be provided to the MAJCOM Safety office by the unit commander or designated representative. **(T-2).**

2.17. Adverse Weather. SUAS-Os will obtain sufficient weather information to safely conduct the flight and adhere to operator's manual restrictions. **(T-3).**

2.17.1. Operations in the Vicinity of Thunderstorms. Do not intentionally operate into a thunderstorm. When observed or reported thunderstorm activity adversely affects the planned flight route, SUAS-Os will delay the scheduled mission or alter the route of flight within approved airspace to avoid the thunderstorm activity. **(T-3).**

2.17.2. SUAS-O will not takeoff, land, or operate where thunderstorms are producing hail, winds outside published aircraft wind limitations, gust fronts, heavy rain, lightning, wind shear, severe or extreme turbulence, microbursts, or other hazardous conditions. **(T-3).**

2.17.3. Takeoff with Ice or Frost. The SUAS-O will not takeoff (or launch) with ice, snow, or frost adhering to the wings, control surfaces, propellers, engine inlets, or other critical surfaces of the aircraft. **(T-3).**

2.18. Stores or Weapons Release.   SUAS-O must receive unit developed or vendor provided, MAJCOM Safety Office approved training prior to executing missions that release stores, payloads, or weapons. **(T-2).** Certify this training on an AF Form 1381, *USAF Certification of Air Crew Training*. As a minimum;

2.18.1. Training should include normal arming, safing, release and separation, unintentional ground and inflight release, arming and release malfunctions, jettison, hung/misfired store recovery and landing, environmental considerations, range safety, aircraft instrumentation, and range clearance and test control procedures. If energetic release systems or stores (explosives, stored energy springs, etc.) are used, training should also include special handling requirements unique to positively determining a disarmed state in order to safely launch and recover the aircraft with the energized system or store aboard. Air-to-surface training is required for all SUAS-O carrying or releasing any live explosives or stores kinetically impacting any target outside of restricted or warning airspace.

2.18.2. For operations within restricted or warning airspace, weapons delivery or release of stores will be IAW with local range rules. **(T-2).**

2.18.3. RDT&E air-to-surface testing will be conducted IAW test and safety review board guidance. **(T-2).**

2.18.4. All weapons must have an approved Air Force Judge Advocate Officer (AF/JAO) weapons review IAW AFI 51-401, *The Law of War*, prior to employment. **(T-1).**

2.19. See and Avoid. SUAS-Os operating in visual meteorological conditions, whether or not under radar control, are responsible to see and avoid other traffic, terrain, obstacles and also maintain VFR cloud clearance. For SUAS operations to comply with see and avoid requirements, the SUAS-O must have the capability to see (or detect) traffic and clouds in sufficient time to perform an avoidance maneuver in a timely manner. **(T-0).** This can be done through the use of dedicated surface or airborne visual observers (chase vehicle/aircraft) in direct communication with operators. If not capable of see and avoid, SUAS may only be operated in approved segregated airspace (restricted or warning areas, combat restricted operating zones, etc.). In this case, VFR weather minimums may not apply. SUAS-Os must not allow the aircraft to be flown so close to another that it creates a collision hazard. **(T-0).**

2.20. Safety/Risk Management. Commanders utilizing SUAS assets should understand the potential hazard these vehicles pose. SUAS can cause injury, death and/or substantial monetary damage to real property or other air operations when used improperly or with loss of control. Commanders will ensure appropriate safety programs are implemented for both the SUAS being employed and the SUAS capable payloads (e.g., laser, munitions, hazardous materials, etc.). **(T-2).**

2.21. SUAS-O Medical Requirements. Operators and their commanders should consider the following medical factors during SUAS operations: use of medications whose known common adverse effect or intended action(s) affect alertness, judgment, cognition, special sensory function, or coordination. SUAS-Os will report any new medical conditions which could negatively impact SUAS operations to the appropriate command and medical authority. **(T-2).**

2.22. Scheduling Limitations/Alcohol Consumption. SUAS operators will not consume alcoholic beverages within 12 hours of flight operations. **(T-1).** Failure to observe the mandatory provisions of this instruction by Regular Air Force military members, Air Force Reserve military members on active duty or inactive duty for training, and ANG members in Title 10 status is a violation of Article 92 of the Uniform Code of Military Justice. ANG members in Title 32 status performing full-time National Guard duty or inactive duty for training, who violate the mandatory provisions of this instruction, may be held accountable through similar provisions of their respective State Military Codes. Civilian employees are subject to administrative and/or disciplinary action for violations of the mandatory provisions of this instruction IAW Air Force Instruction 36-704 or Air Force Manual 34-310, as applicable. Government contract employees are expected to uphold the requirements of this manual IAW their statement of work. All contracts shall include language mandating compliance with this manual. **(T-1).** Do not schedule SUAS-Os for flight duties when the SUAS-O has any medical, mental health, or medication issue which would negatively impact the SUAS-Os ability to safely operate the SUAS.

2.23. Pre-Mission Planning. SUAS-Os will accomplish pre-flight planning. **(T-2).**

2.23.1. Operators will acquaint themselves with all information, procedures and rules appropriate to the SUAS and the mission. **(T-2).**

2.23.2. Weather. SUAS-Os will obtain sufficient weather information to safely conduct the flight and adhere to operator's manual restrictions. **(T-2).**

2.24. Briefings. The lead SUAS-O will ensure each crewmember is briefed on items affecting safety or mission completion. **(T-2).** These briefings will include, but need not be limited to:

2.24.1. Emergency procedures. **(T-2).**

2.24.2. Airspace/operating area, approved frequencies and method of complying with restrictions. **(T-2).**

2.24.3. Safety precautions and restrictions, including use of electronic devices that may cause interference. **(T-2).**

2.24.4. Special procedures and instructions for use during training or operational missions. **(T-2).**

2.25. Fuel/Battery Charge Requirements. The SUAS-O will ensure sufficient fuel/battery charge is available to safely conduct or continue the flight. **(T-3).**

Chapter 3

TRAINING

3.1. General.   SUAS-Os are trained, certified, and authorized to plan and conduct SUAS operations in approved airspace. IT certifies or qualifies an individual in basic operator duties of an assigned SUAS without regard to a unit-specific mission. Completion of IT is a prerequisite for MT, which certifies or re-certifies an operator in duties required to perform SUAS missions specific to their unit. After completing MT, SUAS-Os may operate a system in support of the unit mission without supervision.

3.1.1. Acceptance of Previous Certification**.** Unit commanders may accept an operator's previous SUAS IT, MT, specialized training, or upgrades from other AF units or contractors/industry partners on the same system. All gained SUAS-O's will comply with **paragraph 1.2.10**. (**T-3).** Commanders must document acceptance of certification on the AF Form 1381. **(T-3).**

3.1.2. Removal from Training. A commander may remove an individual from SUAS training at their discretion. The justification for the removal will be documented and becomes a permanent part of the individual's training record. **(T-3).**

3.1.3. Reentry into Training. Commanders may approve, and will document, a decertified or unqualified individual's reentry into SUAS training. **(T-3).** This documentation becomes a permanent part of the individual's training record.

3.1.4. Unit commanders may determine training events using a LC approved SUAS simulator.

3.2. Initial Training (IT).   IT focuses on basic knowledge and skills required to operate a specific SUAS. AFSOC/A3OU is the approval authority for SUAS IT courseware/syllabi. For RDT&E units, the unit commander is the approval authority for unit or vendor provided training. The training includes operation of all baseline mission equipment, but does not emphasize tactical employment, nor does it address the operation of specialized equipment, software, or sensors uniquely employed by specific units. IT will conclude with a culmination flight and a written, or verbal, examination. **(T-2).** Individuals attending the Air Force FTU course will be trained to a minimum of basic unmanned aircraft systems qualification (BUQ) Level II. **(T-0).** Individuals attending approved IT courses, other than the FTU, must complete the appropriate BUQ stand-alone level training required to conduct SUAS operations in their assigned airspace prior to conducting the SUAS operations. **(T-0).** Students attending IT may log flight hours with instructor guidance. These hours will not be counted for SUAS-O currency. Approved stand-alone BUQ training and examples of the AF Forms 797 and 1381 are located in the training section in the SUASMAN web application. Requests for SUASMAN access can be made at **https://suasman.us.af.mil** or by Email: **AFSOC.A3OU.SUASMAN@us.af.mil**.

3.2.1. Formal IT**.** The primary method of formal IT is to attend a LC approved FTU or vendor instructed training course. Manufacturers who do not offer LC approved self-taught training materials for the SUAS will require formal IT. **(T-2).** Training concludes with a culmination flight and a written, and/or verbal examination. Upon completion of IT award a graduation certificate. The certification will be recorded on AF Form 1381 by the squadron/unit SUAS PM and uploaded into SUASMAN. **(T-2). Exception:** RDT&E units may maintain training records as determined by Air Force Materiel Command Flight Operations and Standardization and Evaluation (AFMC/A3V).

3.2.2. Unit IT. Units flying SUAS using manufacturer's self-study training materials are eligible for unit IT, with MAJCOM and LC approval. Units must implement additional performance-based materials to develop a comprehensive unit SUAS IT program. **(T-2). Exception:** RDT&E unit commanders may authorize unit IT without going through MAJCOM and LC.

3.2.2.1. To obtain MAJCOM and LC approval, the unit IT program must incorporate system-specific training developed by the manufacturers and unit, and AFSOC/A3OU-developed BUQ course. **(T-2).** MAJCOMs may supplement the AFSOC-developed BUQ training as desired.

3.2.2.2. SUAS IT training topics are included in the checklist provided in **Attachment 10.**

3.2.2.3. Refer to **paragraph 3.11** for documentation requirements.

3.2.2.4. The squadron or unit SUAS PM records completion of unit IT on an AF Form 1381 and uploads the documentation into SUASMAN. **(T-2).**

3.2.2.5. Units may request formal IT at the FTU, in lieu of unit IT, as long as the FTU offers that system's training.

3.2.3. At a minimum, training will meet SUAS Group specific training requirements to include appropriate BUQ Level, IAW CJCSI 3255.01, *Joint UAS Minimum Training Standards*, airspace training and vehicle specific systems and operations training. **(T-0).** Assigned airspace determines the training level required.

3.2.3.1. BUQ Level I: VFR in Class E, G, and restricted/combat or uncontrolled airspace <1200 ft. above ground level.

3.2.3.2. BUQ Level II: VFR in Class D, E, G, and restricted/combat or uncontrolled airspace <18,000 ft. mean sea level.

3.2.3.3. BUQ Level III: VFR in all classes of airspace except U.S. and ICAO Class A.

3.2.3.4. BUQ Level IV: VFR/instrument flight rules in all weather conditions and classes of airspace up to FL600.

3.2.4. Unit SUAS-I will utilize approved courseware/syllabi. **(T-2).** Units SUAS-Is are allowed to tailor training/recertification programs to meet unit requirements and individual SUAS-O needs. SUAS-I should consider individual's current certification, experience, currency, documented performance, available training assets, and prior formal training.

3.3. Fundamentals of Instruction. Prior to instructing IT, SUAS-Is must have completed a fundamentals of instruction course. **(T-2).** While formal schoolhouse training is always the preferred option, AFSOC/A3OU has included a suitable distance learning fundamentals of instruction courseware in the SUASMAN library for units to utilize, if formal schoolhouse training is unavailable. Document fundamentals of instruction completion/certification on the AF Form 1381.

3.4. Vendor Provided Training. With AFSOC/A3OU approval, units may utilize vendor-provided training or other contracted sources of training. For approval, email request to AFSOC/A3OU workflow (**AFSOC.A3OU.WF@us.af.mil**). **Exception:** RDT&E unit commanders may authorize vendor training for their unit.

> 3.4.1. If a student's progress is unsatisfactory, the vendor should notify a member of the student's chain of command or unit SUAS PM.

> 3.4.2. Following review of the student's record, the student's chain of command or unit SUAS PM will determine whether to continue or terminate training. **(T-3).**

3.5. Other Service SUAS Training for Air Force Members. AFSOC/A3OU will review, validate, and approve other service SUAS training. **(T-2).** If that service's training is approved, commanders may accept SUAS-O certifications attained using other Service's training. Document acceptance of certification on the AF Form 1381.

3.6. Difference Training (DT). DT is instruction on system series modifications, improvements or additional added equipment to an existing SUAS (i.e., gimbaled payload vs. fixed payload or RQ-20A vs RQ-20B). DT may be conducted at the unit with courseware approved by AFSOC/A3OU. **Exception:** AFMC RDT&E and USAFA RDT&E will approve DT for their respective organizations. **(T-2). Note:** RDT&E units are not required to conduct DT when systems/payloads under test are modified without change to vehicle operations or flying characteristics.

> 3.6.1. DT shall only be taught by an appropriately trained SUAS-I. **(T-2).** SUAS-Os enrolled in DT must have first completed IT for the basic/unmodified system**. (T-2).**

> 3.6.2. All tasks will be annotated on AF Form 797 and completion of DT will be documented on AF Form 1381. **(T-2).**

3.7. Conversion Training. When the difference between SUAS variants is significant and changes the way the SUAS is operated or launched and recovered, the training should be classified as conversion training. Conversion training requires AFSOC/A3OU approved curriculum or approved vendor provided training. Conversion training eliminates or limits BUQ training that has already been accomplished and is conducted using a shorter, AFSOC/A3OU approved curriculum or vendor provided training. Completion of conversion training will be documented on AF Form 1381 by the SUAS PM. **(T-2). Note:** RDT&E units are not required to conduct conversion training when systems/payloads under test are modified without change to vehicle operations or flying characteristics.

3.8. Mission Training (MT). MT is required to certify Group 1, 2, and 3 SUAS-Os to employ SUAS in support of the unit's METL requirements and is accomplished after IT. Upon completion of all MT training events the SUAS-O may be mission certified by the unit commander. **Exception:** MT does not apply to AFMC RDT&E units or USAFA RDT&E, Air Force Institute of Technology, Reserve Officer Training Corps, or Officer Training School.

3.8.1. Unit MT programs should be developed incorporating unit METL requirements and providing local orientation to new SUAS-Os. Training tasks will be annotated on AF Form 797 (or equivalent) and completion of training recorded on AF Form 1381 by the SUAS PM. **(T-2).**

3.8.2. MT is not normally conducted on operational missions. With unit commander approval, training requirements may be completed during operational missions. Comply with any restrictions in applicable operations order.

3.8.3. If a SUAS-O is certified in multiple platforms, the MT flight tasks should be tailored to focus on how each platform differs for each mission, and have the SUAS-O demonstrate their capability to execute each of those tasks. If a SUAS-O has completed MT on a previous platform and the execution of those tasks remain the same, they do not need to repeat MT on the newly certified platform.

3.8.4. Special Mission Certifications. The commander may select SUAS-Os certified in the unit's mission to maintain additional special certifications. Special mission events are not core mission events and are not required to complete MT. SUAS-Is may be authorized to teach and certify any special mission events in which they are certified and current.

3.8.5. Commanders will review CJCSI 3255.01, Enclosure B, to determine if additional joint mission qualification (JMQ) training is warranted (i.e., JMQ-B or JMQ-C). **(T-0).** If additional training is necessary, the unit SUAS PM will develop a training program to satisfy the CJCSI 3255.01 requirements. **(T-0).** SUAS-Os must complete the appropriate JMQ levels in order to complete MT. **(T-0).**

3.9. Continuation Training (CT). CT conducted to maintain and develop proficiency in SUAS to support unit mission. SUAS-Os will complete all required currency events within the time period specified to be considered "current." **(T-2).** See **Table 3.1** **Minimum Currency Requirements** for basic requirements. Unit SUAS PMs may add any additional CT events to a unit specific requirements table, based on commander's guidance.

Table 3.1. Minimum Currency Requirements.

Event	Group 1		Group 2		Group 3	
	#Req	**Period**	**#Req**	**Period**	**#Req**	**Period**
Live Flight	1	90 days	1	90 days	1	45 days
Biennial Certification Flight	1	24 mo.	1	24 mo.	N/A	N/A
Evaluation Flight	N/A	N/A	N/A	N/A	1	17 mo.

3.9.1. A live flight consists of a launch, flight operation, and landing. Minimum flight duration, if required, will be determined by unit commander. **(T-3).**

3.9.2. Flying any model or series of SUAS that certification was achieved through difference or conversion training will satisfy the currency requirements for all SUAS series within that model. Refer to **Aircraft Model/Series** in *Terms* section. **Exception:** RDT&E units may track currency based on Group rather than by individual systems**.**

3.9.3. Failure to maintain currency. Non-current SUAS-Os are not authorized to operate SUAS unless under supervision of a current and certified SUAS-I. SUAS-Is must document currency event recertification on the AF Form 1381. **(T-2).**

3.10. Commander-Directed Downgrade. Any commander in the SUAS-O's chain of command may direct a downgrade to an intermediate level of certification or a decertified status. The commander (or designated representative) will direct a downgrade in a Memorandum for Record (MFR) to the unit's PM. **(T-3).** Upload MFR into the individual's SUASMAN account.

3.10.1. Unit PMs will make applicable changes to the individual's SUASMAN account. **(T-3)**. A commander-directed downgrade will be annotated on an AF Form 1381 and upload via SUASMAN. **(T-2).**

3.10.2. Use the decertification process in cases where there is a loss of commander's confidence in the SUAS-O's ability to safely operate the SUAS and/or equipment. Do not use as a substitution for, or in lieu of, administrative or disciplinary actions.

3.10.3. Individuals who are downgraded to a decertified status must re-accomplish IT. **(T-2).**

3.11. Documentation. The AF Form 797 (or equivalent) may be utilized in conjunction with the AF Form 1381 for training and certification by all SUAS-Os. The AF Form 797 (or equivalent) will be the source document used by SUAS-Os to annotate the training tasks completed during IT or MT certification. **(T-2).** AF Form 1381 will be utilized by SUAS-Os to record all completed certifications and evaluations. **(T-2).** See **Attachments 4** and **5** for examples. SUAS flight activity will be documented electronically in SUASMAN by SUAS-Os. **(T-2). Exception:** RDT&E units may use AFMC/A3V approved software and forms to track flight activity and certification.

3.11.1. Instructions for how to enter and maintain an individual's training record can be found in the SUASMAN User Manual located in the Help menu on the SUASMAN application. It is recommended that PMs and SUAS-Os maintain a copy of their own personal flight log as a backup.

3.11.2. Documentation and training records must be kept current by the SUAS PM and provide an outside inspector adequate detail to accomplish a no-notice paperwork inspection or audit of operational status of all assigned or attached SUAS-O/I/Es. **(T-2).**

3.11.3. SUAS-Os will log operator time only on the platforms and crew positions for which they are certified. **(T-2).**

3.11.4. The unit SUAS PM is responsible for managing both assigned and attached individual's training records.

Chapter 4

SUAS GROUP 1 REQUIREMENTS

4.1. SUAS-O Medical Requirements. Group 1 SUAS-Os are excluded from Section U, *USAF Medical Standards Directory.* Personnel should have no medical condition present which may incapacitate an individual suddenly or without warning. No person may directly participate in the operation of the SUAS or act as a visual observer if they know, or have reason to know, of any physical or mental condition that would interfere with the safe operation of the aircraft; this includes both over the counter and prescription medications.

4.2. Unit IT. Unit IT is authorized but requires MAJCOM and LC approval prior to use/implementation. At a minimum, units will ensure training includes AFSOC/A3OU developed BUQ Level II aviation related training and SUAS-specific training developed by the unit. **(T-0).** Completion of unit IT will be recorded on an AF Form 1381 by the squadron/unit SUAS PM and uploaded into SUASMAN. **(T-2). Exception:** RDT&E unit commanders may authorize unit training.

4.2.1. Courseware must be coordinated through MAJCOM/A3T and approved by AFSOC/A3OU. **(T-2).**

4.2.2. SUAS training topics are included in the checklist provided in **Attachment 10.**

4.3. Continuation Training (CT). Training conducted to maintain and develop proficiency in SUAS used to support unit mission. Document unit specific CT tasks required to accomplish unit's mission in a unit CONEMP.

Table 4.1. Minimum Currency Requirements.

Event	Group 1	
	# required	**Period**
Live Flight	1	90 days
Biennial Certification Flight	1	24 months
Evaluation Flight	N/A	N/A

4.3.1. SUAS-O will complete one live flight every 90 days. **(T-2).** A live flight consists of a launch, flight operation, and landing. Minimum flight duration, if required, will be determined by unit commander. **(T-3).** See **Table 4.1 Minimum Currency Requirements** for basic Group 1 requirements. Credit for a currency flight may be shared between other models and series whose initial certification requirements can be met through conversion or DT. Refer to **Aircraft Model/Series** in *Terms* section**.**

4.3.1.1. Failed launches will not be counted by SUAS-Os. **(T-3).**

4.3.1.2. Simulated flights will not be counted by SUAS-Os for currency if only maintaining the minimum currency requirements in **Table 4.1 (T-2).** However, if the commander's SUAS program exceeds the minimum currency requirement, simulated flights on LC approved SUAS simulators may be used to accomplish sorties for currency.

4.3.2. The 90 day requirement is based off of the IT initial certification date, re-certification date, or completion of the last flight within the required 90 days.

4.3.3. Unit commander will determine appropriate training events that may be accomplished using an LC approved SUAS simulator. **(T-3).**

4.3.4. Failure to complete CT requirements. The unit SUAS PM is responsible for keeping the commander advised on the training status of all assigned SUAS-Os.

4.3.4.1. Non-current SUAS-Os are not authorized to operate SUAS unless under direct supervision of a current and certified SUAS-I.

4.3.4.2. SUAS-O re-currency requirements are as follows:

4.3.4.2.1. Loss of currency up to 6 months. SUAS-Os who fail to accomplish the required quantities and frequency of MT events to maintain currency will demonstrate proficiency in all delinquent items to a SUAS-I. **(T-2).**

4.3.4.2.2. Loss of currency 7 to 24 months. A SUAS-O who is non-current exceeding 6 months, or who did not accomplish a live flight prior to the last day of the 24th month, must complete unit-level training, under the instruction of a SUAS-I, in all delinquent items and additional training as directed by the unit commander. **(T-2).** At a minimum, additional training will consist of a biennial certification and MT administered by a SUAS-I. **(T-2).**

4.3.4.2.3. Loss of currency exceeding 24 months requires re-accomplishment of IT and MT.

4.4. Biennial Certification. Group 1 SUAS-Os must accomplish a periodic certification flight for each SUAS they are certified on every 24 months after IT graduation date, or date of last biennial certification. **(T-2).** This flight will be observed and documented by a SUAS-I on the AF Form 1381. **(T-2). Exception:** RDT&E units may accomplish certification based on Group rather than by individual systems**. Note:** When unit commanders mandate the use of a Standardization and Evaluation Program, the Evaluation Flight process replaces the Biennial Certification Flight process. See **Chapter 7**.

4.4.1. Biennial certification will be administered by a SUAS-I, recorded on an AF Form 1381 and filed in SUASMAN. **(T-2).**

4.4.2. Biennial certification may be accomplished any time prior to the 24 month due date and includes the following ground and flight items:

4.4.2.1. Ground Requisites. SUAS-Os will accomplish a ground review with a SUAS-I. **(T-3).** Include mission planning, preflight, site selection and setup, normal operating procedures, review of checklists, emergency procedures, operator maintenance, recovery, and post-mission requirements.

4.4.2.2. Flight Requisites. SUAS-Os will accomplish a live flight, or a suitable simulator profile if approved by the unit commander, with a SUAS-I. **(T-3)**.

4.4.2.2.1. Flight should be realistic, reflect unit tasking, and incorporate current tactics applicable to the unit mission.

4.4.2.2.2. SUAS-O will receive a biennial certification in all certified positions by a SUAS-I. **(T-2).**

4.4.2.2.3. The SUAS-I administering the certification flight must include a general knowledge verbal and/or written assessment. **(T-2).**

4.5. Safety/Risk Management. Commanders will ensure appropriate safety programs are implemented for various payloads (e.g., laser, munitions, hazardous materials, etc.). **(T-3).**

4.6. Risk Management (RM). Commanders will integrate an RM and mishap prevention program into SUAS mission planning and flight operations. **(T-2).** See **Attachment 6** for example of an RM worksheet and flight authorization. The RM worksheet may be disposed of at the completion of the mission as long as no mishap has occurred. In the event of a mishap, the RM worksheet will be retained by the unit safety representative for investigative purposes, if required.

Chapter 5

SUAS GROUP 2 REQUIREMENTS

5.1. SUAS-O Medical Requirements. Refer to Section U, *USAF Medical Standards Directory* for specific Group 2 SUAS-O medical requirements. Personnel should have no medical condition present which may incapacitate an individual suddenly or without warning. No person may directly participate in the operation of the SUAS or act as a visual observer if they know, or have reason to know, of any physical or mental condition that would interfere with the safe operation of the aircraft; this includes both over the counter and prescription medications.

5.2. Unit IT. Unit IT is authorized but requires MAJCOM and LC approval prior to use/implementation. At a minimum, units will ensure training includes AFSOC/A3OU developed BUQ Level II aviation related training and SUAS-specific training developed by the unit. **(T-0).** Completion of unit IT will be recorded on an AF Form 1381 by the squadron/unit SUAS PM and uploaded into SUASMAN. **(T-2). Exception:** RDT&E unit commanders may authorize unit training.

5.2.1. SUAS-Os requiring BUQ Level III aviation related training may require attendance to a FAA approved ground school or an AFSOC approved BUQ Level III course in addition to SUAS-specific training developed by the unit.

5.2.2. Courseware must be coordinated through MAJCOM/A3T and approved by AFSOC/A3OU. **(T-2).** SUAS training topics are included in the checklist provided in **Attachment 10.**

5.3. Continuation Training (CT). Training conducted to maintain and develop proficiency in SUAS used to support unit mission. Document unit specific CT tasks required to accomplish unit's mission in a unit CONEMP.

Table 5.1. Minimum Currency Requirements.

Event	Group 2	
	# required	**Period**
Live Flight	1	**90 days**
Biennial Certification Flight	1	**24 months**
Evaluation Flight	N/A	N/A

5.3.1. SUAS-Os will complete one live flight every 90 days. **(T-2).** A live flight consists of a launch, flight operation, and landing. Minimum flight duration, if required, will be determined by unit commander. **(T-3).** See **Table 5.1** **Minimum Currency Requirements** for basic Group 2 requirements. Credit for a currency flight may be shared between other models and series whose initial certification requirements can be met through conversion or DT. Refer to **Aircraft Model/Series** in *Terms* section**.**

5.3.1.1. Failed launches will not be counted by SUAS-Os. **(T-3).**

5.3.1.2. Simulated flights will not be counted by SUAS-Os for currency, if only meeting the minimum currency requirement. **(T-2).** Simulated flights on LC approved SUAS simulators may be used to accomplish some sorties for currency if the commander's SUAS program exceeds the minimum currency requirement.

5.3.2. The 90 day requirement is based off of the IT initial certification date, re-certification date, or completion of the last flight within the required 90 days.

5.3.3. Unit commander will determine appropriate training events that may be accomplished using an LC approved SUAS simulator. **(T-3).**

5.4. Failure to Complete CT Requirements. The unit SUAS PM is responsible for keeping the commander advised on the training status of all assigned SUAS-Os.

5.4.1. Non-current SUAS-Os are not authorized to operate SUAS unless under direct supervision of a current and certified SUAS-I.

5.4.2. SUAS-O re-currency requirements are as follows:

5.4.2.1. Loss of currency up to 6 Months. SUAS-Os who fail to accomplish the required quantities and frequency of MT events to maintain currency will demonstrate proficiency in all delinquent items to a SUAS-I. **(T-2).**

5.4.2.2. Loss of currency 7 to 24 months. A SUAS-O who is non-current exceeding 6 months, or who did not accomplish a live flight prior to the last day of the 24th month, must complete unit-level training, under the instruction of a SUAS-I, in all delinquent items and additional training as directed by the unit commander. **(T-2).** At a minimum, additional training will consist of a biennial certification and MT by a SUAS-I. **(T-2).**

5.4.2.3. Loss of currency exceeding 24 months requires re-accomplishment of IT and MT.

5.5. Safety/Risk Management. Commanders utilizing Group 2 SUAS assets must understand the potential hazard these vehicles pose. **(T-3).** Group 2 vehicles can cause death and/or great monetary damage to real property when used improperly or with loss of control.

5.5.1. Commanders will ensure appropriate safety programs are implemented for both the SUAS being employed and the SUAS capable payloads in use (e.g., laser, munitions, hazardous materials, etc.). **(T-3)**.

5.5.2. Commanders may choose to mandate a full or partial Standardization and Evaluation program be implemented to help mitigate safety risk.

5.6. Risk Management (RM). Commanders will integrate an RM and mishap prevention program into SUAS mission planning and flight operations. **(T-2).** See **Attachment 6** for example of an RM worksheet and flight authorization. The RM worksheet may be disposed of at the completion of the mission as long as no mishap has occurred. In the event of a mishap, the RM worksheet will be retained by the unit safety representative for investigative purposes, if required.

Chapter 6

SUAS GROUP 3 REQUIREMENTS

6.1. SUAS-O Medical Requirements. Refer to Section U, *USAF Medical Standards Directory* for specific Group 3 SUAS-O medical requirements. Personnel should have no medical condition present which may incapacitate an individual suddenly or without warning. No person may directly participate in the operation of the SUAS or act as a visual observer if they know, or have reason to know, of any physical or mental condition that would interfere with the safe operation of the aircraft; this includes both over the counter and prescription medications.

6.2. Unit IT. Unit IT is authorized but requires MAJCOM and LC approval prior to use/implementation. At a minimum, units will ensure training includes AFSOC/A3OU developed BUQ Level II aviation related training and SUAS-specific training developed by the unit. **(T-0).** Completion of unit IT will be recorded on an AF Form 1381 by the squadron/unit SUAS PM and uploaded into SUASMAN. **(T-2). Exception:** RDT&E unit commanders may authorize unit training.

6.2.1. SUAS-Os requiring BUQ Level III aviation related training may require attendance to a FAA approved ground school or an AFSOC approved BUQ Level III course in addition to SUAS-specific training developed by the unit. Current or formerly-rated personnel may receive BUQ Level IV credit from Undergraduate Flight Training.

6.2.2. Courseware must be coordinated through MAJCOM/A3T and approved by AFSOC/A3OU. **(T-2).** SUAS training topics are included in the checklist provided in **Attachment 10.**

6.3. Continuation Training (CT). Training conducted to maintain and develop proficiency in SUAS used to support unit mission. Document unit specific CT tasks required to accomplish unit's mission in a unit CONEMP.

Table 6.1. Minimum Currency Requirements.

Event	Group 3	
	# required	**Period**
Live Flight	1	**45 days**
Biennial Certification Flight	N/A	N/A
Evaluation Flight	1	**17 months**

6.3.1. SUAS-Os will complete one live flight every 45 days. **(T-2).** A live flight consists of a launch, flight operation, and landing. Minimum flight duration, if required, will be determined by unit commander. **(T-3).** See **Table 6.1 Minimum Currency Requirements** for basic Group 3 requirements. Credit for a currency flight may be shared between other models and series whose initial certification requirements can be met through conversion or DT. Refer to **Aircraft Model/Series** in *Terms* section**.**

6.3.1.1. Failed launches will not be counted by SUAS-Os. **(T-3).**

6.3.1.2. Simulated flights will not be counted by SUAS-Os for currency, if only meeting the minimum currency requirement. **(T-2).** Simulated flights on LC approved SUAS simulators may be used to accomplish some sorties for currency if the commander's SUAS program exceeds the minimum currency requirement.

6.3.2. The 45 day requirement is based off of the IT initial certification date, re-certification date, or completion of the last flight within the required 45 days.

6.3.3. Unit commander will determine appropriate training events that may be accomplished using an LC approved SUAS simulator. **(T-3).**

6.4. Failure to Complete CT Requirements. The unit SUAS PM is responsible for keeping the commander advised on the training status of all assigned SUAS-Os.

6.4.1. Non-current SUAS-Os are not authorized to operate SUAS unless under direct supervision of a current and certified SUAS-I.

6.4.2. SUAS-O re-currency requirements are as follows:

6.4.2.1. Loss of currency up to 6 months. SUAS-Os who fail to accomplish the required quantities and frequency of MT events to maintain currency will demonstrate proficiency in all delinquent items to a SUAS-I. **(T-2).**

6.4.2.2. Loss of currency 7 to 17 months. A SUAS-O who is non-current exceeding 6 months, or who did not accomplish his/her evaluation flight prior to the last day of the 17th month, must complete unit-level training, under the instruction of a SUAS-I, in all delinquent items and additional training as directed by the unit commander. **(T-2).** At a minimum, additional training will consist of a certification evaluation and MT by a SUAS-I. **(T-2).**

6.4.2.3. Loss of currency exceeding 17 months requires re-accomplishment of IT and MT.

6.5. Certification/Evaluation Cycle. SUAS-Os operating Group 3 systems will complete a certification evaluation no later than the last day of the 17th month after IT graduation date, or date of last certification evaluation. **(T-2).**

6.5.1. Completion of the certification evaluation flight will be documented on the SUAS Evaluation Tool and certification recorded on an AF Form 1381 by a SUAS-E. **(T-2).** SUAS-E will upload the completed Evaluation Tool and AF Form 1381 to SUASMAN. **(T-2).**

6.5.2. The certification evaluation flight may be accomplished any time prior to the 17th month due date.

6.5.3. Evaluation flight will be administered by SUAS-E IAW **Chapter 7**, *Standardization and Evaluation Program.* **(T-2).**

6.5.4. SUAS-Os will accomplish a live flight. **(T-2).**

6.5.4.1. Flight should be realistic, reflect unit tasking, and incorporate current tactics applicable to the unit mission.

6.5.4.2. SUAS-O will receive a certification evaluation by a SUAS-E in all certified positions. **(T-2).**

6.6. Safety/Risk Management. Commanders utilizing Group 3 SUAS assets must understand the potential hazard these vehicles pose. **(T-2).** Group 3 vehicles can cause death and/or great monetary damage to real property when used improperly or with loss of control.

6.6.1. Commanders will ensure appropriate safety programs are implemented for both the SUAS being employed and the SUAS capable payloads in use (e.g., laser, munitions, hazardous materials, etc.). **(T-3).**

6.6.2. Commanders will implement a Standardization and Evaluation program to help mitigate risk. **(T-2).**

6.7. Risk Management (RM). Commanders will integrate an RM and mishap prevention program into SUAS mission planning and flight operations. **(T-2).** See **Attachment 6** for example of an RM worksheet and flight authorization. The RM worksheet may be disposed of at the completion of the mission as long as no mishap has occurred. In the event of a mishap, the RM worksheet will be retained by the unit safety representative for investigative purposes, if required.

Chapter 7

STANDARDIZATION AND EVALUATION PROGRAM

7.1. General. A Standardization and Evaluation (Stan/Eval) program will be required when operating any Group 3 SUAS or when a unit commander deems a Stan/Eval program is necessary to mitigate operational or programmatic risk for Group 1 or 2 SUAS. **(T-1).** Stan/Eval program objectives include but not limited to:

7.1.1. Validate readiness and effectiveness of unit flight operations.

7.1.2. Assess and document individual aircrew proficiency and capability to accomplish assigned SUAS duties.

7.1.3. Develop and ensure standardization of operational procedures for SUAS employment.

7.1.4. Ensure compliance with appropriate operational, training, and administrative directives.

7.1.5. Recognize trends and recommend/initiate changes to training programs and directives.

7.2. Stan/Eval Program. The Stan/Eval program is established by the squadron commander and administered by appointed flight examiners embedded within the unit.

7.2.1. The unit commander is the certifying official for all unit SUAS examiners (SUAS-E).

7.2.2. The unit commander will appoint a certified instructor as Chief of Stan/Eval. **(T-2).** This individual will oversee all aspects of the unit Stan/Eval program. **(T-2).**

7.2.3. The unit commander will select examiners from the most highly qualified and experienced instructors. **(T-3).** Document SUAS-E designation on the AF Form 1381.

7.2.4. Annotate all examiners, to include attached or guest help examiners, in a unit letter of examiner certification. Update this letter as necessary when SUAS-Es are added or removed.

7.3. SUAS Examiners (SUAS-E). SUAS evaluations are administered by SUAS examiners. Examiners will:

7.3.1. Conduct and document evaluations IAW this chapter. **(T-2).**

7.3.2. Assign a grade for each evaluation using Qualification level "Q" (Q1, Q2, Q3) or Unsatisfactory "U" for each evaluation administered. **(T-2).**

    7.3.2.1. Assign a "Q1" to an evaluation when published standards are met and no additional training is required. **(T-2).** Desired performance and knowledge of procedures, equipment and directives must be demonstrated. **(T-2).** No U grades were awarded in any evaluation area.

    7.3.2.2. Assign a "Q2" to an evaluation when ability to perform duties safely is demonstrated but there were one or more area(s) where additional training was assigned. **(T-2).**

    7.3.2.3. Assign a "Q3" to an evaluation when an unacceptable level of safety, performance or knowledge is demonstrated or any area was graded U. **(T-2).**

7.3.3. Maintain certification as an instructor. **(T-2).**

7.3.4. Administer evaluations only on SUASs they are certified and current on. **(T-2).** **Exception:** AFMC RDT&E and USAFA RDT&E may provide evaluations by group.

7.3.5. Administer evaluations only on those mission/skill sets in which they maintain certification. **(T-2).**

7.3.6. Conduct a thorough pre-mission briefing and post-mission debriefing for the examinee on all aspects of the evaluation. **(T-2).**

7.3.7. Immediately correct breaches of flying safety or flight discipline during an evaluation. **(T-2).**

7.3.8. Notify the unit leadership whenever Q2 or Q3 performance is observed. **(T-2).**

7.3.9. Prior to SUAS-E certification, the SUAS-E candidate will demonstrate thorough knowledge and understanding of STAN/EVAL requirements and processes including the use and completion of the SUAS Evaluation Tool. **(T-2).** See **Attachment 3**.

7.3.10. Administer an evaluation that the candidate SUAS-E must observe, to include briefing/debriefing and forms completion. **(T-2).** Upon completion, the SUAS-E may recommend the candidate to the unit commander for certification as a SUAS-E or may recommend additional training needed prior to receiving SUAS-E certification. Document evaluation on AF Form 1381.

7.4. Evaluation Flights. SUAS evaluations are divided into four categories: qualification (QUAL); mission (MSN); instructor (INSTR); and SPOT (See **paragraph 7.4.4**).

7.4.1. QUAL Evaluations. Ensures SUAS-O demonstrates minimum basic skills operating assigned SUAS.

7.4.1.1. Requirements for completing QUAL evaluations include taking an open and closed book knowledge test, a verbal ground evaluation, and a flight evaluation.

7.4.1.2. QUAL evaluations are required on a periodic basis. The maximum period allowed between QUAL evaluations is no later than the last day of the 17th month from last Q1 evaluation. (Example—initial QUAL evaluation completed on 14 Nov 2018; next evaluation due no later than 30 April 2020).

7.4.2. MSN Evaluations. Ensures SUAS-O demonstrates understanding of unit's METL requirement(s) and ability to employ SUAS to meet that requirement. Requirements for completing a MSN evaluation includes taking an open and closed book knowledge test, a verbal ground evaluation, and a flight evaluation.

7.4.2.1. All SUAS-Os operating SUAS in support of a unit METL requirements must complete a periodic MSN evaluation. **(T-2).** Evaluation period is 17 months (expiration date calculated the same as the QUAL evaluation). **Exception:** RDT&E and formal training units are exempt from administering MSN evaluations.

7.4.2.2. The MSN evaluation should reflect the type and difficulty of tasks required in fulfillment of the aircraft's operational use to support the unit METL.

7.4.2.3. The MSN and the QUAL evaluations may be combined into a 'single' event. Annotate on the AF Form 1381 as a "QUAL/MSN" evaluation. **Note:** When combining a MSN and QUAL evaluation into a single event, only one open/closed book test and one verbal evaluation need be accomplished.

7.4.3. INSTR Evaluations. Used to qualify a SUAS-O as an instructor by focusing primarily on the examinees instructional ability and systems knowledge. An INSTR evaluation requires demonstrating instructional ability.

7.4.3.1. SUAS-Es will accomplish INSTR evaluations on actual instructional missions whenever possible. **(T-3).** When students are not available or mission/crew composition requirements prevent inclusion of students, another crewmember or the examiner may serve as the student.

7.4.3.2. The MSN, QUAL, and INSTR evaluation may be combined on the same flight. Annotate on the AF Form 1381 as a "QUAL/MSN/INSTR" evaluation.

7.4.4. SPOT Evaluations. The purpose of the SPOT evaluation is to observe a specific event or requirement without intending to satisfy the requirements of a periodic QUAL, MSN, or INSTR evaluation. A SPOT evaluation is simply a snap-shot look at a selected ground or flight event. A SPOT evaluation has no specific requisites and may be administered no-notice.

7.4.5. Certification/Evaluation Cycle. QUAL, MSN, and INSTR evaluation flights conducted by a SUAS-E must be completed no later than the last day of the 17 month after IT graduation date, or date of last certification evaluation. **(T-2).** SPOT evaluations are not associated with a recurring cycle.

7.4.6. Document the evaluation flight on the SUAS Evaluation Tool, see **Attachment 3**. Upload the completed Evaluation Tool to SUASMAN. The SUAS-E administering the evaluation flight will update the SUAS-O's AF Form 1381 in SUASMAN. **(T-2).**

7.5. Loss of Certification. If a Q-3 has been assessed on a QUAL, MSN, INSTR, or SPOT evaluation or if a commander has directed a downgrade, use the following guidance to re-establish certification:

7.5.1. A commander directed downgrade requires a memorandum for record detailing loss of confidence or failure to meet certification standards be uploaded into members SUASMAN account. The MFR should also detail required training elements needed to regain currency.

7.5.2. SUAS-Es assessing an evaluation as overall Q-3 must include a narrative in the SUAS Evaluation Tool describing details of failure to meet standards. **(T-2).** SUAS-Es will include a directed training plan that must be accomplished first before attempting another evaluation. **(T-2).**

7.5.3. When administering combined evaluations, the SUAS-E may determine that only a portion of the evaluation needs to be re-accomplished. For example, an individual receiving a QUAL/MSN evaluation failed to meet standards on a mission specific event. Therefore, the SUAS-E may determine only the MSN evaluation needs to be re-accomplished.

7.5.4. Document loss of any certification on the AF Form 1381.

7.6. Evaluation Grading System.

7.6.1. SUAS-Es will use a "Q", "Q-", or "U" when grading/assessing evaluation areas. **(T-2).** **Note:** Some areas are considered critical and only have Q and U grades.

7.6.1.1. "Q" is the desired level of performance. The examinee demonstrated a satisfactory knowledge of all required information, performed SUAS-O duties within the prescribed tolerances, and accomplished the assigned mission.

7.6.1.2. "Q-" Indicates the examinee is qualified to perform the assigned area tasks, but requires debriefing or additional training as determined by the SUAS-E or there were minor deviations from established standards that did not jeopardize mission accomplishment or flight safety.

7.6.1.3. "U" indicates a breach of flight discipline, performance outside allowable parameters or deviations from prescribed procedures/tolerances that adversely affected mission accomplishment or compromised flight safety. An examinee receiving an area grade of U normally requires additional training. However, the SUAS-E may determine additional training will not improve examinee's performance and may choose to de-brief the U grade in lieu of proscribing additional training or requiring a re-evaluation.

7.6.1.4. Minor momentary deviations are acceptable, provided the examinee applies prompt corrective action and such deviations do not jeopardize flight safety. Consider cumulative deviations when determining the overall area grade.

7.6.2. Remedial Action. All grades of Q- or U require remedial action that includes either debriefing discrepancies and/or assignment of additional training.

7.6.2.1. Debriefed Discrepancy. Remedial action accomplished during debrief of the evaluation wherein the flight examiner provides instruction concerning the discrepancy and determines that the examinee has gained the necessary knowledge or proficiency.

7.6.2.2. Additional Training. Any training recommended by the flight examiner to remedy deficiencies identified during an evaluation. May include self-study, ground instruction, or additional simulation or flights.

7.6.2.3. Document additional training requirements on the SUAS Evaluation Tool.

7.7. Examination/Evaluation Areas.

7.7.1. Open Book Test. Administer an open book test consisting of 40 questions. Include subject material such as vehicle specific operations, local procedures, FAA COA/unit CONEMP requirements, appropriate airspace knowledge, and emergency procedures. The open book subject areas and the publications used to generate the exam will be made available to test takers. **(T-2).** Electronic publications may be used as references for open book examinations. Change at least 10 of the 40 questions annually.

7.7.1.1. Assess a score of 85% or better as Q.

7.7.1.2. Assess a score of 84% or lower as U.

7.7.2. Closed Book Test. Proctor a closed book test consisting of 20 questions drawn from a published Master Question File. The Master Question File bank should be no less than 50 questions and should cover vehicle specific procedures, applicable airspace rules, and emergency procedures. Change at least 10 of the 50 questions annually. **Exception:** AFMC RDT&E and USAFA RDT&E may have group specific questions in Master Question File.

7.7.2.1. Assess a score of 85% or better as Q.

7.7.2.2. Assess a score of 84% or lower as U.

7.7.3. Verbal Ground Evaluation. SUAS-E will verbally evaluate the SUAS-O on knowledge of SUAS-specific systems and emergency procedures for QUAL evaluations. **(T-2).**

7.7.3.1. SUAS-E will evaluate mission-specific procedures and tactical systems knowledge during MSN evaluations of SUAS-O. **(T-2).** Grade using Q/Q-/U standards.

7.7.3.2. Only one Ground Evaluation needs to be accomplished for each combined evaluation (i.e., one verbal evaluation for a QUAL/MSN or QUAL/MSN/INSTR evaluation).

7.7.4. Safety. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.4.1. Award a Q if examinee was aware of and complied with all safety factors required for safe ground and aircraft operations and mission accomplishment.

7.7.4.2. Award a U if examinee was unaware of or did not comply with all safety factors required for safe operation or mission accomplishment, did not adequately clear the SUAS flight path, or operated the aircraft in a dangerous manner.

7.7.5. Judgment. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.5.1. Award a Q if examinee executed the assigned mission in a timely, efficient manner and conducted the flight with a sense of understanding and comprehension.

7.7.5.2. Award a U if examinee's decisions or lack thereof resulted in failure to accomplish the assigned mission or demonstrated poor judgment to the extent that effectiveness was compromised.

7.7.6. Flight Discipline. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.6.1. Award a Q if examinee demonstrated strict professional flight and crew discipline throughout all phases of the mission.

7.7.6.2. Award a U if examinee failed to exhibit strict flight or crew discipline or violated or ignored rules or instructions.

7.7.7. Briefings. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.7.1. Award a Q if examinee presented briefings in a professional manner. Briefings were well organized and in a logical sequence. Established objectives for the mission. Effective use of training aids, if required. Concluded briefing in timely manner.

7.7.7.2. Award a Q- if examinee briefed events out of sequence, hard to follow, some redundancy. Did not make effective use of available training aids. Dwelled on non-essential mission items. Limited discussion of techniques. Did not identify probable problem areas.

7.7.7.3. Award a U if briefings caused confusion or doubt. Did not allow time for preflight of personal equipment and aircraft. Did not use training aids, if required. Redundant throughout briefings. Lost interest of participating individuals. Did not establish objectives for the mission. Omitted major training events or mission requirements.

7.7.8. Flight Planning. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.8.1. Award a Q if adequate plan was developed to accomplish the mission. Checked all factors applicable to flight IAW applicable directives. Aware of alternatives available, if flight cannot be completed as planned.

7.7.8.2. Award a Q- if flight planning contained minor error(s) or omission(s) that did not detract from mission effectiveness. Demonstrated limited knowledge of performance capabilities or approved operating procedures/rules in some areas.

7.7.8.3. Award a U if examinee made major error(s) or omission(s) that would have prevented a safe or effective mission. Displayed faulty knowledge of operating data or procedures.

7.7.9. Takeoff/Launch. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.9.1. Award a Q if examinee maintained aircraft control throughout takeoff. Performed takeoff IAW flight manual procedures and techniques.

7.7.9.2. Award a Q- if minor flight manual procedural or technique deviations were observed or control was rough or erratic.

7.7.9.3. Award a U if takeoff was potentially dangerous or exceeded aircraft systems limitations. Raised gear too early/late (if applicable). Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path.

7.7.10. Recovery/Landing.   Will   be   assessed   on   every   evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.10.1. Award a Q if landing or recovery was accomplished IAW flight manual procedures. Aircraft control throughout the landing was smooth and positive using proper steering and flight control inputs.

7.7.10.2. Award a Q- if landing or recovery was erratic or accomplished with significant deviations to established procedures but safety was not affected.

7.7.10.3. Award a U if airspeed, alignment, or sink rate limitations exceeded normal procedures. Landing was unsafe, or inappropriate control inputs jeopardized safety.

7.7.11. Systems Knowledge. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.11.1. Award a Q when examinee demonstrates a thorough knowledge of aircraft systems, limitations, and performance characteristics.

7.7.11.2. Award a Q- when knowledge of aircraft systems, limitations, and performance characteristics is adequate to perform the mission safely.

7.7.11.3. Award a U when examinee is unfamiliar with systems operation, unable to recall details, limits, or operational processes.

7.7.12. Airspace Rules and Procedures. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.12.1. Award a Q if examinee complied with airspace rules and requirements and airspeed restrictions.

7.7.12.2. Award a Q- if minor deviations detracted from safe accomplishment of the mission.

7.7.12.3. Award a U if examinee was unfamiliar with rules and procedures or unaware of or created potential traffic conflicts.

7.7.13. Conduct of the Mission. Will be assessed on every evaluation (QUAL/MSN/INSTR/SPOT) by SUAS-E. **(T-2).**

7.7.13.1. Award a Q if examinee executed the assigned mission in a timely, efficient manner and conducted the flight with a sense of understanding and comprehension.

7.7.13.2. Award a Q- if examinee made untimely or inappropriate decisions degraded or prevented accomplishment of a portion of the mission. Resources were not effectively used causing specific mission objectives to be missed.

7.7.13.3. Award a U if examinee's poor decisions resulted in mission failure.

7.7.14. Instructional Ability. Only applicable to INSTR evaluations.

7.7.14.1. Award a Q if examinee demonstrated satisfactory instructor ability and clearly defined all mission requirements and any required additional training/corrective action. Instruction was accurate, effective and timely. Instructor was completely aware of aircraft/mission situation at all times.

7.7.14.2. Award a Q- if examinee had problems with communication or analysis which degraded effectiveness of instruction/evaluation.

7.7.14.3. Award a U if examinee demonstrated inadequate ability to instruct/evaluate or was unable to perform, teach or assess techniques, procedures or systems use. Instructor did not remain aware of aircraft/ mission situation at all times.

7.8. Documentation.

7.8.1. Memorandum for Record. Use the MFR to detail circumstances leading to de-certification. If applicable, include training plan and evaluation requirements to re-gain certification. Upload MFR to members' SUASMAN account.

7.8.2. AF Form 1381. Use this form to track in chronological order all certifications, de-certifications, and evaluations.

7.8.3. SUAS Evaluation Tool. Use this document to record evaluation results. SUAS-Es fill out the form and sign documenting completion of the evaluation. Review will be conducted and signed by Chief of Standardization and Evaluation, IAW **paragraph 7.2.2** or unit commander. **(T-2).** Lastly, the examinee must sign the form accepting evaluation results. **(T-2).** Upload the completed form to members SUASMAN account.

MARK D. KELLY, Lt Gen, USAF
Deputy Chief of Staff, Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Joint Publications 3-52, *Joint Doctrine for Airspace Control in the Combat Zone*, 13 Nov 2014

PM 16-003, Deputy Secretary of Defense Policy Memorandum, Interim Guidance for Countering Unmanned Aircraft, 18 August 2016

PM 17-00X, *Deputy Secretary of Defense Policy Memorandum, Supplemental Guidance for Countering Unmanned Aircraft*, 5 July 2017

Title 10, United States Code, *Armed Forces*, 7 January 2011

Title 32, United States Code, *National Guard*, 10 August 1956

USAF Medical Standards Directory*, USAF MSD, Section U*, 24 May 2018

USN-USCG MOA, *In-Transit Escort*

10 USC Ch.15, *Military Support for Civilian Law Enforcement Agencies,* 23 December 2016

18 USC SEC 1385, *Use of Army and Air Force as Posse Comitatus,* 2012 Edition

Adopted Forms

AF Form 797, *Job Qualification Standard Continuation/Command JQS*

AF Form 847, *Recommendation for Change of Publication*

AF Form 1381, *USAF Certification of Air Crew Training*

Abbreviations and Acronyms

AF—Air Force

AFI—Air Force Instruction

AFLCMC—Air Force Life Cycle Management Center

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSOC—Air Force Special Operations Command

ANG—Air National Guard

ATC—Air Traffic Control

BUQ—Basic Unmanned Aircraft Systems Qualification (Level I-IV)

CJCSI—Chairman of the Joint Chiefs of Staff Instruction

COA—Certificate of Waiver or Authorization

CONEMP—Concept of Employment

COTS—Commercial-off-the-shelf

CT—Continuation Training

DOD—Department of Defense

DT—Difference Training

FAA—Federal Aviation Administration

FCIF—Flight Crew Information File

FMC—Fully Mission Capable

FTU—Formal Training Unit/Schoolhouse

IAW—In Accordance With

ICAO—International Civil Aviation Organization

INSTR—Instructor

IT—Initial Training

JMQ—Joint Mission Qualification

LC—Lead Command

MAJCOM—Major Command

MDS—Mission Design Series

METL—Mission Essential Task List

MFR—Memorandum for Record

MQF—Master Question File

MSN—Mission

MT—Mission Training

NMC—Non-Mission Capable

PM—Program Manager

PMC—Partially Mission Capable

Q—Qualification Level

QUAL—Qualification

RDT&E—Research Development Test and Evaluation

RM—Risk Management

SII—Special Interest Item

STAN/EVAL—Standardization and Evaluation

SUAS—Small Unmanned Aircraft System

SUAS-E—Small Unmanned Aircraft System Examiner

SUAS-I—Small Unmanned Aircraft System Instructor

SUAS-O—Small Unmanned Aircraft System Operator

SUASMAN—Small Unmanned Aircraft System Manager

U—Unsatisfactory

USAF—United States Air Force

USAFA—United States Air Force Academy

VFR—Visual Flight Rules

Terms

Above Ground Level (AGL)—Height above ground level is a height measurement with respect to the underlying ground surface.

Aircraft Model—Aircraft model refers to a specific design designation. (i.e. RQ-20 Puma, RQ-11 Raven, Instant Eye, Black Hornet or DJI Phantom.)

Aircraft Series—Aircraft series refers to distinct versions of a particular aircraft model. (i.e. RQ-20A or B, RQ-11B, Instant Eye Gen 3-5, Black Hornet (BH 3), or DJI Phantom 4 Pro.)

Certification—A term used to convey status or level of achievement. Certification is achieved by demonstrating proficiency of an event/task to a certifying official while attending a FTU, vendor, or unit training program. Certifying officials are appointed in writing by the unit commander or equivalent. Certifying officials are instructors or examiners.

Currency—A recurring event/task that must be repeated within specified timeframe. Failure to complete the event in allowed timeframe may require instructor supervision, additional training or recertification before unsupervised duty may resume.

Familiarization Training—Training conducted under the direct supervision of a SUAS-I for the purpose of allowing individuals to gain an understanding of SUAS operations and capabilities. Familiarization training does not result in SUAS-O certification.

Initial Training (IT)—Training conducted by a FTU, vendor, or unit that certifies an individual in basic operator duties of assigned SUAS without regards to a unit-specific mission or specialized equipment.

Intelligence Activities—Refers to all activities that DoD intelligence components are authorized to undertake pursuant to Executive Order 12333. It includes counter-intelligence, foreign intelligence and intelligence-related activities.

Intelligence—**Related Activities**—Those activities outside the consolidated defense intelligence program (i.e., funded by intelligence) that: respond to operational commanders' tasking for time-sensitive information on foreign entities; respond to national intelligence community tasking of systems whose primary mission is support to operating forces; train personnel for intelligence duties; provide an intelligence reserve; or are devoted to research and development of intelligence or related capabilities. (Specifically excluded from this definition are Research and Development outside the consolidated defense intelligence program and programs that are so closely integrated with a weapon system that their primary function is to provide immediate-use targeting data.)

Lead SUAS-O—A single SUAS-O specifically identified as the Lead SUAS-O by the flight authorization approving authority. The Lead SUAS-O, regardless of rank, is responsible for all aspects of the mission, regardless of crew position.

Mean Sea Level (MSL)—Altitude/elevation above mean sea level or height above average terrain.

Mission Training (MT)—Certifies an operator in those specific duties required to perform SUAS missions assigned to a specific unit.

Program Manager (PM)—The individual (normally an experienced SUAS-I) designated by the Unit Commander to oversee all aspects of SUAS training and equipment management.

Restricted Area—Restricted areas are Special Use Airspace identified by an area on the surface of the earth within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Restricted areas are depicted on aeronautical charts with an R followed by numbers, e.g., R5104.

Small Unmanned Aircraft System Examiner (SUAS-E)—Conduct/administer ground or flight evaluations and must be a current SUAS-I. A unit SUAS-E is only required if a unit has a formal standardization and evaluation (Stan/Eval) program.

Small Unmanned Aircraft System Instructor (SUAS-I)—The subject matter experts on the unit's SUAS operations. Instructors are appointed by the unit commander and the only ones authorized to provide SUAS-O flight and ground training.

Small Unmanned Aircraft System Manager (SUASMAN)—A single source web-enabled database for tracking SUAS-O certifications, flight logs, currency, training accomplishments and SUAS logistics management. SUASMAN will be used by all units for SUAS inventory and logging flights. Link is **https://SUASMAN.us.af.mil**. **Exception** RDT&E personnel from AFMC and USAFA may maintain training records and forms on MAJCOM approved software.

Small Unmanned Aircraft System Operator (SUAS-O)—is a certification received after completing IT in a specific SUAS.

SPOT Evaluations—The purpose of the SPOT evaluation is to observe a specific event or requirement without intending to satisfy the requirements of a periodic QUAL, MSN, or INSTR evaluation. A SPOT evaluation is simply a snap-shot look at a selected ground or flight event. A SPOT evaluation has no specific requisites and may be administered no-notice

Visual Observer—An individual assigned to assist the SUAS-O in duties associated with maintaining visual line of sight of the SUAS, maintaining safe terrain/obstacle clearance or avoidance, and monitoring the assigned airspace for safe air traffic separation.

Warning Area—Warning areas are Special Use Airspace with defined dimensions, extending from three nautical miles outward from the coast of the U.S. that contains activity that may be hazardous to nonparticipating aircraft. Warning areas are depicted on aeronautical charts with a W followed by numbers, e.g., W151.

Attachment 2

DOD UAS CATEGORIES

Figure A2.1. DoD UAS Categories (Ref DoD UAS Airspace Integration Plan, 21 Jan 2016).

UAS Category	Maximum Gross Takeoff Weight (lbs)	Normal Operating Altitude (ft)	Speed (KIAS)
Group 1	0–20	<1200 AGL	<100
Group 2	21–55	<3,500 AGL	<250
Group 3	<1320	<18,000 MSL	<250
Group 4	>1320		Any Speed
Group 5		>18,000 MSL	Any Speed

Attachment 3

SUAS EVALUATION TOOL

Figure A3.1. SUAS Evaluation Tool (Example).

SUAS EVALUATION TOOL					
Name Jona Smith			**Rank** TSgt	**Organizational Unit & Location** 14 SPFU, Eglin AFB, FL	
SUAS (system name) ScanEagle			**Type Evaluation** Qual / Msn / INSTR	**Date** 6 Nov 2018	
Graded Area	**Grade**		**Graded Area**		**Grade**
Open Book Test	Q		Flight Planning		Q
Closed Book Test	Q		Takeoff / Launch		Q
Verbal Ground Evaluation	Q		Landing / Recovery		Q
Safety	Q		Systems Knowledge		Q
Judgement	Q		Airspace Rules/Procedures		Q
Flight Discipline	Q		Conduct of Mission		Q
Briefings	Q		Instructional Ability		Q

Evaluation / Mission Description

TSgt Smith completed a certification evaluation on the Group 2 ScanEagle SUAS. Flight occurred within the Eglin AFB Test Range and simulated a forward tactical surveillance mission. All graded elements met standards. Systems Knowledge was commendable.

Instructor skills were evaluated during the preflight systems briefing and during recovery.

Comments / Directed Training

None

Overall Evaluation Grade				Q1	
Evaluator	**Reviewer**	**Date** 9 Nov 2018	**Examinee**	**Date** 16 Nov 2018	
Name Patrick James	**Name** Franny Ming		**Name** Jona Smith		
Sign // Signed//	**Sign** // Signed //		**Sign** // Signed //		

Attachment 4

AF FORM 797 EXAMPLE

Figure A4.1. AF Form 797 Example.

		JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS					
			CERTIFICATION				
CRITICAL TASK	TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	START DATE	COMPLETION DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CERTIFIER'S INITIALS (IF REQUIRED)
☒	1.0	Review manufacturer's computer based training (CBT) videos specific to the SUAS TR: Operation/Owner Manual					
☒	1.1	Equipment Accountability and Assembly video TR: Operation/Owner Manual					
☒	1.2	Preflight Checklist and Operations video TR: Operation/Owner Manual					
☒	1.3	Mission Preparation and Basic Flight video TR: Operation/Owner Manual					
☒	1.4	Emergency Procedures and Loss of Link Settings video TR: Operation/Owner Manual					
☒	2.0	Review BUQ training slides provided by AFSOC/A3OU TR: CJCSI 3255.01					
☒	3.0	MISSION PREPARATION TASKS					
☒	3.1	Perform Site Selection					
☒	3.2	Review Flight Authorization, Certificate of Authorization and Waiver (if applicable)					
☒	4.0	COMMUNICATION TASKS					
☒	4.1	Demonstrate verbal radio communication procedures					
☒	4.2	Demonstrate frequency deconfliction					
TRAINEE NAME					CFETP/JQS NUMBER		PAGE NO.

AF IMT 797, 20020801, V3   PREVIOUS EDITIONS ARE OBSOLETE

CRITICAL TASK	TASK NUMBER	TASKS, KNOWLEDGE AND TECHNICAL REFERENCES	CERTIFICATION				
			START DATE	COMPLETION DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CERTIFIER'S INITIALS (IF REQUIRED)
☒	5.0	BEFORE FLIGHT TASKS					
☒	5.1	Measure current weather conditions					
☒	5.2	Conduct flight and crew briefing					
☒	5.3	Demonstrate preflight inspections on system components					
☒	5.4	Recite critical memory or bold face items for emergency procedures					
☒	5.5	Demonstrate compass calibration					
☒	5.6	Complete Before Flight Checklists					
☒	6.0	FLIGHT OPERATIONS					
☒	6.1	Demonstrate safe takeoff					
☒	6.2	Demonstrate safe landing					
☒	7.0	EMERGENCY TASKS					
☒	8.0	CULMINATION FLIGHT AND WRITTEN OR VERBAL EXAM					

JOB QUALIFICATION STANDARD CONTINUATION/COMMAND JQS

TRAINEE NAME	CFETP/JQS NUMBER	PAGE NO.

AF IMT 797, 20020801, V3   (REVERSE)   PREVIOUS EDITIONS ARE OBSOLETE

Attachment 5

AF FORM 1381 EXAMPLE ENTRIES

Figure A5.1. AF Form 1381 Example Entries.

USAF CERTIFICATION OF AIR CREW TRAINING		
THIS IS TO CERTIFY THAT		
LAST NAME, FIRST, MIDDLE INITIAL AND SSAN Bohenry, Eliza, O 001-867-5309		
HAS SATISFACTORILY COMPLETED THE TRAINING OR SPECIAL QUALIFICATION INDICATED HEREON		
TRAINING REQUIREMENT/SUBJECT TITLE	DATE COMPLETED	CERTIFYING OFFICIAL/ORGANIZATION
Initial Group 1 Certification/RQ-20B/Puma & RQ-11B/Raven	20160301	ROBERT N. ROSS, CIV, USAF/ 27 SOW/SF
Mission Training Certification - Security Forces/RQ-20B/ Puma & RQ-11B/Raven	20160415	FRED M. RODGERS, CAPT, USAF/27 SOW/SF
Special Certification Training/Moving Vehicle Deployment	20160607	FRED M. RODGERS, CAPT, USAF/27 SOW/SF
Initial Group 2 Certification/ScanEagle	20161023	FRED M. RODGERS, CAPT, USAF/27 SOW/SF
Instructor Upgrade/RQ-20B/Puma & RQ-11B/Raven	20161104	FRED M. RODGERS, MAJ, USAF/27 SOW/SF
Decertification/RQ-20B/Puma & ScanEagle 2 (Greater than 180 Days from last event)	20170904	FRED M. RODGERS, MAJ, USAF/27 SOW/SF
Recertification/RQ-20B/Puma	20171029	JON B. DOE, CIV, USAF/27 SOW/SF
Acceptance of Group 1 Certification/RQ-20B/Puma & RQ-11B/Raven (PCS)	20171205	CONNY L. APPLES, CAPT, USAF/49 FW/PA
Decertification/RQ-20B/Puma & RQ-11B/Raven (No SUAS systems in unit mission)	20180404	CONNY L. APPLES, CAPT, USAF/49 FW/PA
Mission Training Certification-Public Affairs/Phantom 4 & Phantom 4 Pro	20180404	WILLIAM S. NYE, 1 LT, USAF/49 FW/PA
Instructor Upgrade/Phantom 4, Phantom 4 Pro	20180504	CONNY L. APPLES, CAPT, USAF/49 FW/PA
Recertification/ScanEagle 2 (Security Forces Augmentee)	20180629	LARRY J. BIRD, 1 LT/49 FW/SF
Commander appointed Evaluator/ScanEagle 2	20180729	SHERRY F. WASH, LT COL, USAF/49 FW/PA
Biennial Certification Flight/RQ-20B/Puma	20191015	JAKE R. MEADOWS, MSgt, USAF/27 SOW/SF

AF IMT 1381, 19760301, V1   PREVIOUS EDITION WILL BE USED.

Attachment 6

RM WORKSHEET AND FLIGHT AUTHORIZATION EXAMPLE

Figure A6.1. RM Worksheet and Flight Authorization.

Instructions:
1. Obtain "Authorized by" initials before flight. Any changes to SUAS crew members, systems or date of flight requires FA approval.
2. The Lead SUAS-O will initial "Go/No-go" after all members comply w/ medical, currency, and read file as applicable.
3. File this form with the Unit prior to flight. Verbally update risks w/ your crew as circumstances change during flight.
4. The Lead SUAS-O will determine the overall risk level w/ inputs from crew, but risk will be high if an asterisks item is annotated.
5. Overall ORM approval levels: MODERATE = Site Lead or higher; HIGH = Unit/DO or higher, ASTERISK = Unit/CC or higher.

SUAS Crew (list last names)	Go/No-go (initials)			Date of Flight	System(s)	Authorized by / Date
Lead SUAS-O						/
				Purpose (Reward):		
				Guest/VIPs flight authorized (yes or no)		
	Risk			SPECIFIC CONSIDERATIONS (Circle Applicable Moderate or High Items)		
MISSION	L	M	H	LOW	MODERATE	HIGH
Type / Complexity				Proficiency flight	Instruction, simple exercise, VIP fam/demo	*Test mission or complex exercise participation (EW)
Deconfliction				Shared Air space under tower control	Multiple Shared Ground / Airspaces	*No formal deconfliction or direct comms available
Ground maneuvers				None	Mobile ops w/ troops	*Covert mobile ops; live fire
Overall MISSION is rated:						
EQUIPMENT	L	M	H	LOW	MODERATE	HIGH
Equipment and Spare Parts				Serviceable equip / parts	Spare parts available	*Likely to affect training
Configuration				Hand control/RSTA config	Two Hand controllers	
Overall EQUIPMENT is rated:						
TERRAIN (ENVIRONMENT)	L	M	H	LOW	MODERATE	HIGH
Launch / Recovery				No obstacles within 500m, or reportable damage not likely	Increased risk for AV damage	*Damage likely or no CLS
Airspace Compliance				Within Visual Line of Sight (VLOS)	Not in Visual LOS (restricted A/S), sufficient airspace is available	*Airspace is confined, moderate chance to violate airspace
Observed or Forecasted Weather				At or above Basic VFR	Basic VFR with light precip, winds near max limits, or gust factor > 5 knots	Basic VFR with potential for intermittent hazardous WX (T-storms, lightning, heavy precip)
Heat / Cold Stress				50 > Temps (F) < 85	Temps 40-50, 85-90	Temps < 40 or > 90
Overall TERRAIN is rated:						
TROOPS	L	M	H	See Back for Individual Assessments		
Overall TROOPS are rated:						
TIME	L	M	H	LOW	MODERATE	HIGH
Planning / preparation				Normal (3+ days notice)	Scheduled 24 hrs prior	Last minute
Execution				One Site or multiple sites	Multiple sites and/or training with an instructor	*Multiple sites, same location
Overall TIME is rated:						
	L	M	H			
Overall Mission Risk						

TOP RISKS FOR THIS MISSION		RISK MITIGATION FACTORS	
1		1	
2		2	
3		3	

Lead SUAS-O Signature   Additional Signature as Required

Figure A6.2. RM Worksheet and Flight Authorization.

Lead SUAS-O	L	M	H	Lead SUAS-O		
Crew rest				Adequate crew rest	Met Crew Rest minimums	*Not crew rested
In-flight Fatigue (duty day)				< 8 Hours	8-10 Hours	10-12 Hours
Health / Long term fatigue / Environmental hazards (insects)				no issues	illness, but able to fly or mild fatigue	*Illness or meds affecting performance, feel very fatigued
Currency / Flight tasks				Proficient w/ all tasks	current, non-current w/ SUAS-I	*I do not feel comfortable as the Lead, SUAS-O or student
SUAS-O	L	M	H	Last name:		
Crew rest				Adequate crew rest	Met Crew Rest minimums	*Not crew rested
In-flight Fatigue (duty day)				< 8 Hours	8-10 Hours	10-12 Hours
Health / Long term fatigue / Environmental hazards (insects)				no issues	illness, but able to fly or mild fatigue	*Illness or meds affecting performance, feel very fatigued
Currency / Flight tasks				Proficient w/ all tasks	current, non-current w/ SUAS-I	*I do not feel comfortable as the Lead, SUAS-O or student
SUAS-O	L	M	H	Last name:		
Crew rest				Adequate crew rest	Met Crew Rest minimums	*Not crew rested
In-flight Fatigue (duty day)				< 8 Hours	8-10 Hours	10-12 Hours
Health / Long term fatigue / Environmental hazards (insects)				no issues	illness, but able to fly or mild fatigue	*Illness or meds affecting performance, feel very fatigued
Currency / Flight tasks				Proficient w/ all tasks	current, non-current w/ SUAS-I	*I do not feel comfortable as the Lead, SUAS-O or student
SUAS-O	L	M	H	Last name:		
Crew rest				Adequate crew rest	Met Crew Rest minimums	*Not crew rested
In-flight Fatigue (duty day)				< 8 Hours	8-10 Hours	10-12 Hours
Health / Long term fatigue / Environmental hazards (insects)				no issues	illness, but able to fly or mild fatigue	*Illness or meds affecting performance, feel very fatigued
Currency / Flight tasks				Proficient w/ all tasks	current, non-current w/ SUAS-I	*I do not feel comfortable as the Lead, SUAS-O or student

Attachment 7

AF UAS COA REQUEST CHECKLIST

Figure A7.1. AF UAS COA Request Checklist.

The FAA and DOD representatives have signed a Memorandum of Understanding concerning the operation of DoD UAS in the national airspace system. Prior to approving such operations certain criteria must be met. Complete this Checklist and return to AFSOC/A3OU.

YES   NO

☐   ☐   Have you coordinated this request with your MAJCOM? If yes, identify who and their contact info in the operations section.

☐   ☐   Have you obtained cyber security exemption approval? See AFMAN 11-502, paragraph 2.4.

☐   ☐   If operations will be conducted on a military installation, have you coordinated or obtained approval from installation officials? If yes, state who and their contact info in the operations section.

☐   ☐   Are UAS pilots, operators and visual observers trained and certified IAW AFMAN 11-502?

☐   ☐   Have you done any coordination with any air traffic control agencies? If yes, state who and their contact info in the operations section.

☐   ☐   Do you have the appropriate approval for domestic use? See AFMAN 11-502, paragraph 2.5. and attachment 8.

☐   ☐   Do you have a statement of airworthiness? If yes, state who granted the airworthiness in the operations section and attach a copy. See AFMAN 11-502, paragraph 2.1.

☐   ☐   Confirm that you understand that the UA must remain within clear visual range of the pilot or visual observer in ready contact with the pilot, to ensure separation from other aircraft.

☐   ☐   Confirm that you have ground permission to launch and recover at each location.

☐   ☐   Confirm that you are aware that you must ensure frequencies have been coordinated and approved with the unit or component Spectrum Manager prior to operations.

☐   ☐   Confirm that you have a CONEMP. See AFMAN 11-502, paragraph 2.6.

Unit's Point of Contact:

Name:		Phone:	
Unit/Address:		Email:	

Unit's Commander/approving official:

Name:		Phone:	
Unit/Address:		Email:	

UAS Platform:

Start   [ ]   **Date:**   [ ]   **Stop Date:**

Location (Primary Launch point):

Latitude		Longitude	

Attach the following documents:

☐ Detailed map of operations area.

☐ Detailed Lost Link/Lost Comm./Emergency Procedures.

Description of Operating Area (Include type airspace, requested altitudes, general description of the area, including Lat/Long, radius, boundaries, and any prior coordination information); and purpose, i.e., training, surveying, etc.:

Attachment 8

DOMESTIC USE OF SMALL UNMANNED AIRCRAFT SYSTEMS IN U.S. NATIONAL AIRSPACE

A8.1. Purpose. This attachment provides guidance for the domestic use of United States Air Force (USAF) Group 1, 2, & 3 small unmanned aircraft systems (SUAS) in U.S. National Airspace (hereafter "domestic use" or "domestic operations") to ensure that such use is IAW U.S. law and DoD policy. This guidance applies to all domestic use of USAF SUAS procured or purchased using USAF funds, or operated by USAF personnel including ANG (in a Title 10, Title 32, or State active duty status), or under contract to the USAF. Further, USAF UAS includes commercial off-the-shelf (COTS) SUAS procured or contracted by USAF and SUAS procured, purchased, or contracted by sources other than USAF when operated in support of USAF missions and activities (e.g., SUAS procured with State funds when used by National Guard personnel in a Title 10 or Title 32 status).

A8.2. Privacy and Civil Liberties Requirements. All USAF units will report all domestic SUAS operations (excluding training, exercises, repositioning, research, development, testing, and evaluation) every three months with reports due the first week of January, April, July and October. **(T-0).** Using the report template at Enclosure 1, include a brief description of the types or categories of missions flown; summaries of sensors employed; information acquired, collected, retained, or disseminated; the number of times assistance was provided to other Federal departments, agencies, State, local, tribal, or territorial governments; and under what authority such assistance was provided. Units will send the completed report via e-mail to **AFSOC.A3OU.WF@us.af.mil** within the first five business days of the reporting month. **(T-0).**

A8.3. Operations. Domestic use of SUAS by all USAF units will be conducted IAW FAA policies, regulations, and memoranda of agreement concerning DoD operation of UAS in the national airspace system, and consistent with applicable laws. **(T-0).**

A8.3.1. All USAF units conducting flight operations outside of restricted airspace and warning areas must comply with an FAA authorization in the form of a FAA COA, or notification IAW FAA/DoD guidance/agreements as implemented by AFMAN 11-502. **(T-0).**

A8.3.1.1. SUAS operations at joint base installations require joint base commander approval.

A8.3.1.2. All USAF units conducting domestic SUAS operations will comply with all law, regulations and guidance related to privacy and civil liberties. **(T-0).** Air Force components should use domestic imagery only when there is a justifiable need to do so. Exercises, training, testing, navigational purposes and the purposes described in Enclosure 2 below are generally valid reasons to acquire domestic imagery.

A8.3.1.2.1. The domestic use of SUAS to conduct nonconsensual surveillance and/or acquire or collect imagery involving specifically identified persons requires SecDef approval or the appropriate delegated authority listed in Enclosure 2. Acquired or collected imagery may incidentally include specific persons or private property without consent. Any stored imagery will not be retrievable by reference to person identifiers unless the information is stored in a previously approved law enforcement information system established by U.S. law and DoD policy, (e.g. DoDD 5200.27), and the applicable System of Records Notice (SORN).

A8.3.1.2.2. Imagery captured by USAF SUAS units intended for public release must be cleared for release through local public affairs release authority IAW AFI 35-109, *Visual Information*, and AFI 35-102, *Security and Policy Review Process*. **(T-1).**

A8.3.1.2.3. All USAF SUAS-Os conducting counterintelligence (CI), foreign intelligence (FI), or other intelligence related activities, or using intelligence funding, regardless of class of airspace, will be IAW DoD component intelligence oversight (IO) guidance in DoD Manual 5240.01 and DoD 5240.1-R. and USAF guidance in AFI 14-104, *Oversight of Intelligence Activities*. **(T-0).** CI/FI and intelligence-related SUAS activities conducted by a SUAS-O will require a Proper Use Memorandum (PUM) IAW AFI 14-104. **(T-1).** Unit commander (or equivalent) will ensure there is a MAJCOM/A2 (or equivalent) approved PUM on file prior to SUAS operations. **(T-1).**

A8.3.1.2.4. Domestic SUAS flights not conducting intelligence or intelligence-related activities do not require PUMs. However, prior to conducting any operational activities involving domestic SUAS flights according to Enclosure 2, units will obtain the appropriate approval from the authority listed in Enclosure 2 and comply with applicable guidance and amplification of guidance in Enclosure 2. **(T-0).** Approvals will include a review by the legal office supporting the approving official. **(T-0).**

A8.3.1.2.5. All questionable intelligence activities (QIA) or Sensitive/Highly Sensitive Matters (S/HSM) will be reported by USAF units IAW AFI 14-104 and DoDD 5148.13, *Oversight of Intelligence Activities.* **(T-0).**

A8.3.1.2.6. Any proposed domestic use of SUAS by USAF units not specifically delineated in Enclosure 2 requires SecDef approval. For domestic use requiring SecDef approval, the Under Secretary of Defense for Policy (USDP), in coordination with the Chairman of the Joint Chiefs of Staff (CJCS), the appropriate combatant command (CCMD) commander or commanders, the Under Secretary of Defense for Intelligence (USDI), and the Department of Defense (DoD) general counsel (GC) will provide a recommendation to the SecDef concerning the domestic use of USAF SUAS. **(T-0).** The Secretary of the Air Force (SecAF) will submit appropriate requests to the Assistant Secretary of Defense for Homeland Defense and Global Security (ASD (HD&GS)) at least 30 days prior to projected use. **(T-0).**

A8.3.1.2.7. For domestic use of SUAS in urgent, time-critical situations to protect life or property not addressed in Enclosure 2, the SecAF may contact ASD (HD&GS) for SecDef verbal approval.

A8.3.1.2.8. Domestic use of SUAS by USAF units in support of civil authorities will be provided on a reimbursable basis unless otherwise required by law, or on a non-reimbursable basis if such support is both authorized by law and approved by the SecDef. **(T-0).**

A8.3.1.2.9. For purposes of Enclosure 2, installation commander will mean the commander responsible for flight operations, not further delegable below an O-6 level unit commander. **(T-1).** At joint bases, the joint base commander is the approval authority.

Figure A8.1. Enclosure 1–Domestic UAS Operations Report.

Note: Reports are due every three months on a fiscal year calendar. Refer to paragraph A8.2. for due dates and mailing instructions.

1. Unit Name: _____

2. Unit Point of Contact (Name, rank/grade, phone number, and email address):
_____
_____

3. Inclusive dates of report:_____

4. Brief description of the types or categories of missions flown:_____
_____
_____
_____

5. Summaries of sensors employed:_____
_____
_____

6. Information acquired, and whether any information was collected, retained, or disseminated:_____
_____
_____
_____
_____

7. Number of times assistance was provided to other Federal departments and agencies, or to State, local, tribal, or territorial governments, and under what authority such assistance was provided:_____
_____
_____

Figure A8.2. Enclosure 2–DoD Domestic Use of UAS Authorities Matrix.

Domestic UAS Operations	UAS Groups	Approval Authority	Delegation	Applicable Guidance	Amplification of Guidance
Counter Intelligence (CI) or Foreign Intelligence (FI) or Intelligence related activities	All	As determined by the head of the DoD Intelligence Component concerned	No	For FI/CI: EO 12333; DoDD 5240.01; DoDM 5240.01; DoD 5240.1-R For Intelligence Related Activities: DoDD 5148.13; DoDD 5148.11	Only Defense Intelligence Components are authorized to conduct CI/FI. Intelligence Oversight (IO) rules apply.
Defense Support of Civil Authorities (DSCA) - General	All	SecDef	No	DoDD 3025.18; Standing DSCA EXORD	For Search and Rescue and Incident Awareness and Assessment
DSCA - Support of Civilian Law Enforcement Agencies (LEAs)	All	SecDef	No	18 U.S.C. § 1385; 10 U.S.C. Ch 15; DoDD 3025.18; DoDI 3025.21; DoDI 5505.17	

DSCA - Search and Rescue (SAR) involving distress or potential loss of life, including support of U.S. Coast Guard Maritime Search and Rescue	All	Geographic Combatant Commander (GCC)	No	DoDD 3025.18; DODI 3003.01, Standing DSCA EXORD; National Search and Rescue Plan	GCCs may approve domestic use of DoD UAS on an Air Force Rescue Coordination Center (AFRCC)/ Alaska Rescue Coordination Center (AKRCC)/ Joint Rescue Coordination Center (JRCC) - Pacific/U.S. Coast Guard coordinated mission with a properly issued SAR mission number.
DSCA - Incident Awareness and Assessment (IAA)	Groups 1, 2, 3	GCC	No	DoDD 3025.18; Standing DSCA EXORD	

| State Use for SAR or IAA | Groups 1, 2, 3 | The State Governor or Adjutant General | No | DoDD 3025.18; Standing DSCA EXORD | Must meet all the requirements below: **(T-0)** - When requested by the State Governor and not allocated for DoD purposes as determined by the Secretary of the Military Department concerned. - UAS intelligence component capability sensors are not used to target specific U.S. persons without consent (e.g., the use of a UAS to monitor protestors would not be an appropriate use) - Use will be conducted IAW FAA policies and DoD-FAA MOA. - National Guard Personnel using or supporting the UAS operations are serving in a State active duty status. - States inform |

					the National Guard Bureau within 24 hours of initial use.
Training Exercises, and Repositioning Operations within airspace delegated by the FAA for DoD use[1]	All	Installation Commander	Yes; to unit commander as determined by the Installation Commander	DoD-FAA MOA	Includes repositioning operations and direct transit to and from the training and exercise airspace delegated by the FAA for DoD use.

[1] "Airspace delegated by the FAA for DoD use" includes: Special Use Airspace delegated by the FAA for DoD use; temporary Air Traffic Control Assigned Airspace Areas (ATCAA); airspace above land with express permission of the landowner or government-owned or -leased land as permitted by DoD-FAA MOA; U.S. National Airspace delegated by the FAA for DoD use to provide air traffic services, U.S. National Airspace under an approved FAA Certificate of Waiver or Authorization (COA); and airspace delegated by the FAA and coordinated with DoD for permanent, long-term, and short-term requirements.

Training and Exercise Exceptions: -Training and Exercises with armed UAS outside Restricted and Warning Areas -Training ICW civilian LEAs	All	SecDef	No		DoD Component heads will submit appropriate requests to the ASD (HD&GS) at least 30 days prior to projected use.
Counter-Drug (CD) Operational Support	All	GCC	No	CJCSI 3710.0IB	If delegated by SecDef for CD Operational Support in CJCS Instruction 3710.0IB
Force Protection (FP) and Maritime Force Protection Unit Escort Operations	Groups 1, 2, 3	Installation Commander	No	PM 16-003; PM 17-00X; CJCSI 3121.01B; CJCS Notice 3124; Military Department Guidance; USN-U.S.C.G MOA on In-Transit Escort	Local Commanders are responsible for FP within DoD installations and are authorized to use assets under their control within installation boundaries when DoDD 5200.27 criteria are met. Includes U.S. Navy and U.S. Coast Guard requests for UAS support in connection with Maritime Force Protection Unit escort

					operations when airspace is delegated by the FAA for DoD use. For FP, follow USD (P)-issued policy for domestic use of UAS for FP.
RDT&E within airspace delegated by the FAA for DoD use.	All	Installation Commander	Yes; to unit commander as determined by the Installation Commander	DoDI 3200.18	Includes direct transits to and from the RDT&E airspace delegated by the FAA or DoD use.
Public Affairs support within airspace delegated by the FAA for DoD use	Groups 1, 2, 3	Installation Commander	Yes; to unit commander as determined by the Installation Commander		

| DoD Installation support within airspace delegated by the FAA for DoD use | Groups 1, 2, 3 | Installation Commander | No | | Includes surveys, inspections, repositioning operations, DCIO crime scene surveillance (consistent with DoD IG guidance), and capability demonstrations in restricted airspace; and other installation support as specified in the implementation guidance by the Secretaries of the Military Departments. |

| Other Authorized Missions within airspace delegated by the FAA for DoD use | Groups 1, 2, 3 | O-6 level Installation Commander or O-6 level unit commander | No | | Includes missions executed under Immediate Response Authority (IRA) IAW DoD 3025.18. Includes surveys, inspections, map generation, construction and environmental site monitoring; and research and other mission support as specified in the implementation guidance by the Secretaries of the Military Departments. Includes DoD UAS use for approved DSCA missions (e.g., U.S. Army Corps of Engineers DoD UAS use in hurricane response and recovery operations). |

Attachment 9

FLIGHT CREW INFORMATION FILE TEMPLATE

A9.1. Note: The information below is a template MAJCOMs may use when drafting an FCIF item.

Figure A9.1. Flight Crew Information File Template.

MEMORANDUM FOR (SEE DISTRIBUTION)

FROM: (Unit's Complete Address)

SUBJECT: The Subject Line contains the FCIF number and title of the FCIF (if applicable)

1. Applicability paragraph. This paragraph lists the MAJCOMs that the FCIF item is applicable to, and those MAJCOMs for which the FCIF item is "for information only". It may also include applicable aircraft or units as necessary.
2. Directive paragraph. Use this paragraph to give direction to crews regarding procedures or guidance. This information shall be placed immediately following the applicability paragraph in order to ensure a consistent place for new procedures or guidance.
3. Amplification paragraph. This paragraph should focus on background information to the crews or any other amplifying data deemed necessary by the FCIF item author for crews to understand the impetus behind the FCIF item. The FCIF item should be limited to one or two pages in length. Additional supporting background documentation should be included in attachments or references.
a.   Amplifying data may be organized into subparagraphs or follow-on paragraphs.
b.   If follow-on paragraphs are used, ensure paragraphs are numbered correctly.
4. Administrative paragraph. Use this paragraph to show where the FCIF item is to be placed (Part B or C), and how long the FCIF item is to remain in effect. Other items of an administrative nature may also be placed in this paragraph.
5. Receipt/POC paragraph. This paragraph directs units to acknowledge receipt of the FCIF item within a desired period of time, FCIF item POC(s), and the POC phone number and email address.

Attachment 10

SUAS UNIT TRAINING TOPICS CHECKLIST

A10.1. The following list is an example of the basic training topic areas in a unit's IT Program: That AFSOC/A3OU is looking for when reviewing a unit's AF Form 797 and training plan.

A10.2. These training topics, when applicable, should be covered and prescribed in the Unit Training Plan: (I.e., lectures, presentations, demonstrations, flight cards, etc.) and accurately reflected on a course schedule. This list is not all inclusive.

Figure A10.1. Topic areas.

Mission Planning

System Characteristics/Limitations/Safety

System Software

Equipment Assembly

Preflight Inspection

Launch

Aircraft Maneuvering

Sensor Operation

System Malfunctions/Troubleshooting

Emergency Procedures

Recovery and Landing

Post Recovery Procedures

Operator-Level Maintenance

System Simulator (if applicable)

Attachment 11

SAMPLE CONEMP

Figure A11.1. Sample CONEMP.

MEMORANDUM FOR 1 SOW/CC   9 March 2018

FROM: 29th AEMX/CC

SUBJECT: Concept of Employment (CONEMP) for SUAS Operations on Jones AFB

1. Mission and Objectives. The 29th AEMX conducts aircraft tail inspections on each aircraft prior to flight operations and take on average 4-hours per aircraft. Using the DJI Phantom Pro SUAS, this time can be reduced to 30-minutes per aircraft.

2. CONEMP Overview. This CONEMP describes how the 29th AEMX will conduct SUAS operations on Jones AFB and complies with all applicable federal law and DoD policies.

3. Responsibilities. The 29th SUAS Program Manager has been delegated overall responsibility and must ensure that all required guidance in AFMAN 11-502 is followed by all SUAS operators.

4. Training and Certification.

4.1. The Program Manager will approve entry into the SUAS operator IT and instructor upgrade programs.

4.2. The SUAS operator IT and instructor upgrade programs are executed IAW the AFSOC/A3OU-approved training plans and will be documented on AF Form 1381.

4.3. Upgrade training will be conducted by certified SUAS instructors.

4.4. SUAS operator and instructor certifications are annotated on the AF Form 1381 and maintained by the Program Director.

4.5. SUAS certification is valid for 24 months, with another certification by a SUAS instructor required after this period.

5. Currency.

5.1. To be considered current, a SUAS operator must perform one live sortie every 90 days. Currency will be tracked via SUASMAN. The 90-day requirement will be rolling and based off of the IT date, re-currency/re-qualification date, or completion of the last live flight within the required 90 days.

5.2. The duration of loss of currency time is from the date the SUAS operator became non-current until the specific retraining start date. Non-current SUAS operators are not authorized to operate SUAS unless under the supervision of a SUAS instructor. SUAS operator re-currency requirements are as follows:

5.2.1. Loss of currency Up To 6 Months. A SUAS operator will conduct a live fight with a SUAS instructor.

5.2.2. Loss of currency Up to 24 Months. A SUAS operator who is non-current exceeding 6 months, or who did not accomplish the required 24-month certification prior to the last day of the 24th month, will accomplish the ground and flight certification with a SUAS instructor.

5.2.3. Loss of currency exceeding 24 months requires re-accomplishment of IT.

6. Cyber Security. No operations to include; purchasing, turning on any SUAS equipment, or removing SUAS from boxes will take place until a AF cyber security exemption has been approved IAW AFMAN 11-502, paragraph 2.4. Cover the camera lenses when the SUAS is not in use. The Program Manager will maintain on file the approve exemption and ensure that each operator is trained on the mitigations. Document training on the AF Form 1381.

7. Domestic Privacy Concerns. Operations prescribed within this CONEMP fall within the "DoD Installation Support within Airspace Delegated by the FAA for DoD Use" and require installation commander approval. Refer to AFMAN 11-502 Attachment 8. Installation commander (1 SOW/CC) signature on this CONEMP constitutes approval.

8. Spectrum deconfliction and approval has been accomplished with the base spectrum manager. The DJI Phantom Pro 4 utilizes frequencies in the "unlicensed" band and may cause interference with the SUAS. Prior to launching, turn the equipment on and if any abnormalities are noticed, do not launch.

9. Coordination with Applicable Agencies. The Program Manager will develop a flight schedule each Monday for that week and provide the schedule to 1 OSS/OSAT (ATC Tower), 888-888-8888 and 1MSG/SF (Security Force Desk) 888-777-7777. Any changes will be coordinated.

10. Operational Area Description. SUAS will ONLY be flown within the designated approved areas; A, B and C (figure 1).
-- A.   Surface to 200' above ground level. DO NOT FLY OVER THE CHARLIE TAXIWAY.
-- B.   Surface to 100' above ground level. DO NOT FLY OVER THE CHARLIE TAXIWAY.
-- C.   Surface to 200' above ground level. DO NOT FLY OVER THE CHARLIE TAXIWAY.

11. Flight Approval Procedures. The Program Manager has been delegated flight approval authority and each SUAS crew will sign the flight authorization.

11.1. The Program Manger will ensure that a Federal Aviation Administration (FAA) COA has been approved prior to any operations and ensure that each operator is knowledgeable on the COA requirements.

12. Risk Management. The Program Manger or lead SUAS operator will provide a mass brief, including an RM assessment, prior to SUAS operations.

13. Communication requirements. Prior to launching the SUAS, the Lead SUAS operator will contact the ATC Tower, 888-888-8888 and obtain approval. Contact ATC Tower when operations are complete.

14. Deconfliction. All SUAS operations will ONLY occur within the designated and deconflicted SUAS areas up to the maximum altitudes allowed in each quadrant, depicted in the FAA COA (Attachment 1).

14.1. Visual observers will accompany SUAS operators and will maintain visual contact with the SUAS and surrounding airspace at all times during flight operations.

15. Night operations are authorized if the operators and visual observers are in place 30 minutes prior to launching to acclimatize their vision. Aircraft lighting, if installed, must be on.

16. Contingencies. Immediately land the SUAS if it becomes unresponsive to control inputs or performs abnormally. Immediately notify the ATC Tower, 888-888-8888 if the SUAS departs the approved area. Provide last known altitude and direction of flight. Notify the Program Manager who will notify base safety 888-666-6666. Program Manager will complete the Mishap Report IAW AFMAN 11-502.

17. Personal Protective Equipment. All SUAS operators will wear gloves and safety googles/glasses when launching the SUAS.

18. This CONEMP is in compliance with applicable federal law and policy and applicable state and local law.

Figure A11.2. A, B, C Operational Areas.

Approved

JOHN E. DOE, COL, USAF
1st Special Operations Wing Commander

Attachment 12

SAMPLE UNIT SUAS-I UPGRADE TRAINING PROGRAM

A12.1. Upgrade training will: Consist at a minimum; an oral review and a flight(s) that demonstrates the candidate's ability to instruct MT and preform re-currency training. **(T-3).** Units may add additional missions and training objectives, as desired. Training should reflect the complexity of the unit's use of SUAS IAW their unit METL. **Exception:** If the SUAS-I candidate is certified in multiple SUAS platforms that are similar and/or MT task items for each platform are similar, training may be combined and accomplished concurrently during a single sortie. (i.e... a candidate is certified on both the Raven and Puma and flying a raven mobile operation that is conducted exactly the same with the Puma, the SUAS-I candidate only needs to execute that task on a single platform.) All additional tasks that differ from platform to platform must be executed separately. SUAS-I candidates should observe a certified SUAS-I instruct unit MT prior to conducting SUAS-I upgrade training. **(T-3).**

A12.2. Documentation. Training task items will be documented on AF Form 797 or equivalent form. Record the upgraded certification on AF Form 1381. **(T-2). Exception:** AFMC RDT&E and USAFA RDT&E may maintain training records on forms and automated products currently approved.

A12.3. Oral review. Each SUAS-I candidate will be given an open book oral review of relevant material from the appropriate UAS operators manual, CJCSI 3255.01, AFMAN 11-502, local flying procedures and local range procedures. **(T-2).** Discussions should emphasize UAS normal and emergency procedures, local coordination procedures, SUAS-O and SUAS-I responsibilities.

A12.4. Flight Demonstration. Candidate SUAS-Is will demonstrate the ability to instruct under the supervision of a certified and current SUAS-I. **(T-3).** Squadrons are responsible for developing the unit SUAS-I upgrade training program, which may reflect the below examples:

A12.4.1. **Flight 1.** The SUAS-I candidate should plan and conduct a flight training profile under the supervision of a SUAS-I. The mission profile should focus on providing instruction (and corrections as necessary) on basic aircraft certification skills and assumes that the SUAS-Os require supervision and/or instruction to regain currency. Objectives are:

A12.4.1.1. Conduct the preflight briefing

A12.4.1.2. Monitor site setup: system assembly and mission planning

A12.4.1.3. Normal procedures: checklist usage, crew coordination, and minor maintenance

A12.4.1.4. Monitor crew during flight: maintain SA on airspace and air vehicle, emergency procedures

A12.4.1.5. Monitor recovery and processing of data

A12.4.1.6. Monitor site teardown and load out

A12.4.1.7. Conduct mission debriefing

A12.4.2. **Flight 2.** The SUAS-I candidate should plan and conduct a flight training profile under the supervision of a SUAS-I. The focus of the profile should be on instruction of SUAS-Os in unit-specific mission certification training. Objectives are:

A12.4.2.1. Conduct the preflight briefing

A12.4.2.2. Tactical launch and recovery procedures

A12.4.2.3. Advance ISR

A12.4.2.4. Water operations

A12.4.2.5. Mobile Operations

A12.4.2.6. Special payload use

A12.4.2.7. Handoff/relay procedures