For Training Only!!!

This is a ***crosswalk*** to help those familiar with 8210-1C Chg1 to upgrade and understand the significant changes in 8210-1D. There are some clarifications/interpretations; however, ***they are generic***, and if a question or ***conflict of applicability of the interpretation to your contract***, utilize the process described in 3.3.

AR 95-20
NAVAIRINST 3710.1H
COMDTINST M13020.3B

DCMA Instruction 8210-1D

Contractor's Flight and Ground Operations

Office of Primary Responsibility	**DCMA Aircraft Operations**
Effective:	February 6, 2023
Releasability:	Cleared for public release
Incorporates and Cancels:	All previous versions of this Instruction/Regulation, Defense Contract Management Agency Instruction (DCMA INST) 8210-1(series), Air Force Instruction (AFI) 10-220, Army Regulation (AR) 95-20, NAVAIR Instruction (NAVAIRINST) 3710.1(series), U.S. Coast Guard (USCG) Commandant Instruction (COMDTINST) M13020.3(series) are superseded by this Instruction for new contracts. Current contracts will follow existing contract requirements.
Internal Control:	Not Applicable
Labor Codes:	Not Applicable
Resource Page Link:	https://www.dcma.mil/Customers/Aircraft-Operations-Resource-Page/
Approved by:	David G. Bassett, LTG, USA, Director

BY ORDER OF THE DIRECTOR, DEFENSE CONTRACT MANAGEMENT AGENCY, COMMANDANT, U.S. COAST GUARD, AND THE SECRETARIES OF THE ARMY, THE AIR FORCE, AND THE NAVY

//signed, November 15, 2022//

JAMES C. MCCONVILLE
General, United States Army
Chief of Staff

Official:
MARK F. AVERILL
Administrative Assistant to the
Secretary of the Army

//signed, July 22, 2022//

Carl P. Chebi
Vice Admiral, USN
Commander, Naval Air Systems Command

//signed, 2 May 2022//

JOSEPH T. GUASTELLA Jr.
Lieutenant General, USAF
Deputy Chief of Staff, Operations

//signed, January 23, 2023//

Carola J. List
Rear Admiral, United States Coast Guard
Assistant Commandant for Engineering and Logistics

//signed, February 6, 2023//

Sonya Ebright
Deputy Director, Defense Contract Management Agency

COORDINATION: DCMA (DCMA-AO), Army (HQ AMC: AMPE-SF), Navy (ACC), Air Force (HQ AFMC/A3V), Coast Guard (ALC)

PURPOSE AND SCOPE. This issuance, in accordance with the authority in DoD Directive 5105.64 and DoD Instruction 5025.01:

- Establishes requirements for flight and ground operations involving all contracted work performed on aircraft where this Instruction is incorporated as a contract requirement,
- Establishes requirements for Government Flight Representatives (GFRs) and the procedures to be followed by the GFRs,
- Describes the content of the contractor's aircraft flight and ground operations procedures (hereafter identified as Procedures) and approval for these Procedures,
- Provides for the delegation of authority for such approvals, regardless of Service affiliation,
- Applies to contractor personnel whose responsibilities include duties under any contract which incorporates by reference or includes this Instruction, and to all GFRs appointed pursuant to those contracts,
- Has been coordinated with and concurred by the Military Services (hereafter referred to as the Services),
- Section 10 establishes policy and procedures to be followed by GFRs and does not establish any additional contractor requirements,
- References in this Instruction to Federal Aviation Administration (FAA) certifications or requirements may be substituted with applicable host nation equivalent certifications or procedures.

The lead command for each Service for contractor operations and all Service GFRs is:

- U.S. Army (USA) — Army Materiel Command (AMC)
- U.S. Navy (USN) — Naval Air Systems Command (NAVAIRSYSCOM)
- U.S. Marine Corps (USMC) — NAVAIRSYSCOM
- U.S. Air Force (USAF) — Air Force Materiel Command (AFMC)
- U.S. Coast Guard (USCG) — Aviation Logistics Center (ALC)

Pursuant to Section 552a of Title 5, United States Code (U.S.C.), also known as 'The Privacy Act of 1974,' affects this Instruction. This document requires the collection and or maintenance of information protected by the Privacy Act of 1974. The authority to collect and maintain the records prescribed in this Instruction are in Title 10, U.S.C., and implementing Service regulations.

1

CHANGES

Recommendations for changes should be submitted to HQ DCMA, ATTN: DCMA Aircraft Operations (DCMA-AO) (the Office of Primary Interest (OPI) for this combined military Regulation/Instruction) for review. Changes must be coordinated with all Services and DCMA prior to incorporation into this Instruction. For specific guidance from each DoD Component, contact the following:

- HQ DCMA:
  DCMA-AO (804) 279-6322
  6090 STRATHMORE ROAD, BLDG 54
  RICHMOND, VA 23237
- ARMY:
  COMMANDER (256) 450-7165
  U. S. ARMY MATERIEL COMMAND
  ATTN: AMPE-SF, 4400 MARTIN ROAD
  REDSTONE ARSENAL, AL 35898-5000
- NAVY:
  COMMANDER (301) 342-7233
  NAVAL AIR SYSTEMS COMMAND (ACC)
  22187 ARNOLD CIRCLE, BLDG 401, RM 200
  PATUXENT RIVER, MD 20670-1541
- AIR FORCE:
  HQ AFMC/A3V (850) 882-7890
  508 W CHOCTAWHATCHEE AVE, STE 4
  EGLIN AFB, FL 32542-5713
- COAST GUARD:
  COMMANDING OFFICER (252) 335-6191
  AVIATION LOGISTICS CENTER
  US COAST GUARD
  1664 WEEKSVILLE RD BLDG 63
  ELIZABETH CITY, NC 27909-5001

Table of Contents **[Note, the *red text* throughout makes this table inaccurate]**

SECTION 1: RESPONSIBILITIES [NEW]

1.1. Approving Authority. The Approving Authority will:

1.1.1. Appoint GFRs/Ground GFRs (G-GFRs) for contractor aircraft operations where the contractor is required to comply with this Instruction.

1.1.2. Appoint alternate GFRs/G-GFRs when possible.

1.2. Commander Responsibilities. Contract Administration Services Component (CASC) Commanders having the administrative responsibility for any contract or other legal agreement (e.g., Cooperative Research and Development Agreements (CRADAs), Other Transactions, or Grants) containing this Instruction will ensure trained GFRs/G-GFRs and alternates are appointed by the Approving Authority to perform the Federal Acquisition Regulation (FAR) 42.302 (a)(56) Contract Administration Services (CAS) responsibilities.

1.3. Government Flight Representative Responsibilities. GFRs and G-GFRs perform the CAS function – FAR 42.302(a)(56) "Maintain surveillance of flight operations." GFRs and G-GFRs are responsible for ensuring contractors establish and follow written Procedures in accordance with (IAW) this Instruction. Further GFR responsibilities are described in Section 10.

1.4. Contractor Responsibilities. Contractors are contractually required to ensure their responsibilities from this Instruction are fully met. Prime contractors must ensure their subcontractors comply with the applicable provisions of this Instruction. **[New language for the first sentence]**

SECTION 2: PROCEDURES FOR WAIVERS AND APPROVALS

2.1. Waiver Requests. A waiver is written relief from a specific requirement. Waivers may be limited to specific contracts, locations, individuals or conditions. The contractor should request a waiver when specific requirements add cost or complexity to contract accomplishment without increasing safety or reducing Government's risk, or when alternate procedures or requirements can be substituted which provide equivalent levels of safety, proficiency and/or risk mitigation. The contractor must comply with the contract and this Instruction until the waiver is granted. Procuring contracting officers (PCOs) and administrative contracting officers (ACOs)~~,~~ must not use the contract modification process for aviation contracts to waive this Instruction or Service Guidance requirements. Defense Federal Acquisition Regulation Supplement (DFARS) Part 228.3, Insurance, subpart 228.370 – Additional Clauses, describe the limits imposed on the PCO for modifying the clause at DFARS 252.228-7001, Ground and Flight Risk (GFRC). When issued, waivers must be attached to the Procedures. All waivers must be reviewed at least annually by the GFR to ensure the requirements for the waiver are still valid. There are three types of waivers that affect contractor aircraft operations: waivers to this Instruction; waivers to Service Guidance; and contract waivers. **[Old CI 2.]**

2.2. Approval Requests. GFRs approve flights, crewmembers, and Procedures. Contractor approval requests refer to areas in this Instruction that require special attention from the GFR but are approved at the Service Waiver Authority (SWA) level. Examples include approvals for performing experimental test operations without having attended a U.S. Military Test Pilot School, multiple aircraft qualifications, alternate aircraft rescue and firefighting (ARFF)/fire protection processes, and orientation flights. Routing for contractor approval requests will follow the same routing as paragraph 2.3.3 **[New]**

2.3. Waivers to this Instruction. **[Old CI 2.1]**

2.3.1. Waiver requests to this Instruction are generated by the contractor.

2.3.2. Content. Waiver requests are written on company letterhead, must be signed, and include a detailed justification for the waiver. Contractor must submit a risk management analysis and risk mitigation plan to reduce the risk to aircraft operations affected by the waiver. Waiver requests must be in written or electronic format. (USAF: To expedite the waiver process, contractors should document/submit waiver requests on an AFMC Form 73.) **[Old CI 2.1.2]**

2.3.3. Routing. Send all requests for waivers to this Instruction to the GFR. The GFR must ensure the ACO receives a copy of the waiver package. Service GFRs must forward waiver requests with recommendations directly to the waiver authority. (USAF: If the AFMC Form 73 is used, the GFR will be listed as the Action Officer in Section 1. The GFR must indicate their concurrence or non-concurrence (with or without comment) with the contractor waiver request.) DCMA GFRs will incorporate the contractor's request into the appropriate DCMA-AO forms and will forward waiver requests with recommendations through their chain of command to DCMA-AO. DCMA-AO will evaluate the waiver, make recommendations, and forward it to the waiver authority of this Instruction. **[Old CI 2.1.3, no change just restructure of the paragraph]**

2.4. Service Guidance Waivers. **[Old CI 2.2]**

2.4.1. Waivers to Service Guidance are generated by the contractor.

2.4.2. The use of Service Guidance in a contract is intended to align the contractor's flight and ground operations risk levels with the risk accepted by the Services. Though "contractor" aircraft operations may not have been considered when Service Guidance was developed, contractors must comply with the Service Guidance as written (when required by this Instruction) or seek relief through the waiver process. Use this process when requesting relief from requirements of Service Guidance.

2.4.3. Content. Waiver requests are written on company letterhead, must be signed, and include detailed justification for the waiver. Contractor must submit a risk management analysis and risk mitigation plan to reduce the risk to aircraft operations affected by the waiver. Waiver requests must be in written or electronic format. (USAF: To expedite the waiver process, contractors should document/submit waiver requests on an AFMC Form 73.)

2.4.4. Routing. From the contractor's viewpoint the routing process for Service Guidance is the same as for waivers to this Instruction. Once the waiver package is received by the waiver authority for this Instruction, they will forward it with recommendations to the appropriate Service Guidance waiver authority for final approval or disapproval. (USAF: If the AFMC Form 73 is used, the GFR will be listed as the Action Officer in Section 1. The GFR must indicate their concurrence or non-concurrence (with or without comment) with the contractor waiver request.)

2.5. Contract Change Requests. These requests are routed through the ACO to the PCO for action. If the contract change relates to aircraft operations, route requests generated by contractors through the GFR. The GFR will forward the requests with recommendations to the ACO. **[Old CI 2.3, removed DD 1716s]**

2.6. Processed Waivers. If approved, the GFR must provide a copy of the approved waiver to, and discuss the scope of the waiver with, the ACO. Processed waivers will be communicated directly to the contractor, from the GFR, with a copy to the ACO. **[Old CI 2.4]**

2.7. Waivers with Time Limits. Contractors should ensure that waivers that are within 90 days of expiring are resubmitted if the original requirement for the waiver still exists. This will ensure no disruptions in contractor aircraft operations occur due to the waiver expiring. When a waiver expires, contractors are bound by the original contract, Service Guidance, and this Instruction. **[Old CI 2.5]**

2.8. Waivers to this Instruction Generated by the Government. See paragraph 10.11.2, for waivers related to requirements for Government personnel in this Instruction (e.g., G-GFR rank waiver request). **[New]**

2.9. Combat Operations. The Waiver Authority does not have the authority to allow, or approve a waiver which allows, the contractor to place the government aircraft into a situation of expected loss. Examples are weather related (thunderstorm penetration) or fuel (continue operations below designated bingo, minimum, or emergency fuel). To operate in this manner (e.g., IAW published Special Instructions) requires specific contract language to relieve the contractor from the requirements of DFARS (GFRC) and GFR oversight of flight operations. **[New]**

2.10. Waiver Authorities for this Instruction and Routing for Service Guidance. **[Old CI 2.6]**

2.10.1. Army - U. S. Army Materiel Command, ATTN: AMPE-SF, 4400 Martin Rd., Redstone Arsenal, AL 35898-5000.

2.10.2. Navy/USMC - Commander, Naval Air System Command. Forward requests to: Commander, Naval Air System Command, ACC, 22187 Arnold Circle, BLDG 401, RM 200, Patuxent River, MD 20670-1541.

2.10.3. Air Force - Headquarters Air Force Materiel Command, HQ AFMC/A3. Forward requests to HQ AFMC/A3V, 508 W. Choctawhatchee, Eglin AFB, FL 32542-5713.

2.10.4. Coast Guard - Commanding Officer, USCG ALC, 1664 Weeksville Road Building 63, Elizabeth City, NC 27909-5001.

2.10.5. General Services Administration (GSA) Administered Contracts. The Service that places/funds the Purchase Order through a GSA contract vehicle is the Waiver Authority.

2.10.6. Non-Signatory Waiver Authorities – When a contract that includes this Instruction is issued by an organization not listed as a signatory to this Instruction (e.g., National Aeronautics and Space Administration, Drug Enforcement Agency, Department of Homeland Security, Missile Defense Agency, foreign governments), contact the organization issuing the contract for guidance on identifying the appropriate waiver authority.

SECTION 3: PROCEDURES [Restructured section]

3.1. Contractor's Written Procedures. Contractors must develop written Procedures to mitigate the risk of aircraft loss or damage during contracted aircraft operations. The requirement to develop and follow Procedures is a contractual requirement and applies independently of the Government's assumption of risk via the GFRC. Compliance with Procedures is required whenever contractors perform aircraft ground or flight operations under contract. Conducting aircraft operations prior to GFR written approval of the Procedures for those specific aircraft operations may constitute a contractual non-compliance. Aircraft operations conducted without approved Procedures may be considered to place the aircraft under unreasonable conditions and may be grounds for withdrawal of the Government's assumption of risk as described in the GFRC. **[Old CI 3.]**

3.2. Responsibilities. The contractor is responsible for writing, implementing and enforcing its Procedures, and identifying and correcting deficiencies. **[Old CI 3.2]**

3.2.1. Subcontractors. The prime contractor is responsible for all contract requirements subcontracted or delegated to other sources. The prime contractor has the responsibility for ensuring that the subcontractor has procedures in place to implement the requirements of this Instruction. The prime contractor must review and sign any subcontractor Procedures. **[Old CI 3.6, minimized language that the GFRC already states]**

3.2.2. Access to Contractor's Facilities. The Prime contractor must provide the GFR and aviation program team (APT) access to the aircraft and facilities upon request and without delay during the contractor's work hours. If the contractual work is subcontracted to another company, the Prime is responsible to ensure that the GFR and APT have the same privilege to enter the subcontractor's facilities, and the same access to the aircraft being worked. Access is limited to those areas directly related to aircraft operations under this Instruction IAW FAR 52.246.**[Old CI 3.17]**

3.3. Questions of Interpretation. A difference of interpretation between the contractor and GFR concerning the Procedures or this Instruction should be raised in writing (email is acceptable). Send all requests for interpretation through the GFR. Service GFRs must forward interpretation requests with recommendations directly to the waiver authority. DCMA GFRs will forward interpretation requests with recommendations through their chain of command to DCMA-AO. Interpretations will be disseminated in writing back to the GFR, ACO, and the contractor. **[Old CI 3.16]**

3.4. No existing Procedures. For specific contractor aircraft operations with no existing approved Procedures, or where approval has been withdrawn, the contractor should provide those Procedures, to the GFR for approval as soon as possible. Procedures may be approved in sections, however contractors are not authorized to conduct ground operations until the specific procedure has been approved. Flight operations are prohibited until all Procedures have been approved (conditional or full approval). **[Old CI 3.4]**

3.5. Locations with Multiple Versions of this Instruction. Where contractors have multiple contracts that contain older versions of this Instruction, they are bound by the specific version required in each contract. In lieu of maintaining separate Procedures for each contract,

contractors may request a contract modification for the older contracts to upgrade to the latest version of this Instruction. **[Old CI 3.11]**

3.6. Modifying Contracts to Update to this Version of this Instruction. Contractors are encouraged to request an update of older contracts to the latest version of this Instruction. Updates of this scope will require a contract modification. If a contract modification is issued that requires a more recent version of this Instruction, the contractor may operate for 90 days using the existing version of this Instruction and the associated approved Procedures. **[Old CI 3.10]**

3.7. Guidance/Requirements for Procedures.

3.7.1. Should a conflict occur in the contract between sources of guidance, the following hierarchy must be used in descending order: this Instruction, Service Guidance, and the Procedures. When several of these sources provide guidance that do not conflict but are different, the most restrictive of the sources must be followed. Contracting officers cannot modify any of the requirements of this Instruction or Service Guidance through contract text except as specified in the DFARS 228.370 or the GFRC. If it is discovered that the contract substantially alters the requirements of this Instruction or Service Guidance, elevate concerns to the Waiver Authorities for this Instruction. Contractors must not use Procedures to make specific requirements less restrictive than they appear in this Instruction. **[Old CI 3.1.1]**

3.7.2. Use of Service Guidance. Where Service Guidance is included in the contract or listed in paragraph G.1.65, the contractor's Procedures must comply with that Service Guidance. Contractors are encouraged to base the rest of their Procedures on any available standards (e.g., commercial standards, instructions, manuals, technical directives (TDs), technical orders (TOs), Programs of Instructions). For all aircraft operations, contractors are bound only by that Service Guidance that is applicable to the aircraft operations being performed under contract. In the development of Procedures, the contractor, GFR, and Program Office should work together closely to ensure that the correct, applicable Service Guidance is used. If Service/commercial standards are not available for a unique aircraft, test program, or flight/ground operation, the contractor must recommend procedures similar to standards for a similar aircraft and/or operation for GFR approval. **[Old CI 3.5]**

3.7.2.1. At locations with multiple Service contracts, the GFR and contractor may elect to specify general guidance from a single source for basic flight rules, evaluations, etc. The contractor is encouraged to develop a common set of Procedures. This will require the contractor to request contract modifications and/or waivers. **[Old CI 3.5.1]**

3.7.2.2. The GFR, in concert with contractor management personnel, should ensure that existing Procedures are modified, if required, when pertinent Service Guidance changes. This may require a contract change. **[Old CI 3.5.2]**

3.7.3. Core/Enterprise Procedures. Some contractors develop overarching "Core" procedures to ensure aircraft operations are uniform throughout their multiple locations. When Core procedures do not address site/aircraft specific operations, each site using the Core procedures must address those procedures unique to the specific site and/or aircraft. The Core procedures are treated the same as any referenced procedures (see paragraph 3.8). **[Old CI 3.12]**

3.7.4. Ground Operations Procedures for New Production Aircraft. The GFRC delineates when the Government's assumption of risk of loss begins for new production aircraft. Though the Combined Instruction applies irrespective of the Government's assumption of risk, many ground

operations procedures (GOPs) have no applicability and are not required prior to when Government liability is attached via the GFRC. Contractors will provide ground operations procedures for the following processes that are performed when an aircraft is not "in the open" (i.e., not yet a "covered aircraft" IAW the 2023 GFRC): Foreign object damage (FOD) Prevention Program (commensurate with the risk); Aircraft Servicing; Weight and Balance; and Aircraft/Equipment Hydraulic Fluid Analysis Program. **[Old CI 3. Highlight is new addition and draws a line in the sand to the ONLY GOPs applicable when an aircraft is not in the open]**

3.7.5. Contractors perform flight and ground operations not specifically mentioned in this Instruction; however, all aircraft operations (excluding industrial or quality procedures) that introduce increased risk to the aircraft must be addressed in the Procedures (e.g., de-icing). The addition of a new procedure not identified within this Instruction requires concurrence by the GFR and contractor; if either party disagrees, exercise the process described in paragraph 3.3 **[New to this section; however, stems from Old CI 5.1. Opens the ability to capture those oddity operations that may exist outside the instruction, but must be a mutual agreement]**

3.7.6. Procedures for Non-Standard Applications. Procedures may be required for non-standard applications such as foreign military sales (FMS), Lease Agreements, CRADAs, Bailments, contractor-owned/contractor-operated (COCO) operations, etc. See Section 9 for Procedures requirements for these contractor operations. **[New]**

3.7.7. Procedures for integrated maintenance or contractor logistics support (CLS) contracts on a Base, Post, Camp, or Station (BPCS) location may be written to enhance Government and contractor integration. Contractors may use available U.S. Government Service processes, at the point of execution, in order to fulfill procedural requirements unless the contract specifically requires otherwise. If local U.S. Government Service processes are leveraged, the contractor must adhere to local policies associated with the provided service. **[New]**

3.7.8. Contractor-owned aircraft flying civil aircraft operations (CAO) (i.e., non-public aircraft operations (non-PAO)) follow civil rules. GFRs do not provide oversight for, or approval of, CAO. **[Old CI 3.3.6]**

3.8. Procedures Preparation, Format, and Content. The contractor must prepare and maintain specific written Procedures, separate and distinct from industrial or quality procedures, which describe aircraft flight and ground operations at all operating facilities. If the contractor references existing company Core/Enterprise Procedures, operating instructions, etc., in these Procedures to fulfill the requirements of this Instruction, the referenced document(s) must be made readily available for review and the sections referenced become part of the contractor's Procedures for the purposes of this Instruction. Because such referenced documents are now part of the contractor's Procedures, approval of the Procedures constitutes approval of the referenced documents or those listed sections of the documents. Procedures must address configuration control for referenced documents. Changes to referenced documents affecting process or procedure must be provided to the GFR for review prior to publication. Administrative or maintenance changes to referenced documents not affecting process or procedure do not need GFR approval prior to publication; however, the GFR must be notified of the changes made. **[Old CI 3.3 and 3.9. The first yellow highlight details a previously known requirement, the remaining yellow highlights are new requirements or rules]**

3.8.1. Content. Some paragraphs within this Instruction are directive in nature, provide general guidance, require the contractor to develop procedures, or a combination of these things. Contractor's Procedures must include all items from this Instruction that establish a requirement

for procedures, item-by-item, as applicable to the contract. Appendix 3A, Procedures Outline, is provided to the 3rd bullet level paragraph, however, lower-tier sub-paragraphs must be addressed as applicable. Appendix 3A also provides direction on how to address Sections and additional guidance for some paragraphs. The Procedures must: **[Old CI Attachment 10 opening paragraph]**

3.8.1.1. Provide specific guidance describing activities and requirements of this Instruction and contractual provisions pertaining to safety, flight, and ground operations applicable to all aircraft for each specific contractor operation and location; **[Old CI 3.3.1]**

3.8.1.2. Describe in detail how the contractor ensures that individuals perform only duties they are qualified and authorized to perform; **[Old CI 3.3.2]**

3.8.1.3. Adequately explain all aspects of a given operation to include (as appropriate) the purpose, scope, and steps to accomplish the task; **[Old CI 3.3.3]**

3.8.1.4. Identify the office/title of individual or organization responsible; **[Old CI 3.3.4]**

3.8.1.5. Include requirements to verify the successful completion of the procedure, when appropriate. **[Old CI 3.3.5]**

3.8.2. Format. Contractors must use one of the approaches listed in 3.8.2.1 or 3.8.2.2 for Procedures. Items listed in Appendix 3A that are not applicable to a specific contract/location may be place marked as N/A, with explanation if needed. When addressing individual processes, the contractor may either develop the procedure itself or cite other documents that satisfy the Procedure requirement (see 3.8). Contractors with separate functional organizations responsible for flight and ground operations may divide their Procedures into parts (e.g., flight operations procedures (FOPs), GOPs, and safety procedures (SPs)). Procedures may be in digital format. **[Mostly new language some stemming from old CI 3.7 and Attachment 10]**

3.8.2.1. Organize Procedures to follow the order, structure, and paragraph numbering of this Instruction. For paragraphs listed in Appendix 3A from Sections 4, 5, 6, and 7, paragraph numbering must be maintained to at least the 3rd bullet level. It is not mandatory to maintain lower tier sub-paragraph structure; those requirements may be addressed within the parent paragraph. Paragraphs not listed in Appendix 3A do not require specific written procedures; rather, they would be placeholders (marked N/A) or used for information/introductions for flow. Example: Paragraphs 5.1 – 5.3 could be simply "N/A" and paragraph 5.5., FOD Prevention Program, would appear in the Procedures for flow (most likely as a title or introduction to the section), but the actual FOD prevention program procedures would be addressed in the appropriate sub-paragraphs of 5.5 (e.g., 5.5.1, 5.5.2). **[New]**

3.8.2.2. Organize Procedures at the discretion of the contractor. The contractor will provide a "Table of Contents" that follows the order and structure of this Instruction. The Table of Contents will provide a paragraph cross reference to the location that satisfies each Procedure requirement. **[New language but requirement stems from old CI 3.7]**

3.9. Approvals.

3.9.1. Contractor forwards the completed Procedures for each location to the cognizant GFR for approval. **[Old CI 3.8.1]**

3.9.2. Contractor identifies to the GFR a single point of contact with cognizance over the functional organizations (flight, ground, safety) involved and who can coordinate approval issues. **[Old CI 3.8.2]**

3.9.3. Contractor maintains current copies of the approved Procedures at each operating location. **[Old CI 3.8.3]**

3.9.4. GFRs may conditionally approve a contractor's Procedures in cases where the contractor is making progress towards a complete and satisfactory set of Procedures but schedule constraints make the conditional approval of Procedures advisable. The GFR will document approval/disapproval of the Procedures. If other than full approval, the GFR will provide the conditions of the approval and/or reasons for disapproval to the contractor. **[Old CI 3.8.4]**

3.9.5. The GFR is not responsible for processes or compliance related to other industrial standards and/or procedures such as building and fire codes, insurance requirements, Occupational Safety and Health Administration (OSHA), aerospace standard (AS) 9100, etc. These types of industrial processes may be found in the Procedures or referenced by the Procedures for clarity or for the convenience of consolidation; however, the GFR's approval of Procedures is only concerned with the protection of aircraft covered under the contract. The GFR's approval is not in any way an acceptance, on the GFR's part or on the part of the U.S. Government, of liability for other responsible parties (e.g., fire marshal, insurance, building inspectors). **[New get out jail free language. This verbiage is also strongly recommended to be added to the GFR's approval letter]**

3.10. Changes. All proposed changes must be submitted to the GFR in writing (email is authorized). Approved changes must be incorporated into all copies of the Procedures. Changes are not in effect until the GFR approves them. **[Old CI 3.9]**

3.11. Review Requirements. Contractors must (at least every 12 months): **[Old CI 3.13]**

3.11.1. Conduct a review of their Procedures. Source documents referenced in the Procedures per paragraph 3.8, must be reviewed to ensure they are still valid, however they need not be re-dated to the date of the Procedures themselves. **[Old CI 3.13.1]**

3.11.2. Verify the safety and effectiveness of each procedure. **[Old CI 3.13.2]**

3.11.3. Assess changing Service Guidance and its effect. **[Old CI 3.13.3]**

3.11.4. At the completion of the review, recommended changes must be forwarded to the GFR for approval. **[Old CI 3.3.4. Removed the requirement to attach the approval since the GFR will provide a letter of approval now (according to 10.9.1.1)]**

3.12. Deficiencies. The GFR must notify the contractor if he/she finds deficiencies or inadequacies in the Procedures. Failure to correct the deficiency within the specified time identified in the GFR's notification is grounds for withdrawal of the approval of the Procedures, contractor flight operations, and/or crewmembers. **[Old CI 3.14]**

3.13. Noncompliance. Failure to comply with approved Procedures must be rectified in a timely manner. The Government reserves the right to take such action as may be necessary to preserve the safety and security of the aircraft. The contractor must respond in a timely manner when notified of an observed non-compliance. Corrective actions must correct root causes. Continuation of noncompliant aircraft operations is unacceptable and may be considered an unreasonable condition for aircraft in the open ("covered aircraft"), within the meaning of the contract, and may be considered grounds for withdrawal of the Government's assumption of risk for loss or damage to Government aircraft. Withdrawal of the Government's risk must be accomplished in accordance with the applicable contract wording. **[Old CI 3.15]**

APPENDIX 3A: PROCEDURES OUTLINE

The purpose of this outline is to provide a ready reference for those paragraphs that establish a requirement for procedures and for other paragraphs that must be addressed in the Procedures. It also provides contractors with the expected structure for Procedures and some clarifying guidance. Some paragraph titles listed in this outline may not exactly match the text in this Instruction and are included only as a convenient reference to the paragraphs' purpose. This outline does not negate the contractor's responsibility to comply with the requirements of this Instruction, even when a paragraph is not listed. **[NEW – replaces attachment 10]**

Section 1: RESPONSIBILITIES

Contractors need not address the Responsibilities Section in their Procedures. **[Responsibilities is a new section]**

Section 2: PROCEDURES FOR WAIVERS AND APPROVALS

Contractors need not address the Waivers and Approvals Section in their Procedures. Including waiver procedures as a ready reference or adding organizational specific processes is acceptable. However, if included, the GFR approval of the Procedures does not extend to waiver process. Though not required to do so, contractors and GFRs should always use the waiver process in the most recent version of this Instruction. Failure to do so could result in delays in waiver processing. The waiver administrative process is not directive in nature. It merely defines the current process with the most current contact information. **[Old CI Attachment 10, 3rd paragraph]**

Section 3: PROCEDURES

This Section provides overarching guidance and requirements for the development of Procedures and need not be addressed in the Procedures except as noted in the following paragraphs.

3.7.5. Flight and ground operations not specifically mentioned. Include any procedures added to address the requirements of paragraph 3.7.5. These procedures may be placed in the appropriate section of the contractor's Procedures for ease of use and clarity. For example, if de-icing procedures were added, they could be located in Section 5 of the Procedures. **[New "all hazardous operations section"]**

3.8. Procedures Preparation, Format, and Content. Address configuration control of referenced documents. Subparagraphs of 3.8 need not be addressed. **[New]**

3.9.2. Procedures POC. **[Old CI Attachment 10 chapter 3 section]**

Section 4: FLIGHT OPERATIONS **[New layout according to this instruction]**

4.2.1. General flight rules. A simple statement listing which Services' guidance aircrews must follow is sufficient.

4.2.2. Contractor flight planning.

4.2.3. Flight profiles.

4.3.1. GFR approval.

4.3.3. Flights with Multiple Contractors/Multiple Contracts.

4.5. Flights not Under GFR Cognizance.

4.6.1. Allow for communication.

4.6.2. Identify flight areas.

4.6.3. Safe-for-flight release.

4.6.4. Record keeping for supersonic flights.

4.6.5. Documentation of certificates, licenses, and permits.

4.6.6. Mixed crew flights.

4.6.7. Minimum crew requirements.

4.6.9. Aircrew duty and rest limitations.

4.6.10. Other aircrew restrictions.

4.7.1. Flight crew information file.

4.7.2. Current publications.

4.8. CRO.

4.9.3. Government approval for crewmember qualification and training.

4.9.4. Government approval for crewmember status.

4.9.5. Multiple aircraft qualification.

4.9.6. Contractor approval for non-crewmember status.

4.9.7. Removal from crewmember status.

4.10. Crewmember qualification requirements. Contractors need not address these paragraphs. Including these procedures as a ready reference or making them more restrictive is acceptable.

4.11.1. Airfield operations.

4.11.2. Weather requirements.

4.11.4. Flight operations restrictions.

4.11.5. Filing of flight plans.

4.11.6. Arming and disarming.

4.11.7. Live fire, laser, and gunnery operations.

4.11.8. Night vision/low light operations.

4.11.9. Aircrew flight equipment.

4.11.10. Experimental and engineering test operations.

4.11.11. Aircrew and contractor response to emergencies.

4.11.12. Aircrew and flight briefing guides.

4.11.13. Mission briefings (Army).

4.11.14. Weight and balance.

4.11.15. Aircrew FOD awareness.

4.12.1. Initial qualification training.

4.12.2. Crewmember currency and/or proficiency requirements.

4.12.3. Multiple aircraft qualification currency requirements.

4.12.4. Night and IMC.

4.12.5. Special flight events.

4.12.6. Periods of reduced flight time availability.

4.12.7. Re-currency/re-qualification.

4.13. Crewmember/non-crewmember ground training requirements.

4.13.1. Crewmember and non-crewmember requirements.

4.13.2. Additional requirements for crewmembers.

4.14. Crewmember evaluations.

4.14.1. General.

4.14.2. Flight Evaluations.

4.15.1. Requests for flight approval.

4.15.4. Records (crewmember).

4.15.5. Records (non-crewmember).

Section 5: GROUND OPERATIONS **[New layout according to this instruction]**

5.4. Qualification.

5.4.1. Training plan.

5.4.2. Employee qualification records.

5.4.3. Testing.

5.4.4. Recurring training.

5.4.5. Initial and annual egress.

5.4.6. Medical/physical. Document ground operations positions requiring physicals.

5.5.3. FOD prevention meetings.

5.5.4. FOD prevention procedures.

5.7. Engine/APU/GTC qualification program.

5.7.1. Engine/APU/GTC qualification requirements.

5.7.2. Engine/APU/GTC currency/proficiency.

5.7.3. Engine/APU/GTC/motoring/windmill run certifiers.

5.8.1. Indirect support AGSE.

5.8.2. Direct support AGSE.

5.8.3. Small unmanned aircraft systems.

5.9. Vehicle and powered equipment operation.

5.10. Aircraft servicing.

5.11. Aircraft ground handling.

5.11.1. Towing.

5.11.2. Marshalling.

5.11.3. Parking, mooring and tie down.

5.11.4. Jacking.

5.11.5. Hoisting.

5.11.6. Taxiing by ground personnel.

5.12. Aircraft/equipment hydraulic fluid analysis program.

5.12.1. Hydraulic fluid contamination.

5.12.2. Sampling.

5.12.3. Testing methods.

5.12.4 Documentation of testing results.

5.12.5. Required actions for abnormal results.

5.13. Weight and balance.

5.13.1. Maintenance.

5.13.2. Automated weight and balance.

5.13.3. Documentation of results.

5.14. TOs/maintenance manuals.

5.15. Aircraft records management.

5.16. Safe-for-flight release.

5.16.1. Appointment.

5.16.2. Process for release.

5.16.3. Review items.

5.16.4. Release documentation.

5.17. Aircraft related explosives and ordnance.

5.18. Hangaring of aircraft.

5.18.1. Aircraft fuel status.

5.18.2. Methods to ensure lower explosive limit.

5.18.3. Purging requirements.

5.18.4. Special hangar considerations.

5.19. UAS Ground Control Stations (GCS) and Ground Data Terminals (GDT).

Section 6: AVIATION SAFETY MANAGEMENT SYSTEM **[New layout according to this instruction]**

6.2. Safety Policy.

6.2.1. Procedures.

6.2.2. Designate ASO.

6.2.3. Safety philosophy.

6.2.4. Privileged data.

6.3. Safety risk management.

6.3.1. Flight and aviation ground risk management.

6.3.2. Aviation safety council.

6.3.3. Severe weather.

6.3.4. BASH Program.

6.3.5. MACA Program.

6.4. Safety assurance.

6.4.1. Internal procedural audits/surveillance.

6.4.2. Aircraft damage reporting procedures.

6.4.3. Aircraft mishap notification procedures.

6.4.4. Mishap response plan.

6.5. Safety promotion.

6.5.1. Flight safety meetings.

Section 7: INFRASTRUCTURE AND SUPPORT **[New layout according to this instruction]**

7.2. Contractor infrastructure evaluation. This paragraph does not require a procedure but may generate a report from the contractor.

7.5.2. Contractor fire prevention/ARFF focal point. This paragraph does not require a procedure unless the contractor wishes to provide a procedure for their ARFF focal point to use to perform the required functions.

7.5.3. Use of outside agencies.

7.6.2. Contractors at government owned contractor operated facilities. This paragraph will generate a report and procedures for operational considerations.

7.7.1. FMS. Applicable procedures required by this paragraph will be addressed in the corresponding paragraphs of this Section.

7.7.2. U.S. Government Aircraft. Applicable procedures required by this paragraph will be addressed in the corresponding paragraphs of this Section.

7.8. Fuel equipment, storage, and quality.

7.8.1. Use of outside agency to provide aircraft fuel.

7.8.2. Fuel acquired from FBO.

7.8.3. Fuel acquired from a U.S. Service or host nation.

7.8.4. Fuel acquired from other sources.

7.8.5. Contractor controlled/managed fuel operations.

7.9. Facilities for painting, stripping, and coating.

7.10. Supporting programs/processes.

Section 8: UNMANNED AIRCRAFT OPERATIONS **[New layout according to this instruction]**

This Section provides special requirements and guidance for UAS operations. The applicable paragraphs in this Section need only be addressed in the corresponding paragraphs from Sections 4 and 5. There is no need for the contractor's Procedures to have a specific Section 8.

Section 9: NON-STANDARD APPLICATIONS **[New layout according to this instruction]**

This Section provides guidance on how to apply this Instruction to various unique contract situations. The applicable paragraphs in this Section need only be addressed in the corresponding paragraphs from Sections 4, 5, 6 and 7. There is no requirement for the contractor's Procedures to have a specific Section 9.

Section 10: GOVERNMENT FLIGHT REPRESENTATIVES

Contractors must not include Section 10 in the Procedures.

Glossary 1: DEFINITIONS

Contractors need not address the Definitions from this Instruction in their Procedures, however, including them as a ready reference is acceptable. If any definitions from this Instruction are included, they must not be changed from the language of this Instruction. Adding organizational specific definitions is acceptable. GFR approval of the Procedures does not extend to any definitions. **[This paragraph is now extremely important given the stronger leverage of definitions especially as it pertains to the FOD prevention program. Previously contractors had their own definitions for equipment, consumables, etc., but now must align with those within this instruction.]**

SECTION 4: FLIGHT OPERATIONS

4.1. Flight Operations. This chapter applies to all Contractor Requesting Officials (CRO), crewmembers and non-crewmembers. It applies to all flights under contract regardless of who is on board or operating the aircraft. Optionally piloted aircraft will be treated as unmanned aircraft systems (UAS) when unmanned. Section 8 provides additional requirements for UAS operations. Paragraphs in this Section with specific requirements related to UAS operations are marked with (UAS). The referenced Section 8 paragraphs supplement or replace certain requirements in this Section. Paragraphs marked (UAS NA) do not apply to UAS operations. **[Added Information about UAS and Section 8]**

4.2. Flight Management.

4.2.1. General Flight Rules. Contractor flight operations must follow Service Guidance. **[4.1.1]**

4.2.2. Contractor Flight Planning. The contractor must have a flight planning process that allows crewmembers to properly plan flights. An area should be provided allowing privacy for the aircrew, enabling a thorough, uninterrupted briefing and discussion of the mission. Government provided flight planning areas meet this requirement. **[Removed 'area' from 4.1.2 and focused planning process]**

4.2.3. Flight Profiles. Flight profiles must be prepared for all flights and must detail planned flight checks and events, to include proficiency training and the specific geographical areas or point-to-point routes to be used. Design flight profiles to allow the maximum possible use of ground radar monitoring/advisories, radio communications (status reports at established intervals) or chase aircraft to monitor aircraft position and status. For Flight Services contracts, an approved flight schedule constitutes a flight profile. **[4.1.3 – adds Flight Services]**

4.3. Contract Flight Approval.

4.3.1. GFR approval is required for all contract flights under this Instruction. The Government does not assume the risk for loss under the GFRC for any flight which has not received prior written approval by the GFR. Procedures must delineate processes that ensure flight schedules are developed, and Requests for Flight Approvals submitted, with sufficient lead time to preclude interruption to either Government or contractor operations. Under normal situations, submitting requests during the workday prior to the day of the scheduled flight is considered sufficient lead time. **[4.1.5]**

4.3.2. Embedded Flight Operations. When contractor personnel performing contract activities fly on aircraft owned and operated by a Service organization, the GFR does not authorize the flight. These operations are considered "flight services." A DD Form 3062 (or GFR-approved alternate) listing only contractor personnel must be approved by the cognizant GFR to authorize contractor personnel participation in the flight(s), document contractor personnel qualifications, facilitate the Service organization's flight management processes, and activate the Government's assumption of risk IAW DFARS 252.228-7001. **[New]**

4.3.3. Flights with Multiple Contractors/Multiple Contracts. The GFR approving flights involving a mixture of contractors and/or contracts must direct which Procedures the aircrew will follow. **[4.1.6]**

4.4. Approved Flights. Flights approved by the GFR must be: **[4.1.7]**

4.4.1. Conducted by current and qualified crewmembers and non-crewmembers (except as noted in paragraphs 4.12.1, and 4.12.7) in an approved flight area, route, and specified profile.

4.4.2. Performed according to an approved mission profile or test plan, and within applicable safety and engineering limitations. Experimental and engineering test flights require a specific test plan. Experimental test plans must be approved by: **[added test plan approvals to old 4.1.7.2]**

4.4.2.1. The Aviation Engineering Directorate (Army),

4.4.2.2. IAW NAVAIRINST 3960.4 (Navy),

4.4.2.3. Lead Developmental Test Organization (Air Force).

4.4.3. IAW approved Procedures.

4.4.4. Assessed for risk prior to each flight.

4.5. Flights not Under GFR Cognizance. Occasionally, contractor flight operations include formations, chase, pace, intercept/target, in-flight refueling (receiver or tanker), adversary training, etc. with aircraft not part of the contract being administered by the GFR. These aircraft may be aircraft operating on another contract, U.S. Government, or foreign government aircraft. Contractors are not responsible for the conduct of the aircraft not on their contract. However, the CRO must note the presence of these aircraft involved in the contracted mission on the DD Form 3062, Request for Flight Approval. The CRO must request a statement verifying the qualifications and capabilities for these aircrew and aircraft from the owning organization. This statement is not required when the aircrew or aircraft is provided by the U.S. Government. Elevate any concerns with respect to the safety of the mission to the GFR (UAS see paragraph 8.3). **[clarification / examples added to 4.1.8]**

4.6. Flight Supervision. Procedures must:

4.6.1. Allow for communication between the contractor flight operations facility and the crewmembers while flying in the local area (e.g., contractor radio, phone patch through tower, etc.). Whatever system is used must be manned for the duration of the flight. Contractor aircrews embedded in Service units should use the local unit's communication facilities and procedures to meet this requirement.

4.6.2. As a minimum, identify the check flight area, maintenance test flight areas, supersonic corridor, stereo route profiles and any required/desired Federal Aviation Administration (FAA) coordination.

4.6.3. Define aircraft maintenance Safe-for-Flight Release requirements for aircrews. Requirements should include a review of all safety of flight non-conforming repairs and a review of aircraft logs and records for outstanding safety of flight aircraft inspections/bulletins requiring action and expiring components (TDs, service bulletins, time compliance technical orders, airworthiness directives (ADs), etc.). **[Clarified 4.1.9.3]**

4.6.4. Include record keeping requirements for supersonic flights, if applicable.

4.6.5. Documentation of Certificates, Licenses, and Permits. Contractors must ensure no crewmembers/non-crewmembers are placed on flight approval requests with non-current

certificates, licenses, or permits. The GFR with flight authorization authority will have access to all applicable certificates, licenses, and permits. **[Added GFR access certificates, etc. 4.1.10]**

4.6.6. Mixed Crew Flights. Procedures must address designation of pilot in command and crew positions for dual-piloted and/or multi-place aircraft and flight lead for formation flights. With dual contractors with no prime-sub relationship flying on the same flight, dual flight authorization requests are required. Mixed crews performing crewmember or maintenance tasks must use identical checklists. **[4.1.11]**

4.6.7. Minimum Crew Requirements. Procedures must address minimum crew requirements for the various types of flight activities and be at least that required by the Service Guidance, flight manual, or test plan applicable to the flight event. **[Updated language from 4.1.12]**

4.6.8. Non-Crewmembers. **[NEW]**

4.6.8.1. Non-crewmembers (including USAF mission essential personnel (MEP)) observing the performance of systems or software inflight (subject matter experts), or performing ground support duties at enroute locations or destinations supporting ground operations at off-site locations, require FOPs and GFR approval on all flight approval requests to participate in the flight. A contract modification may be required to include flight operations.

4.6.8.2. Contractor maintenance personnel (not under 4.6.8.1) (USAF – designated as MEPs) on a ground only contract who are acting in direct support of a Service unit may fly under the control of the unit flight operations authority. These maintenance personnel may fly in Service aircraft, when required to support the mission without contractor FOPs or GFR approval. A G-GFR can accept the non-crewmember status documentation from the CRO.

4.6.9. Aircrew Duty and Rest Limitations. The crew rest period is the non-work period immediately preceding the crew duty period. This period must be a minimum of 12 hours with at least 8 uninterrupted hours allowed for sleep. The following crew duty period restrictions apply to all contractor crewmembers/non-crewmembers: **[4.1.13]**

4.6.9.1. The crew duty period begins when an individual reports for work (either flight or administrative duties) and ends when the engines are stopped at the end of an event, mission, or series of missions (UAS see paragraph 8.4).

4.6.9.2. The crew duty period must not exceed 12 consecutive hours. The GFR is authorized to grant extensions to the crew duty period of not more than two hours when requested by the aircrew on a case-by-case basis. For flight services contracts, the Service flight authorization authority is also authorized to extend the crew duty period by 2 hours. **[clarification of 4.1.13.2]**

4.6.9.3. When flying support flights (or engineering test flights IAW paragraph G.1.31) in dual-piloted aircraft with an operative autopilot installed and used, the maximum crew duty period is 16 consecutive hours.

4.6.9.4. Pilots in single-piloted helicopters are limited to a maximum of 6 flying hours in a 12-hour crew duty period.

4.6.9.5. Use of augmented crews per procuring Service Guidance is allowed.

4.6.9.6. Procedures must address chronic fatigue issues.

4.6.10. Other Aircrew Restrictions. The contractor must establish flight restrictions for contractor flight personnel recovering from the effects of alcohol consumption, medications, diving, etc. **[4.1.14]**

4.7. Publications. **[4.1.15]**

4.7.1. Flight Crew Information File (FCIF). Each flight operations facility must maintain an FCIF at a location readily available to crewmembers. Procedures must require crewmembers to read and certify knowledge of the contents of the FCIF initially, and whenever there are new entries. Additionally, an annual review of the FCIF is required. The FCIF should contain information which affects the safety of aircraft operations and information of a transitory nature that concerns flight operations. When collocated with a Government flight operations activity, the contractor may use the Government FCIF, provided both organizations concur and standardized procedures for use are established. Approved revisions to the Procedures must be included in this file until republished.

4.7.2. Current flight publications must be used. Procedures must identify the method used for receiving, distributing, and maintaining the currency of flight manuals and checklists. Contractor personnel must use Government flight manuals and checklists in all flight operations where applicable technical data has been published. The contractor must obtain military flight manuals, changes, and supplements through Government channels. Where only commercial manuals are available, the contractor is responsible for obtaining them and ensuring that changes and supplements are promptly posted in the basic technical publications. Locally devised checklists may be used only when such deviation is authorized by the appropriate Procuring Service. Use of electronic flight bags are authorized IAW Service Guidance.

4.8. CRO. Procedures must identify the individual(s) authorized to request flight approval, crewmember approval and qualification training, and the process for requesting approvals. Prime contractors may appoint a subcontractor individual as the CRO. Only contractor designated CROs may submit requests to the GFR for crewmember approval or for qualification training. The contractor must identify by name (in writing) these officials to the GFR, and must revise the list, as necessary, to ensure currency. **[4.2.1]**

4.9. Crewmember/Non-Crewmember Approval.

4.9.1. The contractor and the GFR must ensure that only the required number of crewmembers are authorized and that programs include sufficient flying time for currency and/or proficiency IAW this Instruction and Service Guidance. The GFR must not approve any crewmember until the Procedures have been approved. GFRs have the authority to approve crewmembers employed by the prime's subcontractor. GFRs have the authority to authorize subcontractor non-crewmembers to fly. **[4.2.2]**

4.9.2. Prior to submitting a crewmember/non-crewmember for training, approval, authorization, or review, CROs must notify the GFR, if candidates have: **[4.2.3]**

4.9.2.1. Ever been removed from crewmember/non-crewmember status by a GFR for cause,

4.9.2.2. Been cited for a violation by the FAA or,

4.9.2.3. Removed from military flight orders for cause.

4.9.3. Government Approval for Crewmember Qualification and Training. The CRO will forward the DD Form 2627, "Request for Government Approval for Aircrew Qualification and

Training," a résumé, and DD Form 1821, "Contractor Crewmember Record," for approval of training to the GFR. At the contractor's request and with GFR approval, the DD Form 1821 can be substituted by Service forms. Include a copy of contractor crewmember's proposed qualification training plan/program per paragraph 4.10. The GFR approves/disapproves the DD Form 2627, files the original and returns a copy to the contractor. The contractor must ensure that crewmembers do not fly or initiate qualification training before receipt of Government approval. Following approval, training must be initiated and completed without delay. Formal training courses offered by the Services may be requested by the contractor and may require reimbursement according to the given contractual agreement. The GFR will then make the request for training to the appropriate Service. It must be endorsed by the ACO, showing that the contract cost adjustment has been made, if applicable. (USAF: Formal training courses provided by the Government may be used to qualify or upgrade contractor employees when it is in the best interest of the Government. Contact AFMC/A3V for all formal training requirements. Send request from the contractor for formal training using USAF Formal Schools Catalog 36-2223, USAF Formal Schools). (Note: Use Pilot-in-command (PC/PIC) time where the DD Form 1821 lists First Pilot as (1st Pilot)). **[4.2.4 – Note: The title of the 1821 has changed to 'Contractor Crewmember Flight Summary.' In doing so, you can ignore the Note at the end of the paragraph as the instructions for each field are now included with the form.]**

4.9.4. Government Approval for Crewmember Status. On completion of qualification training or designation, the CRO forwards the form DD Form 2628, "Request for Approval of Contractor Flight Crewmember," and DD Form 1821 (or GFR approved Service form), to the GFR. The GFR indicates action taken and returns a signed copy to the contractor within 10 workdays. Contractor crewmembers must not perform in their aircrew specialties until receipt of Government approval. An approved DD Form 2628 is valid as long as the crewmember maintains their qualifications for the contractor. Contractor pilots that meet the alternative standard for test pilot school (TPS) graduates listed in paragraph 4.10.2.2 may be approved by the Service waiver authority (SWA) for experimental test flights. **[4.2.5]**

4.9.5. Multiple Aircraft Qualifications. GFRs may authorize contractor crewmembers to maintain qualification in two different series of the same aircraft design (model). Authority to approve multiple qualifications in two or more different design (model) aircraft, three or more series of the same aircraft design (model), or any other combination of mission/design/series, rests with the SWA for this Instruction. Contractors will re-validate the need for multiple qualifications with the GFR annually. Exception: Contractor aircrews embedded in Service units may be qualified in multiple model/series aircraft IAW local unit directives at the discretion of the GFR (UAS see paragraph 8.5). **[Re-ordered from 4.5.3]**

4.9.6. Contractor Approval for Non-crewmember Status. Semi-annually, the CRO must provide the GFR a list of contractor and subcontractor non-crewmembers required to fly in government aircraft. The CRO must ensure that each non-crewmember is qualified and essential for accomplishing the specific mission. (UAS NA) USAF: CROs will annotate non-crewmember lists with any restrictions related to physiological training and exemptions IAW AFI 48-123, "AFMC Supplement, Medical Examinations and Standards." **[4.2.6]**

4.9.7. Removal from Crewmember Status. Approvals of crewmembers are automatically canceled upon termination of employment, physical disqualification, or suspension/revocation of FAA Certificate. **[4.2.7]**

4.9.7.1. The contractor must have procedures for identifying and addressing human factors issues such as substance abuse, personal and family problems, etc., which would preclude flight duties. The contractor must notify the GFR of crewmember status changes by the most expeditious means and then immediately follow up in writing.

4.9.7.2. After completion of an appropriate investigation, the GFR must withdraw the approvals of crewmembers who have:

4.9.7.2.1. Failed to meet the general requirements of basic airmanship or who fail to exercise sound judgment during ground or flight operations.

4.9.7.2.2. Exhibited evidence of personal instability or similar undesirable tendencies or have conducted themselves contrary to the Government's interests in promoting safety.

4.9.7.2.3. Refused timely toxicological testing when the Procedures require it or GFR requests the testing.

4.9.7.3. The GFR must promptly notify ACO and CRO when an approval is withdrawn.

4.10. Crewmember Qualification Requirements. (UAS see paragraph 8.7)

4.10.1. General Qualifications. Minimum qualifications for approval of contractor crewmember, for test and other flight categories, are listed in paragraphs 4.10.2, 4.10.3, 4.10.4, and 4.10.5 Factors such as total experience, currency of experience, experience in similar aircraft, type of flying experience, and other related factors must be evaluated by the GFR before approving a contractor crewmember. All pilots (except those described in paragraph 8.7) must have an FAA Commercial Pilot or Airline Transport Pilot Certificate and the appropriate category and class ratings. For COCO flight operations, contractor pilots must also hold the appropriate type rating. Flight engineers must have an FAA Flight Engineer Certificate or a Service equivalent Certificate or Qualification. Contractors may use Service forms/directives to record individual crewmember records when performing ground and flight operations as approved by the GFR. For non-crewmember requirements see paragraphs 4.9.6 and 4.13. **[Added COCO requirement for a type rating to old 4.3.1]**

4.10.2. Experimental Test Flights and Associated Experimental Ground Operations. (UAS see paragraph 8.7.2) **[4.3.2 clarified that expectation for TPS is the 'full course'. Note that it must also be a U.S. TPS – Empire (UK) and the French TPSs do not differentiate between short course and full course graduates so they are no longer acceptable. If used, see 4.10.2.2. for Non-TPS Approval process.]**

4.10.2.1. Pilot. Not less than 1,500 hours Pilot-in-Command (PC/PIC) time, to include 100 hours as PC/PIC during engineering and/or acceptance flights listed under the functional flight category. Graduation from a U.S. military test pilot school (TPS) full length course is required.

4.10.2.2. Non-TPS Approval. When the contractor pilot is not a graduate of a U.S. military TPS full length course, the listed education and experience requirements must be met in order to execute experimental test missions IAW paragraph 4.9.4 Submit a waiver through normal processes when the contractor pilot does not meet the alternate standards listed here.

4.10.2.2.1. Pilots must have at least 2,000 hours PC/PIC time in comparable aircraft (e.g., helicopter, fighter/attack, cargo, or other). Additionally, 200 hours of PC/PIC time during engineering flight test, and 10 hours during experimental flight test are required.

4.10.2.2.2. Education and experience requirements are as follows:

4.10.2.2.2.1. An undergraduate or higher degree in an aerospace related engineering or aerospace related scientific discipline plus 1 year of applicable engineering test flight experience or,

4.10.2.2.2.2. An undergraduate or higher degree in any other engineering or scientific discipline plus 2 years of applicable engineering test flight experience or,

4.10.2.2.2.3. Any non-engineering undergraduate or higher degree plus 3 years of applicable engineering test flight experience or,

4.10.2.2.2.4. If no degree, 4 years of applicable engineering test flight experience.

4.10.2.2.3. Include in the approval package a request from the contractor per Section 2 and a résumé detailing how the pilot has met the requirements of 4.10.2.2 The additional flight time (paragraph 4.10.2.2.1) and education requirements (paragraph 4.10.2.2.2) constitute the required Risk Management (RM) information. Route the approval request to the SWA per Section 2.

4.10.2.3. Other crewmembers. All other crewmembers must have 1000 hours in the position they are qualifying in, of which 300 hours must be in the same aircraft category (rotary-wing, glider, etc.).

4.10.3. Engineering Test, Check Flights, and all other flights. (UAS see paragraph 8.7.3)**[4.3.3]**

4.10.3.1. Pilot. The pilot must be qualified in mission, type, design, and if appropriate, series of aircraft. The pilot must have not less than 1,000 hours PC/PIC time. In addition,

4.10.3.1.1. For fighter, attack, and trainer aircraft, the PC/PIC time must include 100 hours in the same aircraft type and design (similar design in cases of new design aircraft).

4.10.3.1.2. The PC/PIC time for other aircraft must include 300 hours in similar aircraft type.

4.10.3.2. Copilot. The copilot must have not less than 500 hours PC/PIC time and be qualified in mission, type, design, and if appropriate, series aircraft.

4.10.3.3. Flight Mechanics/Crew chiefs. Contractor crewmembers must have a minimum of 150 hours experience as a flight mechanic/crew chief, have previously qualified and served in such capacity during military service or have been trained using the applicable Service training program modified to the contract requirements (Army: Includes CH-47 Flight Engineers).

4.10.3.4. Other crewmembers. All other crewmembers must have 500 hours in the position they are qualifying in, of which 100 hours must be in the same aircraft category.

4.10.3.5. Maintenance Test Pilot/Functional Check Pilot (Army). **[4.3.3.5]**

4.10.3.5.1. Standard Army Aircraft. Contractor pilots who perform Maintenance Test Flights (MTFs) on Army Aircraft, which have undergone maintenance, modification, or overhaul, or on new production aircraft, where a follow-up/acceptance MTF is not performed by the Government, must be a graduate of the Army Maintenance Test Pilot (MTP) Course (Aviation Maintenance Officer's Course not required) or complete an equivalency evaluation conducted by the Directorate of Evaluation and Standardization (DES), U.S. Army Aviation Center of Excellence, Ft. Rucker, AL 36362-5000. All requests for equivalency evaluations must be forwarded through the GFR to the SWA or to the procuring Army Command (ACOM). The ACOM will coordinate all equivalency evaluations with DES.

4.10.3.5.2. Nonstandard Army Aircraft. Contractor pilots performing Functional Check Flights (FCFs) or maintenance flights conducted per the airworthiness authority's approved procedures are not required to be graduates of the Army Maintenance Test Pilot Course; however, they must be a pilot in command (PC) and meet the task iteration and initial and/or annual evaluation requirements as per the contract and contractor's flight procedures.

4.10.4. Contractor Flight Instructor and Flight Examiner Qualifications. (UAS see paragraph 8.8) **[4.3.4]**

4.10.4.1. Flight Instructors may be designated by the contractor to provide instruction to contractor crewmembers. Only highly qualified, proficient, and experienced personnel may be selected and trained as instructor crewmembers. These candidates must meet the evaluation requirements provided by the Services prior to GFR approval on DD Form 2628.

4.10.4.2. Flight Examiners may be designated by the contractor to administer recurring flight evaluations when authorized by the GFR. Only highly qualified instructor personnel may be selected and trained as Flight Examiners. These candidates must meet the evaluation requirements provided by the Services prior to GFR approval on DD Form 2628.

4.10.4.3. Instrument Flight Examiners (IE), Standardization Instructor Pilots (SP), Instructor Pilots (IP), and Maintenance Evaluators (ME) designations apply only to contractor pilots (Army) contracted for the sole purpose of conducting aircraft qualification training and administration of the Aircrew Training Program (ATP). Contractor pilots in these designated positions must meet all Army initial aircraft qualifications and recurrent training requirements per AR 95-1, "Flight Regulations" and the applicable aircraft Aircrew Training Manual.

4.10.5. Medical Qualification Requirements. Follow all Health Insurance Portability and Accountability (HIPAA) Privacy Rules regarding protection of medical records (UAS see paragraph 8.9). **[4.3.5]**

4.10.5.1. Pilots.

4.10.5.1.1. Contractor pilots need an annual FAA Second Class flight physical.

4.10.5.1.2. Army contractor pilots will have the option of maintaining either an annual FAA Second Class Medical Certificate or an Army Class 2 flying duty medical examination.

4.10.5.2. Other Crewmembers. Unless an FAA Second Class physical is required for their FAA flight certificate, non-pilot crewmembers may receive either an FAA Second Class or military Class 2 flight physical annually. (Exception: crew chiefs, loadmasters, and Army flight engineers, will meet the medical requirements of paragraph 4.10.5.3).

4.10.5.3. Non-crewmembers require an FAA Third Class or military Class III flight physical. Non-crewmembers who fly ejection seat aircraft must also meet Service anthropometric standards. (USAF: Maintenance Non-crewmembers (MEP) only require a medical screen prior to flight in ejection seat aircraft. Not required for non-ejection seat aircraft that operate with cabin altitudes below 10,000 feet.) **[4.3.5.5 - removed 'annual' requirement]**

4.11. General Procedures. At a minimum, the following areas must be addressed:

4.11.1. Airfield Operations. **[4.4.1]**

4.11.1.1. The Procedures must address local airfield operations. If the contractor flight activity is physically located at an operational civil or military airfield, the contractor must comply with local airfield operating instructions.

4.11.1.2. Procedures must address qualification, certification, and licensing requirements for tower controllers and radio flight following service personnel IAW Federal Communications Commission, FAA or host nation regulations when these services are provided by the contractor.

4.11.2. Weather Requirements. For initial acceptance check flights (ACFs)/ FCFs, takeoff and landing criteria must meet the standards of paragraph 4.11.2.1, plus the mission itself must be daytime in visual meteorological conditions (VMC) until assessment for engine, flight controls, landing gear, and instruments affecting instrument flight rules (IFR) capability can be checked and confirmed as operational. Subsequent events may then use paragraph 4.11.2.2, weather requirements (assuming no discrepancies in listed critical systems). Regardless of initial or subsequent flights, ACF/FCF checklist items are to be accomplished during daytime in VMC. For all other flights, Service Guidance will be used for ceiling/visibility minimums and alternate weather requirements (UAS see paragraph 8.10). **[Removed Army direction in 4.4.2, removed 4.4.2.3 and subs]**

4.11.2.1. All initial ACF/FCFs, and subsequent ACF/FCFs involving discrepancies for engine, flight controls, landing gear, or instruments affecting IFR capability:

4.11.2.1.1. Bomber, cargo, tanker, patrol, and trainer aircraft: 1,500 feet and 3 miles.

4.11.2.1.2. Fighter, attack, and reconnaissance aircraft: 3,000 feet and 3 miles.

4.11.2.1.3. Helicopters/tilt-rotor: 700 feet and 1 mile.

4.11.2.2. Subsequent ACF/FCF flights not falling under 4.11.2.1.

4.11.2.2.1. Bomber, cargo, tanker, patrol, and trainer aircraft: 1,000 feet and 3 miles.

4.11.2.2.2. Fighter, attack, and reconnaissance aircraft: 1,000 feet and 3 miles.

4.11.2.2.3. Helicopters/tilt-rotor: 500 feet and 1 mile. Helicopter/tilt-rotor ACF/FCF flights may be conducted under special visual flight rules conditions, but in no case with weather less than 500 feet and 1 mile. ACF/FCF hover checks may be performed when clear of clouds and at least ½ mile visibility. **[tweaked 4.4.2.2.3]**

4.11.3. Required daylight operations. **[4.4.3]**

4.11.3.1. All check flights must takeoff no earlier than official sunrise and land no later than official sunset. Exception: When a flight is required only to check the operations of auxiliary systems or components (unrelated to airworthiness, flight performance, or basic flight instruments), the flight may be flown during the hours of darkness.

4.11.3.2. Experimental/Engineering flights must takeoff no earlier than official sunrise and land no later than official sunset unless night operations are specifically required by the test plan to assess the functionality of the system under test. Exception: When an Engineering flight is required only to check the operations of auxiliary systems or components (unrelated to airworthiness, flight performance, or basic flight instruments), the flight may be flown during the hours of darkness. **[added exception to 4.4.3.2]**

4.11.4. Flight operating restrictions. Service Guidance or applicable flight test documents must be used for all operating restrictions (e.g., minimum altitudes for unusual attitude maneuvers as described in Service Guidance). **[4.4.4]**

4.11.5. Filing of flight plans. Local procedures for filing of flight plans must be addressed. Flight plans must be filled out and filed IAW FAA/Service/host nation regulations. **[4.4.5]**

4.11.6. Arming and disarming (if applicable). The Procedures must mirror Service, TO, Tech Manual (TM), and any applicable local procedures for arming and disarming procedures. **[4.4.6]**

4.11.7. Live fire, laser, and gunnery operations. If conducted, the Procedures must mirror Service, TO, TM, and any applicable local procedures. **[4.4.7]**

4.11.8. Night Vision/low light operations. If conducted, the Procedures must mirror Service, TO, TM, and any applicable local procedures. **[4.4.8]**

4.11.9. Aircrew Flight Equipment, Life Support, and Survival Gear (AFE/ALSE/ALSS). **[4.4.9 – greatly expanded due to removing from Chapter 5]**

4.11.9.1. Procedures will document the specific AFE/ALSE required for the mission flown (e.g., AFI 11-301V2 and TO 14-1-1 list required AFE/ALSE tables for each MD and mission).

4.11.9.2. Procedures will document TO guidance or equivalent manuals used to maintain equipment. Commercial-off-the-shelf (COTS) manuals delivered with the supported equipment are authorized for use until a Service TO/Manual is provided.

4.11.9.3. Contractor must be a graduate of a Service training program, equivalent technical training courses, or sister-service equivalent courses. FAA equivalent training may be used in lieu of Service training. Procedures must address how the ALSE personnel maintain currency in their position. Procedures will address quality assurance (QA)/in-process inspection (IPI) responsibilities.

4.11.9.4. Procedures will address proper documentation of all equipment inspection records, forms, cards or information systems. Use Service documents or approved suitable alternatives that contain all required information.

4.11.10. Experimental and Engineering Test Operations. This area must address the contractor's specific procedures for experimental tests, engineering tests, and associated ground tests of Government aircraft. **[4.4.10]**

4.11.11. Aircrew and Contractor Response to Emergencies. The following emergency situations must be covered in the Procedures (as applicable to the aircraft and mission) to address specific local processes and actions of the airfield and contractor personnel necessary to support the aircrew during ground and in-flight emergencies (UAS see paragraph 8.11): **[4.4.11 – added expectations of support to the aircrew]**

4.11.11.1. Radio failure,

4.11.11.2. Landing gear malfunctions,

4.11.11.3. In-flight fire,

4.11.11.4. Barrier and arresting gear engagement,

4.11.11.5. Controlled bailout/ejection,

4.11.11.6. Jettisoning (fuel, armament, cargo),

4.11.11.7. Minimum and emergency fuel (propulsion power),

4.11.11.8. Emergency aircrew extraction,

4.11.11.9. Emergency aircraft movement (flight-line, severe weather),

4.11.11.10. Hot brakes,

4.11.11.11. Inflight LASER illumination of aircraft,

4.11.11.12. Hazardous material (including hydrazine),

4.11.11.13. Chase aircraft procedures (if applicable) (e.g., lost communications, lost sight, lead/chase responsibilities, inadvertent instrument meteorological conditions (IMC)),

4.11.11.14. Any other airfield specific emergency procedures.

4.11.12. Aircrew and Flight Briefing Guides. Mission/aircraft specific Service briefing guides, or GFR approved equivalent, must be used for conducting these briefings. In the absence of such briefing guides, the contractor must develop briefing guides similar to what the Service uses for like aircraft and missions. **[4.4.12]**

4.11.13. Mission Briefings (Army). Whenever a contract pilot serves as a PC/PIC on a mission in a contracted or Government owned/contractor operated (GOCO) aircraft, a mission briefing must be conducted by contract personnel. The contractor must designate in writing those pilots and supervisory personnel authorized to conduct mission briefings. Only a designated mission briefer can conduct the mission briefing. Self-briefing is not authorized. **[4.4.13]**

4.11.14. Weight and Balance. Contractors must develop procedures for completing aircraft weight and balance (e.g., Form F) prior to flight. **[4.4.14]**

4.11.15. Aircrew FOD Awareness. All crewmembers and non-crewmembers are responsible for foreign object debris (FOd)/ foreign object damage (FOD) prevention while executing aircraft operations. Personnel will ensure that all professional gear, flight equipment, publications, etc. are removed from the aircraft following the completion of the flight/mission. **[NEW]**

4.12. Crewmember Training Requirements. [4.5]

4.12.1. Initial Qualification Training. No GFR syllabus approval is required when Service provided training syllabi are used. **[4.5.1 Restructured]**

4.12.1.1. Initial qualification training must be equivalent to Service Guidance in the specific mission, type, design, and if appropriate, series aircraft. Differences in series aircraft and any special equipment or systems should also be addressed during initial training. If provided, the contractor's in-house training program must be equivalent to the Services', but may be tailored to the contractor's requirements. GFRs may route the contractor's proposed training plan through the waiver authorities (Army/USAF) or appropriate project/program/model manager for the aircraft (Navy), for Service feedback.

4.12.1.2. When aircraft flight simulators exist for the type aircraft being flown, crewmembers must complete emergency procedures simulator training. The duration of the training session must be commensurate with Service requirements. When no simulator exists, emergency procedures training must be accomplished in an actual or mockup cockpit by an instructor. A

comprehensive written examination on the applicable mission, type, design, and if appropriate, series of aircraft must be completed.

4.12.1.3. Knowledge of all the aircraft systems, including normal and emergency procedures, must be demonstrated to an instructor in their crew position. In the absence of a Service-defined program or when limited by the contract, the contractor must recommend an initial qualification program which is similar to programs the Services use for like aircraft to the GFR for approval.

4.12.1.4. Requalification Training. (USAF: GFRs may approve local requalification training for individuals that are unqualified less than 24 months. All other requalification approvals will be coordinated with AFMC/A3V.) **[New]**

4.12.2. Crewmember Currency and/or Proficiency Requirements. **[4.5.2]**

4.12.2.1. General Requirements. Currency and/or proficiency applies to minimum hour/sortie/event requirements necessary to maintain qualification in a particular type/design aircraft. Contractors must use Service Guidance for crewmembers to maintain all applicable currencies and/or proficiencies for each flight operation/event (in which qualification is maintained), in the designated aircraft and crew position. If this guidance does not exist, the contractor must develop and submit a recommended currency program (similar to Service requirements for like aircraft, missions and events) to the GFR for approval. For COCO operations the training program is not tied to Service Guidance, but all training programs requiring GFR oversight must ensure that the aircrews are capable of performing the mission in a safe and effective manner before assigning that crewmember to the flight schedule. The Procedures must:

4.12.2.1.1. Describe the methods used to ensure that aircrews maintain currency and/or proficiency, and do not perform tasks for which they are not current and qualified.

4.12.2.1.2. Identify the office/title of the individual responsible for overseeing paragraph 4.12.2.1.1.

4.12.2.1.3. Publish the specific Service Guidance used for currency, and re-currency and/or proficiency requirements.

4.12.2.1.4. Proration. A crewmember performing on a contract for less than a semiannual training period must accomplish a prorated share of the minimum requirements based on the percentage of the remaining training period. Accomplishment of these currency and/or proficiency requirements should be distributed evenly throughout the calendar period to enhance aircrew skill levels.

4.12.2.2. Using Civil Aircraft to Maintain Currency and/or Proficiency on Contract Aircraft. Generally, the operation of civil aircraft does not contribute to currency and/or proficiency requirements for the operation of Government aircraft unless the civil and Government aircraft are considered similar as determined by the GFR. A similar aircraft may be a new variant of an existing model (F-15SA and F-15E). Similar aircraft may fly related flight profiles such as low altitude instrument approaches (C-12 and C-130). The aircraft may be similar in flight characteristics and/or handling qualities (C-146 and C-12). The aircraft may use a common form of flight management systems (B767 and B787). When the GFR allows the use of civil aircraft to count for requirements, the records of the contractor crewmember will be annotated to indicate the specific civil aircraft used. Use of similar aircraft is not to be considered a multiple qualification per paragraph 4.9.5 Use of the similar aircraft may be used to meet no more than

50 percent of Service currency and/or proficiency requirements. Use of aircraft that are not deemed similar will not satisfy any Service requirements. **[4.5.2.2 – added clarification of 'similar aircraft']**

4.12.2.3. Contractor pilots (Army) contracted to conduct initial aircraft qualification, initial Maintenance Test Pilot qualification, or administration of the Army Aircrew Training Program must be qualified and maintain currency per AR 95-1 and the applicable Aircrew Training Manual. Such designated pilot positions include; IP, SP, IE, and ME. (UAS NA)

4.12.3. Multiple Aircraft Qualification Currency Requirements. Contractor crewmembers maintaining qualifications in multiple aircraft under contract must accomplish a minimum of 50 percent of the Service currency requirements in each aircraft. Contractor crewmembers qualified in other than Government aircraft in a professional capacity must have their records so noted, but approval for such additional qualification must not be the responsibility of the GFR, nor does it constitute multiple qualification under this Instruction. **[4.5.3]**

4.12.4. Night and IMC. There is no requirement for pilots/unmanned aircraft (UA) operators to fulfill night or instrument requirements, except in those cases where night or instrument flying by contractor personnel is required by contract. Pilots/UA operators maintaining night flying currency must also maintain instrument currency except in aircraft not certified for instrument flight. Training and currency requirements for night currency and other events must be accomplished in the contractor's flying program under the provisions of the contract. **[4.5.4]**

4.12.5. Special Flight Events. The contractor must ensure that crewmembers are properly trained in flight operations which require special maneuvers or qualifications (e.g., formation, air refueling, basic fighter maneuvers (BFM), air combat training, low level, night vision devices, weapons delivery). Currency requirements for these operationally oriented flight events must be per Service Guidance. **[4.5.5]**

4.12.6. Periods of Reduced Flight Time Availability. When contractor crewmembers cannot meet training requirements because of low density production or developmental aircraft, the contractor must develop and submit a recommended alternative training plan for category/design aircraft through the GFR and ACO to the appropriate waiver authority. An example of such a training plan would be to substitute 50 percent of the Service requirements in a similar aircraft or compatible simulator. Such approvals must be obtained for each applicable semiannual period. **[4.5.6]**

4.12.7. Re-currency/Re-qualification. When crewmembers fail to maintain basic aircraft qualification/currency they must not be permitted to fly as crewmembers on Government aircraft except for appropriate re-currency/re-qualification training. The contractor must develop and submit a recommended training program (similar to Service requirements for like aircraft, missions and events) to the GFR for approval. **[4.5.7]**

4.13. Crewmember/Non-Crewmember Ground Training Requirements. The contractor must develop a ground training program which includes (as a minimum) the requirements of this Section. The Procedures must assure that aircrews do not fly if training requirements have not been meet. (UAS see paragraph 8.12)

4.13.1. Crewmember and non-crewmember requirements. **[4.6.1 clarified]**

4.13.1.1. Physiological training. All crewmembers and non-crewmembers must receive the appropriate physiological training equivalent to the analogous Service crew position and mission

parameters. Refresher training frequency must be accomplished per Service Guidance. This training, if required by Service Guidance, may be waived by the GFR for non-crewmembers required to fly no more than once in a 12 month period. Non-crewmembers that fly infrequently (less than 12 times in a 12 month period) qualify for an exception when flying in passenger capable aircraft. These excepted personnel are restricted to flight altitudes less than 10,000 feet mean sea level (MSL) when unpressurized.

4.13.1.2. Aircraft Egress/Evacuation Training. This training must cover a review of aircraft emergency equipment and escape procedures. Training must be tailored to the type(s) of aircraft and crew position in which the individual maintains qualification. The contractor must ensure that all crewmembers and non-crewmembers receive annual egress training. (USAF: Maintenance non-crewmembers designated as MEPs will complete plane-side egress training. This training is valid for a period not to exceed 30 days.) As appropriate, egress/evacuation training must address a minimum of the following:

4.13.1.2.1. Egress methods (ground and flight),

4.13.1.2.2. Ejection seat normal and emergency procedures to include automatic modes,

4.13.1.2.3. Seat kit modes of operation and deployment,

4.13.1.2.4. Post ejection checklist items,

4.13.1.2.5. Parachute operation to include malfunctions and landing techniques,

4.13.1.2.6. Fire extinguisher training/refresher and,

4.13.1.2.7. Use of smoke masks.

4.13.1.3. AFE/ALSE/ALSS training. The frequency and content of training must be based on Service Guidance. (Not applicable to UAS Operations)

4.13.1.4. Water Survival Training/Under Water Egress Training. Currency is required prior to operating any Government aircraft over open water beyond the gliding distance to land. Base the content of the training on Service Guidance. Frequency of water survival training must be per Service Guidance. Training must be given by a qualified life support/survival equipment instructor or by attending a Service water survival refresher course. Water survival training may be tailored to the type(s) of aircraft, crew position(s) and mission risk. This training, if required by Service Guidance, may be waived by the GFR for non-crewmembers required to fly no more than once in a 12 month period. (USAF: This training is not applicable to maintenance non-crewmembers)

4.13.1.5. Land Survival Training. Base the content of the training on Service Guidance. Frequency of land survival training must be per Service Guidance. (USAF: This training is not applicable to maintenance non-crewmembers.)**[4.6.2]**

4.13.2. Additional Requirements for Crewmembers. The frequency and content of training must be tailored to meet minimum requirements of the Procuring Service.

4.13.2.1. Academic Training. Aircrew members must complete academic refresher training to include self-instruction. As a minimum, this training must address the following topics (as appropriate): ACF/FCF procedures; aircraft normal and emergency systems/operations; TM notes, warnings and cautions; flight test areas and procedures; local airfield and air traffic control

(ATC) procedures; review of the Procedures and Service Guidance used. This training may be conducted during monthly flying safety meetings.

4.13.2.2. Emergency Procedures Training. This training may include the use of simulators belonging to either the contractor or the Government. A qualified simulator instructor or IP is required to supervise this training. If a compatible simulator does not exist, an IP may provide this training in a crew station mockup or cockpit. The frequency and content of training must be based on Service Guidance.

4.13.2.3. Initial Centrifuge Training (Air Force). All crewmembers and non-crewmembers who fly Active Sustained High G Aircraft (SHGA) must complete centrifuge training IAW Service Guidance. SHGA are capable of rapid G-onset rates (greater than 3.0 G/sec) and sustained (greater than 5 seconds) G-loading of greater than 6.0 G. Current examples of aircraft that meet this definition are: A-10; T/AT-38; F-15; F-16; F-22; and F-35.

4.13.2.4. Crew/Cockpit Resource Management Training (CRM)/Aircrew Coordination Training (ACT). The contractor must ensure that all crewmembers receive the appropriate CRM Training or ACT required by Service Guidance.

4.14. Crewmember Evaluations.

4.14.1. General. Approved contractor crewmembers must be evaluated on their ability to perform assigned duties and designated flight tasks, including operating all the aircraft systems related to their crew position. They must perform assigned aircrew functions safely and effectively. Flight and ground evaluations must be accomplished IAW Service Guidance. All evaluations conducted by the Government must be coordinated with and approved by the GFR. If a pilot/UA operator exceeds the currency period for the instrument check, they must not fly IFR unsupervised by an IP until the evaluation is satisfactorily completed. Evaluations may be conducted as an integral part of the regularly scheduled flights. The Procedures must describe the methods used to ensure that aircrew evaluations do not lapse. **[4.7.1]**

4.14.2. Flight Evaluations. Flight evaluations must be administered to the contractor crewmember either by an approved contractor flight evaluator/instructor or by a qualified Government evaluator/instructor, at the direction of the GFR. The senior contractor examiner pilot/UA operator must receive initial/recurring evaluations by a Government pilot/UA operator authorized to administer that evaluation to Service aircrews. **[4.7.3]**

4.14.3. Contractor pilots designated as IE, SP, IP, or ME for the administration of the Army ATP must be evaluated annually by a Government pilot authorized to administer that evaluation to Service aircrews (UAS see 8.8.3). **[4.7.4]**

4.14.4. No-Notice Evaluations. Contractor crewmembers are subject to no-notice evaluations. **[4.7.2]**

4.15. Forms and Records.

4.15.1. Requests for Flight Approval. GFR written approval is required for all flights under this Instruction. **[4.8.1 – updated for new 3062]**

4.15.1.1. Procedures must outline requirements for completion and submission of DD Form 3062, Request for Flight Approval, or GFR approved equivalent form. GFR approved alternate forms must contain the same required information depicted on the DD Form 3062.

4.15.1.2. The Government's assumption of risk of loss under the GFRC does not extend to flights not previously approved in writing by the GFR, or to flights which the corresponding flight approvals have been altered following the GFR's signature and without the GFR's approval.

4.15.1.3. The names of all crewmembers, non-crewmembers, and passengers (Government or contractor) flying on aircraft IAW this Instruction, must be depicted, or attached to, the flight approval request. When contractor personnel fly in support of a contract on government-owned / government-operated (GOGO) aircraft, the DD Form 3062 will be used only for documenting contractor personnel qualifications and training.

4.15.1.4. The flight approval request must be completed through block 8 for approval. Specifically, the following items must be completed in detail:

4.15.1.4.1. Block 5 – A by-name listing of all crewmember personnel, by position, authorized to participate in the flight. Contractors must identify the PC/PIC in Block 5.

4.15.1.4.2. Block 6 – A by-name listing of all non-crewmember personnel, by position, authorized to participate in the flight.

4.15.1.4.3. Block 10 – Type of flight, profile, governing directives, test plan, flight release, etc. Include flight area, route of flight, stops, and destination.

4.15.1.4.4. Block 11 – Signature and contact information of CRO who certifies that the flight is IAW the flight program authorized by the contract and must be conducted IAW the approved flight operations procedures.

4.15.1.4.5. Block 12 – GFR signature. Must be in writing. A digitally signed email meets this requirement. Maintain email approvals with flight approval.

4.15.1.4.6. Block 13-15 – Record the applicable information upon completion of the flight and provide to the GFR within 24 hours of the last flight covered under the applicable DD Form 3062. The GFR may waive this requirement for operations where the contractor aircrews are embedded in Service units.

4.15.1.4.7. Once the flight approval is signed, contractors must not deviate from the authorized profile without advance approval in writing from the GFR. A digitally signed email from the GFR meets this requirement. Maintain email approvals with flight approval.

4.15.2. Contractor Crewmember Record. Use DD Form 1821, or Service forms and directives, to record individual crewmember training, qualifications, flight time and approval to operate Government aircraft. **[4.8.2- Note: The 1821 is no longer titled, or considered, the 'contractor crewmember record.' Therefore, as most contractors already do, use the Service forms and directives to document.]**

4.15.3. Training Folder. Maintain a training folder on each crew/non-crewmember in training status. This folder serves as a management tool to record training progress and assist in the orderly progression of training. The folder must contain: **[4.8.3]**

4.15.3.1. A "Training Recap Table" listing all training required by the upgrade program. This table should fully identify prerequisite events and should allow the instructor to document the date an event was completed;

4.15.3.2. A record of the grade and date of the current aircraft and aircrew examinations;

4.15.3.3. Hours, types, and dates of ground schools completed; and,

4.15.3.4. Each training and checkout flight numbered with a résumé as to the areas covered, including how the trainee performed during that training period.

4.15.4. Records (Crewmember). Maintain a record folder for each crewmember after the completion of training and qualification. A method must be established to inform the GFR when these documents are renewed or expire, or are withdrawn or canceled. Documentation will include date of instruction, training completion date, instructor, and method of instruction (e.g., lecture, computer based, demonstration, flight). There is no requirement to maintain records for crewmembers no longer on flight status. Include in the record folder: **[4.8.4 added documentation expectations]**

4.15.4.1. Training records as required in paragraph 4.15.3, for at least 18 months or per Service Guidance, whichever is longer;

4.15.4.2. Copies of GFR crewmember approvals. Include documented records of any completed special training which is needed to perform all maneuvers required to conduct the test, functional/acceptance check flights, and mission profile (e.g., formation, refueling, instrument, night, low level);

4.15.4.3. Current Medical Certificate. Note: Follow all HIPAA privacy rules regarding protection of medical records;

4.15.4.4. Certification of physiological training, altitude chamber, and centrifuge training, when required;

4.15.4.5. Certification of Life Support, egress and survival training;

4.15.4.6. FAA documents.

4.15.4.6.1. All applicable FAA Certificates and records of other qualifications;

4.15.4.6.2. Record that a Violation occurred (FAA or host nation) (Details provided upon request.);

4.15.4.7. Certification of recurring flight evaluations and prerequisite written and oral examinations. A copy of all flight evaluations must be maintained for at least 18 months or per Service Guidance, whichever is longer; and,

4.15.4.8. Certification of CRM Training or ACT.

4.15.5. Records (non-crewmember). A method must be established to inform the GFR when these documents expire, are withdrawn or canceled. There is no requirement to maintain records for non-crewmembers no longer on flight status. Documentation will include date of instruction, training completion date, instructor, and method of instruction (e.g., lecture, computer based, demonstration, flight) (USAF: This paragraph is not applicable for maintenance non-crewmembers). Maintain a records folder for each non-crewmember that must include as a minimum: (UAS NA) **[4.8.5 added documentation expectations]**

4.15.5.1. A completed copy of non-crewmember's authorization to fly or a copy of the CRO's non-crewmember list (per paragraph 4.9.6),

4.15.5.2. Military or FAA Medical Certificate. (Follow all HIPAA privacy rules regarding protection of medical records.),

4.15.5.3. Certification of training and qualification,

4.15.5.4. Certification of physiological training and altitude chamber, when required,

4.15.5.5. Certification of applicable AFE/ALSE/ALSS, egress and survival training,

4.15.6. Flight Time Records. Maintain a record of each crewmember's flights to include:

4.15.6.1. Date and time,

4.15.6.2. Type mission,

4.15.6.3. Aircraft type/design/series,

4.15.6.4. Instrument time (actual, simulated),

4.15.6.5. Night hours and,

4.15.6.6. PC/PIC, co-pilot, IP, etc., hours.

4.15.7. Access to Records. Crewmember/non-crewmember training folders, flight time records, and record folders must be available to the GFR and other appropriate Government personnel at the request of the GFR. Records may be maintained electronically or hard copy in a format acceptable to the GFR. **[4.8.7]**

SECTION 5: GROUND OPERATIONS

5.1. Ground Operations. This Section applies to contractor personnel who perform ground operations. This Section applies to UA unless otherwise annotated. Paragraphs with specific requirements related to UAS operations are marked with (UAS). When the paragraph is marked UAS, see the corresponding paragraph in Section 8. The referenced Section 8 paragraphs supplement or replace certain requirements in this Section. Paragraphs marked (UAS NA) do not apply to UAS operations. **[New addition and direction for UAS Ground Operations]**

5.2. Preparation. In preparation for conducting ground operations, contractors must ensure the aircraft is properly configured for the task being performed. Unless otherwise required by contract, contractor processes such as application of electrical or hydraulic power, operation of landing gear, power doors, or flight control surfaces, must follow existing aircraft technical publications (e.g., GOPs, Service Technical Orders/Manuals) or equivalent original equipment manufacturer (OEM) data/instructions. Contractors will ensure compliance with important and critical instructions (e.g., warnings, cautions, notes). **[New] [This took the place of old CI paragraphs 5.31 and 5.32 and opened the expectation up that some sort of technical guidance will be followed; No procedure required]**

5.3. Ground Operations Procedures. The contractor must develop and follow written GOPs for each applicable ground operation. **[Establishes up front verbiage for remaining paragraph Procedure requirements]**

5.4. Qualification. The contractor must ensure each authorized employee is *qualified* to perform ground operations in a safe and effective manner. The contractor must determine the need, frequency, and requirements for qualification unless prescribed by the contract or this Instruction. Qualification can be obtained by formal training, on-the-job-training (OJT), demonstrating satisfactory job knowledge/skills, attending difference training, or by passing a written, oral, or performance evaluation for a specific task or operation or any combination of these training methods. **[Old CI 5.2]**

5.4.1. Training Plan. Contractors must develop a training plan to ensure that personnel are qualified to perform required ground operations. The training plan must include:

5.4.1.1. Methods for qualifying trainers (e.g., demonstrate task expertise, formal training), **[List of instructors is no longer required from old CI]**

5.4.1.2. Methods for qualifying technicians for each applicable GOP (e.g., written and/or practical exams, computer based training, OJT), **[Moved away from telling them what they must do to train (e.g. practical, written). New- they now will tell us what they do for qualification]**

5.4.1.3. A method that ensures training content is current, and

5.4.1.4. A method for tracking and forecasting training to ensure only qualified employees perform tasks. **[Removed old CI 5.2.1.3 and 5.2.1.4]**

5.4.2. Employee qualification records (electronic or manual) will contain at a minimum:

5.4.2.1. Qualification status including date qualified, and next qualification due date as applicable, **[Change from old CI 5.2.2.1. No longer tell the contractor how to do initial, recurring (except as noted below in 5.4.4), or certification. Bottom line goal is how they receive qualification and are they qualified]**

5.4.2.2. Documentation of engine/auxiliary power unit (APU)/gas turbine compressor (GTC) run currency. A separate run log may be maintained, and

5.4.2.3. Date of last medical examination if required. **[Removed the requirement for a record and only now require a date]**

5.4.3. Testing. Contractors must:

5.4.3.1. For qualifications that require testing, develop methods to ensure tests are not compromised over a period of time (e.g., multiple versions of each test, randomly generated questions (computerized)). For Emergency Procedure testing requirements see paragraph 5.7

5.4.3.2. Provide evidence of most recent written and/or practical exam completion (e.g., pass/fail, score, date completed). For Engine/APU Emergency Procedures exam, retain the last copy of the actual exam. **[New]**

5.4.4. Recurring training. In addition to recurring training requirements otherwise identified by contract or this Instruction, as a minimum, GOPs must address recurring training for the FOD Prevention Program, towing and jacking supervisors, and jack manifold operators. **[New to the training section but mirrors previous CI attachment 12 recurring requirements.]**

5.4.5. Initial and annual egress system familiarization training must be completed for all personnel that have a need to gain access to cockpits or crew stations equipped with ejection or extraction systems and/or explosive operating canopy removal systems. (UAS NA) **[With the removal of egress and seat maintenance training is the only leftover from the old CI. Removed old CI 5.11]**

5.4.6. Medical/Physical. All personnel performing engine runs, ground taxi, ordnance loading, or operating self-propelled support equipment within 10 feet of the aircraft silhouette must pass a physical examination from a qualified medical professional prior to conducting these operations, and subsequently on a specified periodic basis, not to exceed 5 years. Contractors should determine which other ground operations require a medical physical/evaluation. The contractor will ensure that the examination is sufficient to ensure the individual can safely perform the specific operations for which they are qualified. (UAS see paragraph 8.13). **[New subsection to training. Add in specified distance, ordinance, and clarified requirements. Removed old CI 5.5]**

5.5. FOD Prevention Program. An effective FOD Prevention Program identifies potential problems, mitigates risks, promotes awareness, provides effective employee training, and uses industry best practices and lessons learned for continued improvement. Processes must mitigate the FOD risk using *control* methods based on the level of risk of migration, entrapment, encapsulation or damage. (UAS see paragraph 8.14) **[old CI 5.3. Completely new and overhauled section. Do not refer to the old CI focus solely on the words within, the highlight, and red text explanations. *This entire paragraph is predicated on leveraging FOD definitions in the glossary section.* No procedure requirements for 5.5- 5.5.2]**

5.5.1. FOD Prevention should be progressively more stringent based on the risk level for associated Ground Operations. Varying levels of cleaning, inventory management, work processes and incidence reporting, etc., should be considered for risk mitigation. National Aerospace Standard (NAS) 412, "Foreign Object Damage (FOD) Prevention Program Guidance Document," and Aerospace Standard (AS9146), "Foreign Object Damage (FOD) Prevention Program – Requirements for Aviation, Space, and Defense Organizations," are useful guidance for developing a FOD Prevention Program. **[This gives the contractor the latitude to determine what measures to put into place to determine effectiveness and control based on their evaluation of effectiveness described in 5.5.3. It also allows them to simply use one process provided it is effective throughout.]**

5.5.2. All levels of the contractor's management must demonstrate leadership commitment to the FOD Prevention Program (e.g., philosophy letters, participation in FOD prevention meetings, FOD walks) and designate a *FOD Prevention Focal Point* with the responsibility and authority for establishment, implementation, and maintenance of the program.

5.5.3. FOD prevention meetings. Procedures must define the content, attendees and frequency of the meetings. The level of risk should dictate the frequency of FOD prevention meetings; however, they must be at least quarterly. The FOD Prevention Program (to include the tool control program) must be evaluated on a periodic basis to determine effectiveness. Results will be presented to management (e.g., metrics, measures, data collection, analysis, trend identification, root cause analysis, corrective action). **[This paragraph (and 5.5.2) is focused at getting leadership more involved]**

5.5.4. FOD Prevention procedures must address the following elements: Area Designation and Management; Training and Personnel Access; Product Protection; Housekeeping; Clean-As-You-Go; Consumables, Hardware, and Personal Items; when applicable, Flight Line, Tool, Expendable, and Equipment Accountability and Control; and Lost Tool/Item Reporting. **[These are the 8 main sections of the FOD Prevention Program and all employees must be trained on each (5.5.4.2.2). Again, it is extremely important to understand the definitions in the glossary]**

5.5.4.1. Area Designation and Management.

5.5.4.1.1. Designate FOD Prevention Areas (as appropriate) and develop associated controls based on the level of risk (e.g., increased restrictions, vigilance).

5.5.4.1.2. Maintain visual management of each area designation (e.g., area map, signs, colored tape, floor decals).**[New and aligns with industry standards]**

5.5.4.1.3. Mitigate FOD risk when non-product related activities are performed in designated areas (e.g., infrastructure maintenance, equipment repairs, construction). Methods of mitigation could include: Area deactivation, protection barriers, quarantine, product relocation, training, etc. **[New]**

5.5.4.2. Training and Personnel Access.

5.5.4.2.1. Maintain a FOD prevention training program commensurate with risk.

5.5.4.2.2. Ensure initial/recurring training addresses the FOD prevention elements in paragraph 5.5.4.

5.5.4.2.3. Identify internal employees and external parties (e.g., visitors, contractors, customers) training requirements. External parties must follow approved FOD prevention procedures. **[Last sentence new]**

5.5.4.2.4. Establish controls to ensure anyone entering FOD prevention designated areas has received required FOD prevention training or is escorted by trained personnel. This includes personnel not typically assigned to the designated area (e.g., customers, visitors, contractors). For aircrew requirements see paragraph 4.11.15

5.5.4.3. Product (Aircraft) Protection. Protect product from FOD through all stages of ground operations. This also applies to parts/components removed which maintain association with the aircraft. Procedures must address: **[Important to correctly apply the definitions of FO/FOd/FOD as used below]**

5.5.4.3.1. Protecting open component ports, lines, ducting, electrical connectors, etc. against FOd migration/intrusion by use of protective devices (e.g., bags, caps, covers, plugs),

5.5.4.3.2. Protecting removed components from inadvertent contact with other objects/surfaces. Protection methods include properly securing, padding, appropriately containerizing, segregating, etc., and **[New]**

5.5.4.3.3. Storage of tire and wheel assemblies (e.g., vertically stored on racks, protection from environmental conditions). **[New addition with the removal or the old CI 5.16]**

5.5.4.4. Housekeeping and Clean-As-You-Go. Maintain housekeeping and clean-as-you-go in areas where ground operations are performed. **[Leverage definitions in glossary]**

5.5.4.5. Consumables, Hardware, and Personal Items.

5.5.4.5.1. *Control* consumables, hardware, and personal items to mitigate FOD risks. Methods for controlling consumables, hardware, and personal items may differ based on use and proximity to aircraft. Those items used in/on the aircraft may require a higher level of control than those used off-aircraft (e.g., workbench).

5.5.4.5.2. Limit items to ensure only those necessary to accomplish the task are taken into the product work area, on, or within the aircraft. **[New]**

5.5.4.5.3. Report consumables, hardware, and personal items known to be lost in/on aircraft IAW paragraph 5.5.4.8

5.5.4.6. Flight Line. The contractor must maintain a process to effectively mitigate the risk of FOD on the flight line.

5.5.4.6.1. Control foreign objects (FO)/FOd migration on runways, taxiways, parking areas, aprons, hardstands, and aircraft/engine run up areas to include trim pads, hush houses, and test cells through the use of sweepers, FOd walks, etc.

5.5.4.6.2. Report and track degraded ramp/taxiway/runway surfaces and procedures for operating in or around degraded areas and during construction activities.

5.5.4.6.3. Identify methods to mitigate FO generated by vehicle traffic entering aircraft operational areas (e.g., rollover checks, FO shakers).

5.5.4.7. Tool, Expendable, and Equipment Accountability and Control. Within this paragraph (and subordinates), tools, expendables, and equipment will be referred to as tools. The purpose is to *control* and account for all tools used during production, test, assembly, and ground operations to prevent tools from causing damage to the aircraft. The contractor must assess their operations, establish, implement, and maintain a process to control company and personally-owned tools. Effective tool accountability and control systems are easy to follow and difficult to circumvent. The contractor must demonstrate the performance effectiveness of the controls they select (see paragraph 5.5.3). Tool control must be effective and commensurate with risk. The following are a list of historically effective controls/techniques/processes that may be tailored to meet requirements. **[This single paragraph is the most important to understand and get correct in order to ensure the contractor develops an EFFECTIVE tool control program. The key to leveraging the requirement is CONTROL and that definition. Not all paragraphs below are required at every location. They are merely a smorgasbord (but not all inclusive) to help the contractor develop an effective program. Remember, the choices they make MUST demonstrate effectiveness according to 5.5.3 and this paragraph]**

5.5.4.7.1. Limiting tools (e.g., expendables) to ensure only those necessary to accomplish the task are taken into the aircraft or within the aircraft silhouette.

5.5.4.7.2. Minimization. Evaluating for removal any excess tools that could become misplaced, lost or overly burdensome for employees to inventory. Consideration should be given to removing these tools from "active" inventory.

5.5.4.7.3. Accounting. Ensuring tools are accounted for pre/post usage (e.g., tool lists, tool room distribution and return system).

5.5.4.7.4. Storage. Using portable containers (e.g., tool bags, totes) to temporarily contain all tools when working in, on, or around the aircraft. Use containers that, due to their size, minimize the number of tools that can be carried to the work area.

5.5.4.7.5. Serviceability and Condition. Procedures to ensure tools and equipment are fit for use and unserviceable/broken tools are removed from service, reported, and remain out of service until properly dispositioned (e.g., replaced, repaired, recalibrated, disposed of).

5.5.4.7.6. Location and Inventory. Procedures to ensure tool identification, location, and inventory management.

5.5.4.7.7. Tools not traceable to an issuing source accounted for using a logging process. This might be implemented at a primarily commercial site where Government aircraft are quarantined/"roped off" from commercial aircraft and an entry control point is established to ensure control and accountability of tools.

5.5.4.7.8. Use of portable and non-portable tool storage and usage containers or kits (e.g., shadow boards, shadowboxes, tool kits).

5.5.4.7.9. Identification. Uniquely mark and identify each tool container (or kit) and contents (e.g., Electrical Box #27).

5.5.4.7.10. Uniquely Marking Tools for Traceability (optional for expendables). Items too small to etch/mark, and tools where marking compromises form, fit or function, must be listed by description on inventories (e.g., 12 driver bits + kit/container), and containerized with like items.

5.5.4.7.11. Use of Master Inventory Lists. List all tools assigned to tool containers or kits. Inventory lists should be of sufficient detail to identify tool type, location in the tool box (if applicable), and description of sub-components (e.g., feeler gauge/12 blades).

5.5.4.7.12. Pre/post tool usage inventories.

5.5.4.7.13. Periodic tool inventory audits by other than user.

5.5.4.7.14. Use of tool storage location indicators. At its simplest, it can mean simple outlines or cutouts in the shape of each tool but can be as sophisticated as self-inventory tool boxes that, through the use of automated inventory systems and sensors, can identify which tools have been checked out, and by whom. Tool storage location indicators may include, but not limited to:

5.5.4.7.14.1. High contrast color schemes for the foreground and background,

5.5.4.7.14.2. Unique, labeled locations for each tool,

5.5.4.7.14.3. A method of silhouetting or outlining the tool shape,

5.5.4.7.14.4. Personal toolbox drawers, if allowed, should be labeled and only contain personal items.

5.5.4.7.15. Tool issue, return, replacement, and accountability. These are processes to ensure all tool room, tool container (or kit) inventories are kept correct and current.

5.5.4.7.16. Unserviceable Tools. Have a method to account for all missing or broken tool parts, report any missing parts if not accounted for (per paragraph 5.5.4.8), and update inventory list.

5.5.4.7.17. Tool security. Have a method for safeguarding tools to prevent unauthorized migration (e.g., securing tools at end of shift).

5.5.4.7.18. Have a method for the accountability of specialty tools required to be installed on, or assigned to, the aircraft for extended periods of time (over one shift).

5.5.4.7.19. Tool chits (as applicable). These are unique identification tags that are inserted in place of the tool to identify the user or status of the tool. (Tool chits themselves can be a source of FO/FOd and should be controlled as if they were the tools themselves.)

5.5.4.8. Lost Tool/Item Reporting. As a minimum, reporting must allow contractor personnel to identify a lost tool/item under a non-attribution policy. Procedures must include a search process, documentation, notification (to include GFR/G-GFR), and summarizing results for lost tool/item incident closeout. Aircraft must not be released for flight until the search process is concluded. The aircrew must be briefed on all incidents of lost tools/items reported missing and not recovered that the contractor determines may still be on the aircraft. The aircraft records must be annotated to reflect those lost items.

5.6. Aircraft Engine/APU/GTC Operation. **[New paragraph extracted out from old CI 5.4. No procedure required for this paragraph]**

5.6.1. Fixed-wing Engine/APU/GTC Operations. Qualified Ground Personnel are authorized to operate aircraft engines, APU/GTCs, and uninstalled engines.

5.6.2. Helicopter/Tilt-rotor Engine Operations (including UAS helicopter/tilt-rotor). Ground engine operations will only be performed by pilots (UAS operators) qualified in the aircraft/UAS. See 5.6.2.1, for exception.

5.6.2.1. Helicopter/Tilt Rotor aircraft engine motoring/windmill may be performed by qualified ground personnel provided the rotor lock/brake is engaged (excluding U.S. Army contracts). **[NEW]**

5.6.2.2. Qualified ground personnel may conduct helicopter and tilt-rotor APU/GTC operations.

5.6.3. Operators may maintain qualifications in multiple aircraft, engine APU/GTC types.

5.6.4. Operations must be performed IAW existing aircraft technical publications or equivalent OEM data/instructions.

5.7. Engine/APU/GTC Qualification Program. Procedures must address: (UAS see paragraph 8.15). **[Old CI 5.4. Very little changed from old CI except as noted below]**

5.7.1. Qualification Requirements. Ground personnel who operate aircraft engines, APUs, or GTCs must be trained, pass a written exam, pass an emergency procedures test with a score of 100%, receive practical instruction (may be accomplished using a flight crew simulator) and be evaluated by a certifier for each aircraft type, model, series for which they are being qualified.

There are three required phases of qualification for operating aircraft engines. Tailor phases I and II, as applicable, for APU/GTC and motoring/windmill operations. **[Last sentence is new]**

5.7.1.1. Phase I – Training (Academic).

5.7.1.1.1. General aircraft familiarization must include, as a minimum, basic Mission, Design, Series, airframe characteristics, aircraft properly configured, cockpit configuration and systems, throttles and aircraft controls, egress, normal and emergency braking systems, applicable aircraft system and subsystems operation, UHF/VHF radio operation, air traffic control (ATC) tower procedures, emergency radio transmissions, installation and removal of aircraft restraining devices (if applicable), thorough review of tech data procedures with emphasis on notes, cautions, and warnings, engine/APU/GTC operation, to include normal operational parameters and limitations, aircraft and engine/APU/GTC emergency procedures (critical actions) and operating limitations. Procedures identified as critical memory items must be memorized.

5.7.1.1.2. Complete an engine operation parameters/limitations test and an emergency procedures test. Emergency procedures must include all applicable emergency procedures identified in the engine/aircraft/APU/GTC technical data for each type/model/series. Emergency procedures (critical actions) tests must be fill-in-the-blank, i.e., not multiple choice, and require a 100% score.

5.7.1.2. Phase II – Practical (Aircraft Cockpit or Simulator). Students must demonstrate knowledge and proficiency in the following areas prior to performing an actual engine start:

5.7.1.2.1. Proper Run clearance procedures,

5.7.1.2.2. Cockpit scanning techniques/patterns,

5.7.1.2.3. UHF/VHF radio operation, ATC tower procedures, and emergency radio transmissions,

5.7.1.2.4. Normal APU/GTC/engine start, run, and shutdown procedures, including notes, cautions, and warnings,

5.7.1.2.5. Augmenter/afterburner or thrust reverser/propeller reverse operation as applicable, including notes, cautions, and warnings,

5.7.1.2.6. Aircraft systems/subsystems normal operating parameters, including notes, cautions, and warnings,

5.7.1.2.7. Egress procedures,

5.7.1.2.8. Normal and emergency braking operation,

5.7.1.2.9. Ensure emergency procedures (critical actions) are memorized. Instructors will evaluate the student on response time and ability to handle emergency situations.

5.7.1.3. Phase III – Actual Aircraft Engine Run. Students must be evaluated by a certifying official on all items in Phase II (paragraph 5.7.1.2).

5.7.2. Currency/Proficiency:

5.7.2.1. 90-day (180-day for APU/GTC): Perform a run (or motoring/windmill as applicable) for each aircraft-engine/APU/GTC type/model. For multiple series aircraft, if the control, instrumentation, limitations, or procedures are different, then separate currencies are required for each version. Engine runs in an engine test cell cannot be used for currency in the aircraft.

Currency may be maintained by the use of a GFR approved simulator on an alternating (every other engine run) basis. **[New 180 day for APU]**

5.7.2.2. Annual Evaluation. An annual evaluation is required for each type/model, and for multiple series aircraft, if the control, instrumentation, limitations, or procedures are different. Annually, the individual must: **[New]**

5.7.2.2.1. Pass a written procedures and emergency procedures test,

5.7.2.2.2. Complete an evaluation in each operation in which the individual maintains qualification, administered by a certifier described in paragraph 5.7.3

5.7.2.3. To regain 90/180-day currency, operator must complete an engine/APU/GTC run under the supervision of a certifier. GFR approved aircraft simulators may be used to regain currency. Annotate re-currency in the operator's training record.

5.7.3. Engine/APU/GTC/Motoring/Windmill Run Certifiers. Personnel authorized to certify engine operators must be appointed in writing by the contractor. They must be current and qualified in the operation and must receive their annual exam from a Government or contractor engine run certifier. The GFR/G-GFR may restrict certifier status and or require use of military certifiers. **[New requirement to be appointed in writing by the contractor (used to be open-ended).]**

5.8. Aircraft Ground Support Equipment (AGSE). AGSE is used to service and support aircraft maintenance. Practical usage and procedures for inspection and maintenance requirements depend on the type of equipment, complexity, and use. Regardless of the type, the contractor must ensure safety precautions required by technical guidance are followed. These requirements are established to ensure the serviceability of the AGSE to prevent damage to the aircraft. Custodial responsibilities associated with protection of Government Furnished Equipment (GFE)/AGSE are prescribed in FAR 52.245-1 (Government Property), not this Instruction. AGSE is separated into two categories, Indirect and Direct. **[Completely new paragraph that replaces old CI 5.6]**

5.8.1. Indirect support AGSE. Facilitates ground operations, but does not directly connect or interface with the aircraft. Examples include work platforms, ladders, scaffolding, step stools, fall protection equipment stands/platforms, shoring, production work platforms, component/assembly stands, etc., used in performance of on-aircraft maintenance. The contractor must develop procedures, which may differ from paragraph 5.8.2, which mitigates the potential for aircraft damage. **[This paragraph allows the contractor the freedom to determine the procedures required for preventative maintenance and inspections for these items (Unless otherwise required by contract). Important to keep in mind paragraph 3.7.1]**

5.8.2. Direct support AGSE. Connects or interfaces (excludes test equipment) directly with the aircraft. Examples include, but are not limited to: Power carts, hydraulic carts, bleed air cart, air-conditioning units, tow devices, jacks, and UAS catapult and recovery equipment. Procedures must address:

5.8.2.1. Inspection, maintenance, and pre-use checks must be based on OEM or Service Guidance. In the absence of such guidance, the program may be based on locally developed technical processes. This program focuses on the serviceability of the equipment used to perform or facilitate aircraft maintenance. Equipment configuration must conform to current technical guidance. **[New]**

5.8.2.2. AGSE must be checked, as a minimum, prior to the first use of the day. **[New]**

5.8.2.3. Equipment Usage. AGSE must be used only for its intended purpose and IAW the technical guidance for the equipment. The contractor must address precautionary measures taken to prevent aircraft damage from inadvertent contact with AGSE (e.g., proper use of brakes, spotters, positioning, movement) and introduction or migration of FOd (e.g., proper use of caps on equipment serving lines, ensuring equipment is free of FOd prior to use). **[New]**

5.8.2.4. Equipment in overdue status that is in-use and cannot be removed (e.g., jacks installed for extended periods, fixtures, cradles).

5.8.3. Small Unmanned Aircraft Systems (SUAS) used to facilitate maintenance or inspections must only be operated by qualified personnel. Qualifications may vary depending on the operating environment (e.g., in a hangar/facility, flightline, airspace). Equipment must be maintained and inspected as stated within paragraph 5.8.2 **[New]**

5.9. Vehicle and Powered Equipment Operation. Procedures must address vehicle operation (to include self-propelled equipment, such as scissor lifts and forklifts) within 10 feet of the aircraft silhouette or aircraft components. Procedures must also address safe operating speeds, spotter requirements (exception spotters not required for operations in designated vehicle lanes), and vehicle pre-operational/safe-to-operate inspection requirements. **[Old CI 5.7]**

5.10. Aircraft Servicing. Unless otherwise required by contract, procedures must be based on existing aircraft technical publications or equivalent OEM data/instructions. **[New]** Procedures must address, at a minimum, all servicing of fluid and gaseous systems (e.g., fuel, defuel, hydraulic, nitrogen, oxygen, oil, compressed air), to include prevention of cross contamination (UAS see paragraph 8.16). **[Old CI 5.8]**

5.11. Aircraft Ground Handling. (UAS see paragraph 8.17) Procedures must address: **[Old CI 5.9]**

5.11.1. Towing (includes towing by hand):

5.11.1.1. Towing Pre-briefings,

5.11.1.2. Identification of towing supervisor,

5.11.1.3. Required personnel and responsibilities, **[Responsibilities is new]**

5.11.1.4. Towing speeds,

5.11.1.5. Towing in congested areas,

5.11.1.6. Aircraft setup/configuration as required by applicable aircraft technical guidance,

5.11.1.7. Towing during reduced visibility (e.g., use of lighted wands, hand held communications),

5.11.1.8. Communications external to tow team (e.g., air traffic control tower, air field management) and,

5.11.1.9. Signaling for normal and emergency stops (e.g., whistles, horns, radios).

5.11.2. Marshalling:

5.11.2.1. Aircraft obstacle clearance distances,

5.11.2.2. Use of standardized FAA, International Civil Aviation Organization (ICAO), or Service Guidance hand/wand signals,

5.11.2.3. Marshalling team member positions in relation to the aircraft and,

5.11.2.4. Special equipment used for limited visibility marshalling operations (e.g., reflective vests, lighted wands).

5.11.3. Parking, Mooring and Tie Down. **[Parking is new]** Unless otherwise required by contract, procedures must be based on existing aircraft technical publications or equivalent OEM data/instructions. Procedures must address approved restraint locations, equipment, and applicable grounding requirements. DoD Handbook (MIL-HDBK) 274A, "Electrical Grounding for Aircraft Safety," provides additional guidance on aircraft grounding.

5.11.4. Jacking:

5.11.4.1. Jacking Pre-briefings,

5.11.4.2. Identification of jacking supervisor,

5.11.4.3. Required personnel and responsibilities, **[Responsibilities is new]**

5.11.4.4. Communication and signaling between team members,

5.11.4.5. Pre-operational inspection of jacking equipment,

5.11.4.6. Appropriate location(s) to jack the aircraft, **[New wording since they must follow technical guidance in 5.12.3]**

5.11.4.7. Securing/configuring of jacks after aircraft is jacked (e.g., locking rings, relieving manifold pressure),

5.11.4.8. Aircraft specific requirements (e.g., weight and balance, jack-points, configuration),

5.11.4.9. Aircraft stability while on jacks (e.g., minimizing number of personnel on aircraft, use of ballast to adjust for changes in center of gravity) and, **[New]**

5.11.4.10. Shoring/cradling (if required).

5.11.5. Hoisting: **[New]**

5.11.5.1. Pre-briefing,

5.11.5.2. Identify the hoisting supervisor,

5.11.5.3. Required personnel and responsibilities,

5.11.5.4. Communication and signaling between members and,

5.11.5.5. Preoperational inspection of the equipment.

5.11.6. Taxiing by Ground Personnel:

5.11.6.1. Procedures must ensure only qualified personnel taxi aircraft,

5.11.6.2. Follow Service technical manual/data for applicable type/model/series and, **[New]**

5.11.6.3. Ground personnel will not conduct taxi operations on rotor-wing/ tilt-rotor aircraft or conduct high speed taxi operations. **[New]**

5.12. Aircraft/Equipment Hydraulic Fluid Analysis Program. Procedures must address at a minimum: **[Old CI 5.12]**

5.12.1. Hydraulic fluid contamination surveillance program for both aircraft and AGSE (as applicable IAW technical data) to include test equipment used for operational checks of removed components,

5.12.2. Sampling and proper handling to prevent contamination,

5.12.3. Testing methods (e.g., patch, portable oil diagnostic system). For Naval aircraft, unless otherwise required by contract, hydraulic analysis must be performed on AGSE per NAVAIR 00-80T-96, **[Specific Navy requirement new]**

5.12.4. Documentation of testing results for all aircraft and AGSE and,

5.12.5. Required actions for abnormal results.

5.13. Weight and Balance. In the absence of specific contractual requirements, OEM, or other weight and balance standards, contractors will weigh aircraft IAW TM 55-1500-342-23, "Weight and Balance" (Army); NAVAIR 01-1B-50, "Weight and Balance" (Navy/Marine Corps); TO 1-1B-50, "Weight and Balance" (Air Force); Coast Guard technical order 1-1B-50, "Weight and Balance" (Coast Guard). Procedures must address: **[Old CI 5.15; Highlight area no longer a should; one of the standards will be used]**

5.13.1. Maintenance, storage, calibration, and handling of scales and/or load cells,

5.13.2. When an automated system is used for weight and balance, such as the Automated Weight and Balance System, ensure a process exists to verify software is current and,

5.13.3. Documentation of results.

5.14. TOs/Maintenance Manuals. The Procedures must include the method for receiving, distributing, and maintaining the currency of technical publications. Where only commercial manuals are available, the contractor is responsible for obtaining them and ensuring that changes and supplements are promptly posted in the basic technical publications. For FAA certified aircraft, the contractor must maintain all applicable Airworthiness Directives and Service Bulletins for review. **[Old CI 5.19; Removed the foreign disclosure section]**

5.15. Aircraft Records Management. Procedures must address maintenance, management, and control of documents, work pages/plans, historical records, etc. **[Old CI 5.20]**

5.16. Safe-for-Flight Release. Certifies the aircraft is safe for flight. Procedure must address: **[Old CI 5.21]**

5.16.1. Appointment of a qualified release authority in writing by the contractor,

5.16.2. Process for release,

5.16.3. Review items to include: Applicable servicing, inspections, scheduled/unscheduled maintenance, weight and balance, all non-conformances that would preclude flight have been corrected, all deferred non-conformances have been evaluated and documented and,

5.16.4. Release documentation.

5.17. Aircraft Related Explosives and Ordnance. Procedures must address managing the risk posed to the aircraft while handling explosives in close proximity (applicable blast hazard danger

zone) to the aircraft. **[Old CI 5.24. Reworded title, focused the only attention to close proximity (applicable blast hazard danger zone) to the aircraft which is defined in the DoD 4145.26-M]**

5.18. Hangaring of Aircraft. Procedures must address: **[Old CI 5.27 and 5.28, removed fuel cell MX]**

5.18.1. Aircraft fuel status (e.g., fueled, defueled, unfueled),

5.18.2. Methods to ensure aircraft meets and maintains the required Lower Explosive Limit,

5.18.3. Purging requirements if fuel cell maintenance is to be performed and,

5.18.4. Special hangar considerations (e.g., fixed and mobile fire suppression system status, work stand positioning, ongoing hazardous operations).

5.19. UAS Ground Control Stations (GCS) and Ground Data Terminals (GDT). See UAS paragraph 8.18, for specific requirements for UAS GCSs and GDTs. **[New, see section 8 for those ground breakdowns]**

Removed or moved from the Old CI:

Removes processes that are defined as industrial and quality

- **Egress Systems- Old CI 5.11 (With exception of the egress training moved to Qualifications)**
- **Oil Analysis- Old CI 5.13**
- **Tire and Wheel- Old CI 5.16 (Only retained requirement for storage of tire and wheel assemblies)**
- **Security of Aircraft- Old CI 5.18**
- **TMDE- Old CI 5.14 Only requirement is validate the tools in use are calibrated**
- **Gases- Old CI 5.30 (Any protection needed while in use would be captured in the servicing section)**
- **Application of Electrical/Hydraulic Power and Operation of Gears, Doors, Control Surfaces- Old CI 5.31 and 5.32**

Transfers several previous ground requirements into the new Infrastructure section and narrows the scope of effect to only when there is a risk to asset

- **ALSE- Old CI 5.10 Truncated and moved under Flight Operations**
- **Welding and Brazing- Old CI 5.17 modified and moved into the new Infrastructure section**
- **Battery Handling and Storage/ Corrosion Control (except painting)/ Lasers/ HAZMAT- Old CI 5.22, 5.23, 5.25, 5.29. These sections were mostly removed and only the requirement to address in section 7 when handling in close proximity of the aircraft**
- **Severe Weather- Old CI 5.26. Moved into Safety section 6**

SECTION 6: AVIATION SAFETY MANAGEMENT SYSTEM

6.1. Safety Management System (SMS) Program. **[Completely Restructured]**

6.1.1. Purpose. The purpose of the contractor's SMS is to eliminate or reduce hazards and proactively prevent mishaps. This Section focuses on prevention programs, and responding to and investigating damage to aircraft under contract. **[NEW]**

6.1.2. Scope. The contractor's Aviation SMS should be based on the size and complexity of all flight and/or ground operations and address appropriate program elements in each pillar. The procedures required collectively in this Instruction contribute to the minimum requirements of the risk management portion of the SMS. The SMS is comprised of four pillars or components: Safety policy, safety risk management (SRM), safety assurance, and safety promotion. The SMS structure is modeled on FAA and industry standard SMS pillars, tailored to encompass a broad range of government contractor flight and ground operations, including unmanned aircraft operations and military unique flight operations. **[NEW – no new programs were added to the existing programs; they were simply re-organized into the appropriate pillar.]**

6.2. Safety Policy. The safety policy pillar is the management objectives, responsibilities, and safety standards of the SMS. It is also where management conveys its commitment to the safety performance and safety culture of the organization to its employees. The minimum program elements addressed in this pillar must include: **[NEW – loosely 6.1]**

6.2.1. Procedures that address the contractor's overall SMS program including roles and responsibilities.

6.2.2. Designation of an Aviation Safety Official (ASO) and specific responsibilities of the position. The ASO should have unfettered access to senior contractor management officials. **[6.2]**

6.2.3. Publishing of a formal management aviation safety philosophy. **[NEW]**

6.2.4. Privileged Data. The contractor must establish procedures for the handling of "privileged" safety data. In the performance of the contract the contractor may request and receive from the Service's safety center, access to "privileged" safety information as defined in DoDI 6055.07, "Mishap Notification, Investigation, Reporting, and Record Keeping," and the Services' safety regulations. DoDI 6055.07 includes detailed information on the appropriate scope and proper handling and release of privileged information. If mishap related privileged data is to be requested and obtained, handling procedures for the privileged information must be in place to include properly executed Non-Disclosure Agreements (NDA). For USCG use: COMDTINST M5100.47 (Series), "Safety and Environmental Health Manual." Handling procedures must address the following safeguards: **[6.13 – added NDAs]**

6.2.4.1. Limitations of company internal distribution to the minimum number of directly concerned safety or operator personnel,

6.2.4.2. No release of privileged data to third parties,

6.2.4.3. Training to ensure employee awareness of the sensitivity of privileged information and its restrictions for purposes of exclusive Government benefit only.

6.3. SRM. The SRM pillar provides a decision making process for identifying hazards and mitigating risk based on a thorough understanding of the contractor's systems and their operating environment. The SRM pillar is the contractor's way of fulfilling its commitment to consider

risk in their operations and to reduce it to an acceptable level. The minimum program elements a contractor must address in this pillar include: **[NEW]**

6.3.1. Flight and Aviation Ground RM. The contractor must develop and document a RM program. The program will address assessment, mitigation, and acceptance processes. Contractors are not required to provide risk assessment analysis for individual procedures. Contractors may base their programs on Service programs such as Operational RM (Navy) or RM (Army/USAF) or equivalent industry practices. **[6.3]**

6.3.1.1. The procedures must specifically address a documented flight risk assessment and management process.

6.3.1.2. Contractors must provide awareness or training on Human Factors to ground operations personnel. Process should address risk factors as applicable to their site or program (see FAA Circular 120-72A, "Maintenance Human Factors Training," Service guidance, etc.). **[NEW]**

6.3.1.3. Hazard Identification and Elimination. As a minimum, the system/methodology must allow contractor personnel to identify a potential hazard under a non-attribution policy, provide an avenue to communicate (anonymously, if desired) this concern to the contractor's safety department for validation and corrective action, and document resolution of the identified hazard. **[6.4 – read the highlight as a 'must', the program must have non-attribution and an anonymous option]**

6.3.2. Aviation Safety Council. Establish an aviation safety council to promote a program of accident prevention in flight, ground, industrial, and explosive activities as they apply to flight and ground operations. These meetings must be held at least quarterly and may be integrated with Government aviation safety council meetings. Document and distribute minutes of the meetings to appropriate offices and the GFR and maintain for a minimum of one year. The aviation safety council: **[6.5]**

6.3.2.1. Accepts action items, provides safety expertise, implements changes as required, and operates as a focal point for safety within the company,

6.3.2.2. Addresses safety incidents for trend analysis and recommendations and,

6.3.2.3. Addresses airfield/airspace hazards to include obstructions, ATC facilities and procedures, Hazardous Air Traffic Reports (commonly referred to as HATRs), and Bird/Animal Avoidance and Strike Hazard (BASH),

6.3.2.4. Members generally include:

6.3.2.4.1. Safety Manager,

6.3.2.4.2. Director of Flight Operations/Chief Pilot,

6.3.2.4.3. QA (contractor and Government),

6.3.2.4.4. ASO,

6.3.2.4.5. Department Heads,

6.3.2.4.6. FOD Prevention Focal Point,

6.3.2.4.7. Chief of Aircraft Rescue and Fire Fighting (ARFF),

6.3.2.4.8. Contractor Fire Prevention/ARFF Focal Point,

6.3.2.4.9. Environmental/Hazardous Materials Manager,

6.3.2.4.10. Aviation Maintenance Manager (contractor),

6.3.2.4.11. GFR (other APT members may also be invited),

6.3.2.4.12. Airfield Manager,

6.3.2.4.13. ATC liaison and,

6.3.2.4.14. CMO Commander (DCMA).

6.3.3. Severe Weather. Procedures must address at a minimum: **[5.26]**

6.3.3.1. Conditions that constitute severe weather,

6.3.3.2. Provisions for obtaining forecasts/alerts in sufficient detail to address defined severe weather conditions,

6.3.3.3. Provisions for disseminating severe weather information to affected personnel, including off duty hours notification process and,

6.3.3.4. Response plan. Specific responsibilities for hangaring, mooring, or evacuation of aircraft as appropriate.

6.3.3.5. The GFR must be notified of any deviations from approved Procedures.

6.3.4. BASH Program. The contractor must develop and document a program to reduce the likelihood of animal-aircraft collisions. The procedures must address airfield wildlife mitigation, flight profile analysis, and animal strike reporting/species identification. **[6.8 – greatly expanded on minimum expectations]**

6.3.4.1. Airfield wildlife mitigation identifies the actions taken to mitigate the risk of wildlife strikes on or near the airfield (e.g., habitat modification, harassment, depredation techniques, aircrew training, tower advisories). Contractors at a civil or military airfield with existing airfield mitigation programs do not require a separate process, but must cooperate with the existing airfield program.

6.3.4.2. Flight profile analysis includes actions taken to analyze the departure and arrival airfield environment and route of flight risks to flight operations. These actions may include wildlife prediction models, Avian Hazard Advisory System, Notices to Airmen, Automatic Terminal Information Service, and real-time reports such as Next-Generation Radar & ATC or Birdwatch Reporting Conditions.

6.3.4.3. Animal strike reporting may be IAW Service or host nation reporting guidance. If no Service or host nation guidance exists, or is not used, strikes will be reported via U.S. Department of Agriculture/FAA strike reporting channels using FAA Form 5200-7, "Bird/Other Wildlife Strike Report." If possible, species remains (snarge) will be collected and shipped to the Smithsonian Institute Feather Identification Lab.

6.3.5. Mid-Air Collision Avoidance Program (MACA). The contractor must develop and document a MACA program to reduce the likelihood of mid-air collisions. It must analyze the local flying environment and take necessary steps to reduce the likelihood of a mid-air collision. MACA considerations may include, but are not limited to, local airspace restrictions, procedural deconflictions, routes, altitudes, integration of radar or visual flight rules (VFR) flight following, airspace blocks, local test flight areas, airfield traffic hotspots/runway intrusions, reporting points, local civilian training areas, transponder use and unmanned aircraft including threats from

civilian drones. MACA plans, diagrams, and kneeboard cards, if developed, may be shared publically as part of an outreach program to local fixed-base operators (FBOs), flying schools, glider clubs, etc. If a formal Service or host nation MACA program exists, contractors may integrate their program with the local airfield program. **[6.9 - Expanded]**

6.4. Safety Assurance. The Safety Assurance pillar provides the necessary processes to give confidence that the system is meeting an organization's safety objectives, and that mitigations or risk controls developed under the Safety RM pillar are working. In Safety Assurance, the goal is to review processes to ensure that objectives are being met. Strong Safety Assurance processes will yield information used to maintain the integrity of risk controls. The contractor must address the following Safety Assurance areas: **[NEW]**

6.4.1. Internal Procedural Audits/Surveillance. Contractors must conduct audits or assessments at least semiannually, to determine the appropriateness of, and compliance with, the Procedures required by this Instruction. A team with expertise in each functional area may need to be used. Forward copies of the consolidated summary of findings and corrective actions to the GFR. The following references may be used as guidelines: Service regulations, DCMA Aircraft Operations Inspection (AOI) guides obtained via the GFR, internally developed checklists, etc. This requirement may also be met through a program of regular audit/surveillance that generates trending data for reporting, analysis and corrective action (as required) to address noncompliance. GFR access to this data fulfills the requirement of a semiannual report. **[6.7 – expanded expectations]**

6.4.2. Aircraft Damage Reporting Procedures. The contractor must track all damage (does not include fair wear and tear or workmanship) to contract aircraft "in the open," ("covered aircraft") and notify the GFR within 7 calendar days of damage greater than or equal to $5,000 and less than $25,000. For damage greater than or equal to $25,000, see paragraph 6.4.3 Initial cost estimates will be based on the contractor's appropriate over and above labor rates established in the contract plus the cost of parts and materials. **[6.11 – fair wear and tear or workmanship exception…see MFR: While the contractor does not have to track "fair wear and tear or workmanship", the contractor is not the entity to make that determination. That is ultimately a Government call by the contracting officer (ACO/PCO) based on investigation and recommendations from the Property Administrator and/or Quality and the GFR. If a 'production' aircraft not 'in the open' or 'covered aircraft' when damaged, the incident will be addressed through the appropriate material review board (MRB) processes unless the damaged component was Government-furnished (e.g., an engine). If the aircraft is Government-furnished, the contractor is required to report all damage in the property loss function in the Government-Furnished Property (GFP) module of the Procurement Integrated Enterprise Environment (PIEE) for reporting loss of Government property. Since the GFR is only notified of damage above $5000, there will be instances where the GFR may first be notified by Property. If the contractor suspects the damage is due to fair wear & tear or workmanship error, recommend notifying the GFR so that determination can be made by the contracting officer. If determined to be fair wear & tear or workmanship error, the contractor no longer has to track the incident as a damage]**

6.4.3. Aircraft Mishap Procedures. The contractor must notify the GFR of any incident involving aircraft "in the open" ("covered aircraft") meeting the injury or mishap damage (does not include fair wear and tear or workmanship) classification criteria defined in DoDI 6055.07, "Mishap Notification, Investigation, Reporting, and Record Keeping" (or applicable agency reporting criteria for non-DoD aircraft) as soon as practical (see also DoD Accident/Mishap/Incident Classification, Reporting Guide, and cognizant service safety office (CSSO) List Job Aid). The cognizant CSSO will make a determination on whether the reported damage constitutes a "mishap" and the mishap classification. Damage deemed a mishap will

initiate the contractor's mishap response plan if not already initiated. **[NEW 6.12 – fair wear and tear or workmanship exception…The same situation applies as with 6.4.2. If the contractor suspects the damage is due to fair wear & tear or workmanship error, recommend notifying the GFR so that determination can be made by the contracting officer and mishap determination by the CSSO. If determined to be fair wear & tear or workmanship error, the contractor no longer has to track the incident as a mishap.]**

6.4.3.1. The contractor must provide the GFR a narrative of the mishap, including costs. Contractors must provide mishap cost estimates as they become available and must base their estimates on the contractor's over and above labor rate plus the costs of parts and materials. **[broken out from parent 6.12]**

6.4.3.2. If the Service directs, the contractor will provide the GFR a detailed narrative of the mishap, findings, causes, costs, recommendations, and corrective actions to mitigate risk of recurrence. Such investigations do not constitute official Service Safety investigations. Contractor reports do not need to be in Service mishap investigation report format. **[Clarification to 6.12 added for contractor investigation expectations]**

6.4.3.3. For COCO aircraft, the contractor must immediately notify the GFR of any mishap that occurs while flying PAO or CAO under contract. **[NEW]**

6.4.4. MRP. The contractor must develop a MRP or pre-mishap plan, which establishes the policies, responsibilities, and actions to be initiated should any aircraft in the custody of the contractor become overdue or involved in a mishap. Contractors at military airfields, or embedded in a military unit with existing MRPs, may tailor their process to use and complement the existing MRPs. The contractor must exercise an MRP scenario on an annual basis. Elements of the MRP deemed not related to the exercise scenario, or not practical (e.g., taking of toxicological samples, impounding of FBO equipment, search and rescue operations, taking fluid samples from the aircraft/AGSE), will be validated via tabletop discussions, validation of concept, or some other method to ensure that all elements of the MRP are executable. As a minimum, the MRP must include the following: **[6.14 - expanded]**

6.4.4.1. Immediate actions necessary to ensure command, control and coordination of the rescue/recovery effort,

6.4.4.2. A notification plan which includes a current roster of contractor and Government personnel to be notified in the event of an aircraft mishap, and a method to make notifications during non-duty hours (personal/home numbers do not need to be provided to the GFR),

6.4.4.3. A process for securing the aircraft (e.g., security, safing, preserving evidence, movement) for mishaps with the potential to be Class C and above. When the aircraft is impounded by PCO/ACO direction in response to a mishap, the GFR, in coordination with the CSSO, is the release authority for all impoundments of mishap aircraft. If a Service mishap board is convened, the board president is the release authority. **[6.14.3 – totally revised]**

6.4.4.4. Procedures for contractor and subcontractor cooperation and participation in mishap investigations conducted by the Government. Procedures must clearly define the differences between a Government legal investigation (used to establish facts and satisfy claims/litigation) and a Government safety investigation (used for mishap prevention purposes). The procedures must clearly state the contractual obligation of contractor personnel to provide information and interviews to the Government safety investigation immediately upon request. The results of medical and toxicological testing per paragraph 6.4.4.8, must be provided to the Government

safety investigation board immediately upon request. The toxicological testing results must be provided to the Government legal investigation board immediately upon request.

6.4.4.5. Procedures for search and rescue,

6.4.4.6. Procedures for site security and public affairs,

6.4.4.7. Procedures for the collection and preservation of evidence to include:

6.4.4.7.1. Training records,

6.4.4.7.2. Aircraft log books, data records, maintenance and servicing records (includes evidence from ground control stations),

6.4.4.7.3. Mishap aircraft's fluid servicing equipment and contents, and,

6.4.4.7.4. Fluid samples from the mishap aircraft.

6.4.4.8. Medical procedures. Procedures will define location of medical facility, transportation method and escort requirements. **[6.14.8]**

6.4.4.8.1. Toxicological Testing. Contractors must ensure that toxicological testing of personnel involved in aircraft mishaps is promptly accomplished to preserve perishable evidence (subject to host nation restrictions). Contractors must include toxicological testing procedures as part of their MRP. The contractor must ensure that the requirement for toxicological testing is flowed down to its subcontractors. **[note host nation restrictions]**

6.4.4.8.1.1. Testing Thresholds. Testing must be conducted for mishaps that meet the DoDI 6055.07 Class B/A threshold (for Army Service administered contracts, apply AR 385-10, "The Army Safety Program," toxicology thresholds). All crewmembers must receive toxicological testing. Additionally, those contractor non-crewmembers and ground personnel identified by the GFR, whose actions or inactions may have been factors in the mishap sequence, must also be tested. If requested by the contractor, the GFR must document this decision in writing. **[6.14.8.1.1 – big change…no more dollars, added Army differences]**

6.4.4.8.1.2. Toxicological samples must be collected per the Armed Forces Medical Examiner System guidelines and lab specimens must be sent to the Armed Forces Medical Examiner System/Division of Forensic Toxicology. **[6.14.8.1.1 – now MUST use AFMES…no more 'at least equal to' language.]**

6.4.4.8.1.3. Contractor Personnel Refusing to be Tested IAW paragraph 6.4.4.8.1.1 The GFR has no role in the firing or discipline of contractor personnel. In addition, the GFR cannot force compliance with any portion of this Instruction. However, the GFR has complete authority over access to all aircraft covered by this Instruction. Any contractor crewmember refusing timely toxicological testing following a mishap must be permanently removed as a Government approved crewmember. Any contractor non-crewmember refusing timely toxicological testing following a mishap will be permanently removed from the contractor's non-crewmember list. Ground personnel refusing timely testing following a mishap will not be permitted to work on aircraft under this Instruction for 3 years. Contractors may request relief from these risk control measures directly to the appropriate waiver authority for this Instruction. Requests should include sufficient evidence that the Government's risk has been adequately mitigated. Contractors must annotate any refusals to comply with toxicological testing in the individual's personnel files.

6.4.4.8.2. Medical Examinations. The Contractor must establish procedures for medical examination of crewmembers whose actions or inaction may have been a factor in the mishap sequence, as determined by the CRO or GFR. **[Note removal of Army requirement from 6.14.8.4]**

6.4.4.8.3. Physiological Events. An examination by a military flight surgeon, an FAA approved medical examiner, or host nation equivalent, is required for those personnel who experience a physiological incident. Additional Service medical requirements for physiological events may be required (see Service guidance). **[added 'host nation equivalent' to old 6.14.8.3]**

6.4.5. Additional Safety Assurance Tools. Contractors are encouraged to incorporate other Service or industry safety assurance tools and programs into their SMS (e.g., safety climate assessment surveys, Human Factors Analysis Classification System boards for crewmembers, safety culture workshops, Service/FAA Aviation Safety Action Program reporting tools, or NASA/FAA Aviation Safety Reporting System and military flight operations QA programs). **[NEW]**

6.5. Safety Promotion. The safety promotion pillar is designed to ensure that employees have a solid foundation regarding their safety responsibilities, the organization's safety policies and expectations, reporting procedures, and a familiarity with risk controls. This is achieved through communication and training. **[NEW]**

6.5.1. Flight Safety Meetings. Conduct monthly flight safety meetings for flight personnel. The intent of these meetings is to provide a forum for sharing contractor and Government information on safety items or issues. Maintain attendance records, a summary of subject matter presented at meetings, and a method to brief absentees on the subject matter. In cases where the number of contractor flight personnel (i.e., four or less) makes a monthly meeting less effective, with GFR approval, a safety folder, updated monthly, meets this requirement. The contractor must forward minutes of meetings to the GFR and maintain on file for a minimum of one year. Where the contractor's aircraft operations are embedded with Government flight operations, they may combine their meetings. If privileged safety information is shared, all contractors must have an approved NDA on file IAW DoDI 6055.07. **[6.6 – added privilege reminder]**

6.5.2. Safety Publications/Promotion. Contractors are highly encouraged to make safety publications/articles readily available. These can be from Service safety publications, the FAA, Aircraft Owners and Pilots Association, etc. A documented digital distribution method such as an electronic blog or reading forum can be used in lieu of hard copy literature. Displaying safety promotional material such as banners, posters, electronic display boards, in the work areas is encouraged. **[6.10]**

6.5.3. Safety Awards Program. As part of their SMS, contractors are highly encouraged to develop local safety awards program to recognize the safety contributions of outstanding individuals, teams or departments. **[NEW]**

SECTION 7: INFRASTRUCTURE AND SUPPORT

7.1. Infrastructure and Support. This Section addresses areas that describe requirements for the contractor's hangars, ARFF, aircraft safety, and other processes that support the protection of the aircraft beyond the requirements from Sections 4, 5, and 6. The requirement to follow local, state, federal, or host nation codes/laws does not negate the requirements of this Section. **[NEW – 8210-1C C1 6.15-6.18 are greatly expanded and restructured throughout section.]**

7.2. Contractor Infrastructure Evaluation. The contractor must complete an evaluation (based on the requirements of this Section) and provide a report for airfield/heliport suitability, ARFF, aircraft facility fire response, and hangar/facility capabilities at all proposed operating locations. The contractor must use the airfield and heliport section of NAS 3306, Facility Requirements for Aircraft Operations, for evaluation purposes; however, the requirements of that section are mandatory only if specifically required by the contract. Report requirements: **[6.17 – clarified and expanded]**

7.2.1. The report must state whether or not requirements are met in each listed area and provide a brief overview of facilities/capabilities. Clearly identify any conditions failing to meet requirements (shortfalls). For hangars/facilities, identify the specific construction, fire protection capabilities, and fuel status of aircraft to be placed in the hangar(s).

7.2.2. The contractor must provide proposed corrective actions and/or risk mitigation, to include timelines, for identified shortfalls related to ARFF, aircraft facility fire response, and aircraft facilities.

7.2.3. Provide the report to the GFR prior to commencing contractual aircraft operations (new contracts) or within 90 days of this Instruction becoming a contractual requirement (existing contracts). Update the evaluation/report anytime capabilities or circumstances change (e.g., new contract or contractual requirement, adding or modifying facilities, long-term maintenance, system impairments). Updates are not required for changes due to routine maintenance, short-term (under 90 days) repairs or impairments, or other such temporary conditions. Attach the report to the Procedures and review for accuracy during the annual Procedures review process. **[NEW – but the requirement has always been there via Chg 1 Attachment 10]**

7.2.4. Where the circumstances of paragraph 7.3 apply, contractors are not required to identify the differences between NAS 3306 and the services and/or facilities being provided by a U.S. Service; however, they must provide the GFR a statement of capability of all areas listed in paragraph 7.2. Exception: Where only integrated maintenance or CLS operations are conducted, a statement of capability is not required unless the contract specifically requires otherwise (see paragraph 3.7.7). **[NEW]**

7.3. ARFF, Aircraft Facility Fire Response, and Facility Requirements at U.S. Service-Controlled Base, Post, Camp, or Station Locations. ARFF, aircraft facility fire response, and facility requirements (paragraphs 7.4, 7.5, 7.6, and 7.7) of this Section do not apply to contractor aircraft operations on base, post, camp or station (BPCS) locations, to include government-owned ships, if ***all*** the conditions of paragraphs 7.3.1, 7.3.2, and 7.3.3 are met: **[NEW]**

7.3.1. The ARFF, fire response, and/or facility is wholly provided, controlled, and managed by a U.S. Service.

7.3.2. Contract aircraft are the same or lower ARFF Category (as determined by NAS 3306) as the capabilities of the supporting BPCS.

7.3.3. The appropriate BPCS personnel (e.g., installation commander, fire chief, safety office, GFR) are aware of contractor aircraft operations and have the capacity/capability to provide the services and/or facilities needed.

7.4. Documentation. The contractor must provide the risk analyses, technical/compliance documentation, and plans/procedures required by NAS 3306 (see the NAS 3306 Reporting Requirements Job Aid). Use of outside agencies to provide ARFF or facilities fire response (paragraph 7.5.3) does not relieve the contractor from providing applicable documentation. When using an outside agency, but the outside agency is unwilling to provide the necessary information, coordinate issues with the GFR. Applicable procedures required by this paragraph will be addressed in the corresponding paragraphs of this Section. **[New]**

7.5. ARFF and Aircraft Facility Fire Response.

7.5.1. Minimum ARFF and Aircraft Facility Fire Response requirements. Contractors conducting aircraft (to include UA) operations must provide and/or ensure ARFF and aircraft facility fire response capabilities are available. At a minimum, capabilities must meet the requirements of NAS 3306. When unable to meet the specific ARFF and/or aircraft facility fire response requirements of NAS 3306, contractors may seek relief through the appropriate SWA for this Instruction. **[6.15.1]**

7.5.2. Contractor Fire Prevention/ARFF Focal Point. Identify contractor focal point(s) for ARFF, fire protection, and fire prevention for each facility/site. The focal point is responsible for coordinating ARFF, fire protection, and facility fire response issues and procedures for the contractor. **[6.15.2]** **[Note deletion of communication checks, 6.15.3]**

7.5.3. Use of Outside Agencies. The use of ARFF and/or aircraft facility fire response services provided by an outside agency (e.g., local, state, federal, or host nation) to meet the ARFF and/or aircraft facility fire response requirements of this Instruction is permitted. The contractor is responsible to ensure all contractual requirements are met even when partial or complete ARFF and/or aircraft facility fire response services are provided by a third party. The contractor must provide aircraft and facility-specific training of personnel from these units. **[6.15.4]**

7.5.3.1. The contractor must develop specific procedures detailing how all contractual ARFF and aircraft facility fire response requirements are met to include methods for verification by the contractor and the Government. It is recommended to have a written agreement that includes detailed response plans, training requirements, provisions for an annual exercise, and operational command and control arrangements. Any deviations between available ARFF and/or aircraft facility fire response capabilities and contractual requirements must be addressed and corrected by the contractor prior to aircraft operations being performed. A method to notify the contractor and GFR of short-term shortfalls in available coverage is required. **[6.15.4.1]**

7.5.3.2. Unless the circumstances of paragraph 7.3 apply, a U.S. Service providing ARFF and/or aircraft facility fire response does not relieve the contractor of ensuring at least the minimum ARFF and/or aircraft facility fire response services are provided per para 7.5.1 Where all or part of ARFF and/or aircraft facility fire response services are provided by a U.S. Service, the following applies: **[6.15.4.2 – note exception if para 7.3 applies]**

7.5.3.2.1. The portions provided by a U.S. Service may be IAW the instructions, policies, and guidance of that Service in lieu of NAS 3306 requirements.

7.5.3.2.2. The portions not provided by a U.S. Service must meet NAS 3306 requirements.

7.5.3.2.3. NAS 3306 total agent, vehicle, and manning requirements must be met.

7.6. Aircraft Facilities. Aircraft facilities include any building or structure where aircraft are produced/manufactured, housed, stored, serviced, repaired, altered, and/or maintained. **[6.16]**

7.6.1. Requirements. Aircraft facilities must meet the minimum requirements of NAS 3306. When unable to meet the specific facility requirements of NAS 3306, contractors may seek relief through the appropriate SWA. **[6.16.1]**

7.6.2. Contractors at Government Owned Contractor Operated (GOCO) Facilities. Contractors located at U.S. GOCO facilities are exempt from paragraph 7.6.1; however, they must assess facilities based on the requirements of paragraph 7.6.1 when completing the contractor's evaluation (see paragraph 7.2). Shortfalls must be provided to the GFR. This paragraph does not negate other NAS 3306 requirements that are not specific to construction and protection of hangars/facilities (e.g., operational considerations, special purpose facilities). **[6.16.2 – expanded]**

7.7. Infrastructure for Aircraft Operations Outside of U.S. Territory.

7.7.1. FMS.

7.7.1.1. Where the contractor is responsible for providing ARFF, facility fire response, or facilities, they may use either NAS 3306 or germane host nation standards to meet the applicable requirements of 7.1 – 7.6 The GFR has no responsibility to enforce or ensure compliance with host nation requirements, standards, laws, etc. Contractors are not required to identify the differences between NAS 3306 and the host nation standards nor submit their shortfalls to the SWA, however, they must provide the GFR a statement of capability of all areas listed in paragraph 7.2. The contractor must have procedures in place based on guidance used (i.e., NAS 3306 or host nation standards). Where host nation standards are used, procedures will be based on their statement of capabilities to address the applicable requirements of 7.4 – 7.6 (e.g., fire response plans, firefighter training, test/maintenance requirements, notifications, operational considerations). Attach the contractor's statement of capabilities to the Procedures and review for accuracy during the annual Procedures review process. **[6.18.1 – significantly clarified]**

7.7.1.2. When the host nation provides ARFF, aircraft facility fire response, or facilities, see paragraph 9.4.2. Under these circumstances, contractors are not required to complete the infrastructure evaluation per paragraph 7.2. for the services or facilities provided by the host nation. **[NEW]**

7.7.2. U.S. Government Aircraft.

7.7.2.1. Where the contractor is responsible for providing ARFF, facility fire response, or facilities, the requirements of 7.1 – 7.6 apply. If the contractor wishes to use germane host nation standards in lieu of NAS 3306, they must identify and correct any shortfalls or seek approval to use the different standards through the waiver process. All waiver requests must be in English. The contractor must have procedures in place based on guidance used (i.e., NAS 3306 or host nation standards), to address the applicable requirements of 7.4 – 7.6 (e.g., fire response plans, firefighter training, test/maintenance requirements, notifications, operational considerations). **[6.18.2 – significantly clarified]**

7.7.2.2. Where all or part of ARFF, facility fire response, or facilities are provided by the host nation, the contractor must complete the evaluation required by paragraph 7.2 Corrective actions and/or risk mitigations referenced in paragraph 7.2.2 are not required. The GFR must then coordinate with the SWA for guidance and direction if any shortfalls are identified. Procedures for services/functions provided by the host nation need not be provided by the contractor; instead, the Procedures will state the specific required services/functions that are being provided by the host nation and how the contractor obtains those services or contacts the applicable entity (e.g., how to contact ARFF or fire response). **[NEW]**

7.8. Fuel Equipment, Storage, and Quality. The contractor must establish fuel standards and operating procedures commensurate with functions performed at the specific location. Some sources of guidance include Mil-Std-1518, Mil-Std-1548, "Storage, Handling, and Servicing of Aviation Fuels, Lubricating Oils and Hydraulic Fluids at Contractor Facilities," Air Transport Association (ATA)-103, "Storage, Handling, and Servicing of Aviation Fuels, Lubricating Oils and Hydraulic Fluids at Contractor Facilities," National Fire Protection Association (NFPA) 407, "Storage, Handling, and Servicing of Aviation Fuels, Lubricating Oils and Hydraulic Fluids at Contractor Facilities," Army Technical Publication (ATP) 4-43, "Storage, Handling, and Servicing of Aviation Fuels, Lubricating Oils and Hydraulic Fluids at Contractor Facilities," TO 42B-1-1, "Storage, Handling, and Servicing of Aviation Fuels, Lubricating Oils and Hydraulic Fluids at Contractor Facilities," and NAVAIR 00-80T-109, "Storage, Handling, and Servicing of Aviation Fuels, Lubricating Oils and Hydraulic Fluids at Contractor Facilities." It is permissible for contractors to tailor procedures to their specific operations by using guidance from several sources. **[NEW, including subsections below – originally from 5.8.2 - 5.8.4]**

7.8.1. Use of outside agency to provide aircraft fuel. Contractors may use outside agencies to provide aircraft fuel. These may be such entities as (but not limited to) commercial FBO, a U.S. Service, or host nation.

7.8.2. Fuel acquired from an FBO.

7.8.2.1. If the FBO has a current "Into-plane" fuel contract (awarded by Defense Logistics Agency) with the U.S.G., then the contractor need only state this in their procedures. Contractors must annually validate the FBO's continued participation as an "Into-plane" fuel provider. In instances where the FBO provides services outside the normal "Into-plane" scope, such as defuel operations, the contractor must establish procedures for the additional services.

7.8.2.2. If the FBO does not have an "Into-plane" contract, the contractor must establish a process to validate the fuel quality (to include what standard is being adhered to) and procedures commensurate with services provided by the FBO, to include validating serviceability of fuel servicing equipment used on government aircraft.

7.8.3. Fuel acquired from a U.S. Service or host nation.

7.8.3.1. Where a U.S. Service or host nation provides fuel and performs fuel and/or defuel services for the aircraft, the contractor need only state this in procedures.

7.8.3.2. Where the fuel is supplied by a U.S. Service or host nation, but the contractor stores, or performs fuel and/or defuel services for the aircraft, the contractor must have procedures commensurate with the operations they perform (see paragraph 7.8.5).

7.8.4. Fuel acquired from other sources. Contractor procedures must address sourcing, storage, fuel equipment, and fuel quality standards being used to ensure quality of fuel used to service government aircraft.

7.8.5. Contractor controlled/managed fuel operations.

7.8.5.1. Refuel/Defuel Equipment. Where the contractor operates refuel/defuel equipment, procedures must address the maintenance and servicing of the equipment.

7.8.5.2. Fuel Storage. Where contractors store aircraft fuel, procedures must address the specifics of their operations.

7.8.5.3. Fuel quality. Contractor procedures must clearly establish the quality standard(s) used and the source of the guidance. Procedures must address testing requirements and the actions required when fuel testing indicates bad fuel or fuel quality issues.

7.9. Painting, Stripping, and Coating. Procedures must address facility and operational safety considerations (e.g., electrical safety, fire safety, ventilation, and use of proper equipment). See NAS 3306 for information on special purpose hangars/facilities. Contractors may designate areas for limited operations in areas other than special purpose facilities via Procedures. NFPA 33, "Standard for Spray Application Using Flammable or Combustible Materials" and NFPA 410, "Standard on Aircraft Maintenance" provide additional sources of guidance. **[NEW – loosely from removing 5.23]**

7.10. Supporting Programs/Processes. These processes are typically addressed via other quality or industrial procedures (e.g., OSHA, building codes, fire codes, quality standards). While these procedures are not included in the GFR approved Procedures, the GFR has the authority to address circumstances that affect the safety of Government assets when those operations are performed ***close enough to the aircraft to pose immediate risk*** (see paragraph 3.7.5). In such cases, the risk mitigation procedures used to protect the aircraft must be included in the GFR approved Procedures. Examples of supporting programs/processes that may present risk to aircraft include: LASERs (class III or IV), handling of hazardous materials (including explosives), battery charging, and hot work. **[NEW – loosely from removing 5.10, 5.11, 5.22, 5.24 5.25, 5.27, 5.29, & 5.30. Must address risk to aircraft even if not listed here (e.g., fuel maintenance in a common hangar). Note all deletions.]**

SECTION 8: UNMANNED AIRCRAFT OPERATIONS

8.1. Unmanned Aircraft Operations.

8.2. UA Operations Outside of Special Use Airspace. Operations outside special use airspace (Restricted Areas, Warning Areas, or Prohibited Areas) require an FAA Certificate of Waiver or Authorization (COA) or other FAA authorization, or when applicable, a DoD authorization. Coordinate operations with the responsible ATC facility as needed/required. UA operation inside buildings or structures is not considered to be part of the National Airspace System and is not regulated by the FAA.**[4.4.1]**

8.3. Flights Not Under GFR Cognizance. UAS used in the vicinity of government aircraft (e.g., security, fire detection, wildlife abatement, facilities inspections) but not under a contract that includes this Instruction, do not require flight or crewmember approvals from the GFR. For SUAS used to facilitate aircraft maintenance or inspections, see paragraph 5.8.3

8.4. Aircrew Duty and Rest Limitations. The crew duty period for UAS crew members ends at aircrew's final engine shutdown, completion of final inflight handover, or final crew swap **[4.1.13 – just provides differences for when it ends].**

8.5. Multiple Aircraft Qualifications. GFRs may authorize contractor UAS crewmembers to maintain qualification in up to four UAS without the need for Service approval unless Service Guidance is more restrictive. **[4.5.3 – just allows up to 4 instead of 2]**

8.6. Simultaneous Operations. The GFR must not allow UA Operators to serve as UA operator for two or more UAs simultaneously unless Service Guidance or a Service test plan authorizes the execution/conduct of such operations, or unless approved to do so by the SWA.**[NEW]**

8.7. Crewmember Qualification Requirements. All UA crewmembers must be qualified IAW Service Guidance. Title 14 of the Code of Federal Regulations (CFR) Part 107 Remote Pilot Certificate is not accepted as SUAS Operator qualification in lieu of Service guidance standards.**[4.3.6 – Expanded]**

8.7.1. General Qualifications. Minimum qualifications for approval of contractor crewmember for test and other flight categories are listed below. Factors such as total experience, currency of experience, experience in similar aircraft, type of flying experience, and other related factors must be evaluated by the GFR before approving a contractor crewmember.

8.7.2. Experimental Test Flights and Associated Experimental Ground Operations Qualifications. Not required for SUAS.

8.7.2.1. UA Operator. Graduation from a U.S. military test pilot school (TPS) is required unless the applicable Service describes other standards.

8.7.2.2. Non TPS Graduate Approvals. When the contractor UA operator is not a graduate of a U.S. military TPS, the listed alternate education and experience requirements must be met in order to obtain Service approval to execute experimental test missions. Submit an approval package when the UA operator meets the alternate standards. Submit a waiver request when the UA operator does not meet the listed alternate standards.

8.7.2.2.1. UA operators must have at least 2,000 hours Pilot-in-Command time (not in SUAS) or 500 hours in UA. UA operators must have 200 hours of Pilot-in-Command time during engineering flight test, and 10 hours during experimental flight test.

8.7.2.2.1.1. Education and experience requirements are as follows:

8.7.2.2.1.1.1. An undergraduate or higher degree in an aerospace related engineering or aerospace related scientific discipline plus one year of applicable engineering test flight experience or,

8.7.2.2.1.1.2. An undergraduate or higher degree in any other engineering or scientific discipline plus two years of applicable engineering test flight experience or,

8.7.2.2.1.1.3. Any non-engineering undergraduate or higher degree plus three years of applicable engineering test flight experience or,

8.7.2.2.1.1.4. No degree, four years of applicable engineering test flight experience.

8.7.2.2.2. Include in the approval or waiver package a request from the contractor per Section 2 and a résumé detailing how the UA operator has met the requirements from 8.7.2.2 for approvals and risk mitigation strategies when the UA operator has not met those requirements. For approvals the additional flight time and education requirements listed in 8.7.2.2 constitute the required RM information.

8.7.2.3. Other crewmembers. All other crewmembers must have 50 hours or 25 sorties in their assigned position.

8.7.3. Engineering Test, Check Flights, and all other flights. There are no minimum hour requirements for UA crewmembers. UA crewmembers must be qualified in the aircraft and position.

8.8. Contractor Flight Instructor and Flight Examiner Qualifications.**[4.7]**

8.8.1. Flight Instructors may be designated by the contractor to provide instruction to contractor crewmembers. Only highly qualified, proficient, and experienced personnel may be selected and trained as instructor crewmembers. These candidates must meet the evaluation requirements provided by the Services prior to GFR approval on DD Form 2628.

8.8.2. Flight Examiners may be designated by the contractor to administer recurring flight evaluations when authorized by the GFR. Only highly qualified instructor personnel may be selected and trained as Flight Examiners. These candidates must meet the evaluation requirements provided by the Services prior to GFR approval on DD Form 2628.

8.8.3. Contractor UA operators designated as standardization instructor operator, or instructor operator for the administration of the Army ATP must be evaluated annually by a Government UAS Operator or Government SO/IO authorized to administer that evaluation to Service aircrews.

8.9. Medical Qualification Requirements. Follow all HIPAA Privacy Rules regarding protection of medical records. Contractors may use Service Guidance or Service medical qualifications in lieu of the requirements listed here. For Air Force Research Laboratory (AFRL), operations must meet the FAA mandated medical requirements for the license held. **[4.3.5]**

8.9.1. UA operators require an annual FAA Second Class.

8.9.2. SUAS operators require a biennial FAA Third Class physical. Exception: Unless required for a specific case (FAA COA, Service Guidance or specific air vehicle), Group 1 SUAS operators do not require a medical certificate.

8.9.3. All other UA crewmembers and observers must receive a biennial physical examination from a licensed physician. UA observers must have normal color vision and 20/20 visual acuity (corrected).

8.10. Weather Minimums for all Flights. Service Guidance UAS weather minimums for specific UAS models will apply. If Service Guidance does not exist, then the contractor must establish minimums commensurate with safe operation of the aircraft in compliance with UAS limitations, applicable range directives, operations orders, FAA Certificates of Authorization, or other governing directives. **[4.4.2]**

8.11. Emergency Procedures. The following emergency situations must be covered in the Procedures (as applicable to the aircraft and mission) to address specific local processes and actions of the airfield and contractor personnel necessary to support the aircrew during an emergency: **[4.4.11]**

8.11.1. Ground emergencies,

8.11.2. In-flight emergencies, to include notification of controlling agencies,

8.11.3. Landing gear malfunctions,

8.11.4. Ground and airborne aborts,

8.11.5. Armament system malfunctions,

8.11.6. Sensor malfunctions which impact navigation, sense and avoid capabilities and flight operations,

8.11.7. Lost Global Positioning System (GPS)/navigation procedures,

8.11.8. Lost link procedures,

8.11.9. Emergency divert and forced landing procedures,

8.11.10. Flight termination criteria and procedures. (e.g., criteria which may require termination of flight, procedures to initiate flight termination, and methodology to identify safe impact point for the air vehicle),

8.11.11. Radio failure,

8.11.12. Barrier and arresting gear engagement,

8.11.13. Jettisoning (fuel, armament, cargo),

8.11.14. Minimum and emergency fuel (propulsion power),

8.11.15. Emergency aircraft movement (flightline, severe weather),

8.11.16. Hot brakes,

8.11.17. Hazardous material (including hydrazine),

8.11.18. Chase aircraft procedures (if applicable) (e.g., lost communications, lost sight, lead/chase responsibilities, inadvertent IMC),

8.11.19. Any other airfield specific emergency procedures.

8.12. Crewmember Ground Training Requirements. The contractor must develop a ground training program which includes (as a minimum) the requirements of this Section. The frequency and content of training must be equivalent to that required by Service Guidance. **[4.5]**

8.12.1. Crewmember requirements.

8.12.1.1. Physiological training.

8.12.1.2. Aircrew flight equipment training.

8.12.1.3. CRM/Aircrew Coordination Training (ACT).

8.12.2. Academic Training. Crewmembers must complete academic refresher training to include self-instruction. As a minimum, this training must address the following topics (as appropriate): FCF/ACF procedures; aircraft normal and emergency systems/operations; TM notes, warnings and cautions; flight test areas and procedures; local airfield and ATC procedures; review of the Procedures and Service Guidance used. This training may be conducted during monthly flight safety meetings.

8.12.3. Emergency Procedures Training. This training may include the use of simulators belonging to either the contractor or the Government. A qualified instructor is required to supervise this training. If a compatible simulator does not exist, the contractor may provide this training in a crew station mockup or cockpit.

8.13. Medical/Physical Requirements for Ground Personnel. Not Applicable for Group 1 and 2 (see paragraph 5.4.6). **[5.5]**

8.14. FOD Prevention Programs. For UAS in Groups 1 and 2, many of the items in paragraph 5.5 (e.g., Area Designation and Management, Product Protection, Clean-As-You-Go) may not need to be addressed, or may be adapted with consideration to the level of risk. **[5.3]**

8.15. Engine Runs by Ground Personnel for Groups 1 and 2 Electric Motor UAS. Qualification must consist of initial and annual training. All other qualification requirements from paragraph 5.7 are not applicable. **[5.4]**

8.16. Aircraft Servicing for Electric Powered UAS. Procedures will address on-aircraft battery servicing and charging to include thermal runaway. **[5.8]**

8.17. Aircraft Ground Handling. For UA that can be hand carried, the requirements of paragraph 5.11.1 are not applicable, however, contractors must provide procedures for safe handling. **[5.6]**

8.18. UAS GCSs and GDTs. GCSs and GDTs are not considered aircraft, however, they directly affect safe operation of the aircraft. The GCS can be a laptop computer, large control van, shipboard module, fixed facility, etc. It can be located onboard airborne platforms to enable control from manned aircraft. Procedures must be based on the type of equipment and complexity, and will address the following for operational use (e.g., control of aircraft during test, flight services, acceptance): **[NEW]**

8.18.1. Preventive Maintenance/Inspection. Establish procedures to ensure the serviceability of the GCS/GDT to prevent damage to the aircraft.

8.18.2. GCS/GDT Safe-for-Flight Release Procedures. Unless otherwise required by contract, these procedures must be based on existing technical publications or equivalent OEM data/instructions. Ensure procedures address appointment of a qualified release authority in writing by the contractor, and review of the following: Inspections, scheduled/unscheduled maintenance, and all non-conformances that would preclude safe operation if not corrected.

8.18.3. GCS/GDT Maintainer/Operator FOD Awareness. While all maintainers/operators are responsible for foreign object debris (FOd)/foreign object damage (FOD) prevention, no procedure is required.

SECTION 9: NON-STANDARD APPLICATIONS

9.1. Non-Standard Applications. GFRs may be involved in oversight of contracts involving aircraft that the Government does not own, and in cases where the applicability of the GFRC and this Instruction may be non-existent or limited. Non-standard contracts, such as contracts for contractor-owned/contractor-operated (COCO) and contractor-owned/government-operated (COGO) public aircraft operations (PAO) and lease agreements, may still expose the government to risk. Even among these broad categories, there will be differences in the level of oversight required based on the aircraft and operations. Aircraft operations are either civil, public, or state. The term PAO is used when referring to eligible operations within the National Airspace System, and state refers to specially designated aircraft performing operations on behalf of the Government outside U.S. territorial airspace. For state operations that do not cross over or operate to/from another sovereign nation, the duties of the GFR are the same as for PAO. For state operations that do cross over or operate to/from another sovereign nation, the GFR must additionally ensure the contractor meets the requirements of the Foreign Clearance Guide (FCG) for flight profiles in the course of approving flights. The Services make the PAO/state designation. Refer to the program office and DoDD 4500.54E for further information. **[NEW Section – 'like' information from 8210-1C C1 Chapter 7 Identified 7.14.1]**

9.2. COCO PAO/State. **[Hugely expanded 7.14.2]**

9.2.1. COCO operations can be CAO or PAO/state and can shift from flight to flight depending on the operation. When a contractor-owned aircraft operation transitions from civil to public/state, a significant shift in responsibility and liability to the Government contracting agency may occur. When this Instruction is applied to contractor-owned aircraft under a PAO/state contract without the GFRC, the applicable programs and oversight will change because the government has no insurable interest in the aircraft. When a COCO contract is given a "Declaration of PAO/state", this Instruction applies. When a COCO aircraft is not designated as PAO/state, it remains a CAO and this Instruction does not apply. **[Note: removed reference to the DoD PAO Decision Tool, though it is still on the Resource Page.]**

9.2.2. Procedures.

9.2.2.1. Procedures are required for PAO/state operations involving contractor-owned aircraft where the contract does not include the GFRC. Section 3 gives the GFR the authority to determine if certain sections of this Instruction are not applicable and therefore do not require specific Procedures per paragraph 10.9.1.4 The discussions in this Section and the guidance of the Procedures Matrix for Contractor-owned Aircraft PAO/state without GFRC in Appendix 9A, provide valuable guidance to be followed. Since the Government will likely have limited or no financial liability for a contractor-owned aircraft, the GFR is authorized to accept Procedures that do not address many of the requirements in Sections 4, 5, 6, 7 and 8. Contractors and GFRs should work together to decide precisely which procedures apply based on the specific situation. Disagreements in interpretation should be elevated per paragraph 3.3 **[NEW – note that these reduced procedures are only if GFRC is NOT on the contract. If GFRC is on the COCO contract, then full Procedures are expected though flight manuals, qualifications, and currency may be OEM/FAA/host nation vice Service Guidance]**

9.2.2.2. A standard approach for COCO PAO/state contract requirements may not be practical since the risks differ from contract to contract depending on many factors (e.g., aircraft, ownership, mission). For example, the risks associated with an aircraft holding a Standard

airworthiness certificate as compared to a Special Airworthiness Certificated aircraft (e.g., Experimental) change significantly. Likewise, the operational risks associated with contracting for opposing force missions flying a supersonic profile differ significantly from a contracted propeller aircraft acting as a low, slow flyer and being vectored around by a surface ship. The goal is to ensure due diligence without imposing overly burdensome and costly oversight requirements. While Service Guidance may serve as good guidance for a COCO PAO/state contractor, this Instruction is not intended to require the use of any Service methodologies for these contracts. The GFR and contractor should leverage FAA/ICAO processes in meeting Government requirements to the maximum extent possible.

9.3. COGO Operations. The majority of these operations are PAO/state. See Appendix 9A, Procedures Matrix for Contractor-owned Aircraft PAO/state without GFRC, for guidance.

9.4. FMS. FMS refer to the U.S. Government's program for transferring defense aircraft and providing services to foreign country partners and international organizations. FMS can involve contracts for aircraft procurement, modification, depot maintenance, flight, training, etc. Even though the aircraft or services ultimately are for foreign countries, GFRs performing CAS are still acting as agents of the U.S. Government. IAW DFARS 225.7301 (b), FMS acquisitions are conducted under the same acquisition and contract management procedures used for other defense acquisitions.**[7.15]**

9.4.1. FMS at U.S. Locations. GFRs should treat the FMS aircraft as a DoD aircraft under contract until such a time as the aircraft is transferred to the FMS customer.

9.4.2. FMS at Non-U.S. Locations. When FMS contracts occur at locations outside of U.S. territory, who is authorized to fly the aircraft and which instructions/regulations are applicable depend on what is written in the FMS contract. When flight and ground operations are solely conducted or provided by the host nation, Host Nation standards/instructions/regulations apply. GFR oversight applies to the Prime and their subcontractors, but GFRs have no oversight requirements for the procedures/qualifications for Host Nation provided aircrews or ground personnel. Procedures for services/functions provided by the host nation need not be provided by the contractor, instead, the Procedures will state the specific required services/functions that are being provided by the host nation and how the contractor obtains those services or contacts the applicable entity (e.g., how to contact ARFF or fire response).**[NEW – use in conjunction with Section 7]**

9.4.3. FMS contracts for aircraft will contain the GFRC when the foreign customer has agreed to assume the risk for loss or destruction of, or damages to, aircraft (i.e., to "Hold" the U.S. Government "Harmless" of all cost liability) (See DFARS 228.370(b)(1)(iii)). The FMS customer's assumption of risk of loss is documented in the FMS Case Letter of Offer and Acceptance Standard Terms and Conditions. For FMS contracts that do not contain the GFRC, this Instruction may be included as a contract requirement to provide aircraft operations CAS.**[NEW]**

9.5. Other Foreign-Owned Aircraft. These are contracts that involve contracted activities on foreign-owned aircraft that are neither FMS, nor Direct Commercial Sales (DCS), such as those involving "Partner Nations." Unless the contract states otherwise, these aircraft are treated as U.S. assets in the application of this Instruction. Contractors may submit a waiver IAW Section 2 when requirements of this Instruction do not fit the circumstances, or there is a more efficient way of achieving an equivalent level of risk mitigation. **[NEW]**

9.6. Direct Commercial Sales. DCS refers to contracts in which a foreign government buys aircraft directly from a U.S. manufacturer without using the DoD procurement process. With only very rare exceptions (e.g., North Atlantic Treaty Organization procurement), DCS contracts will have no GFR involvement. Consult your legal counsel office if you are assigned to perform CAS on DCS contracts. **[7.16]**

9.7. Short-Duration/Limited-Scope Operations. These aircraft operations include field teams performing aircraft modifications at BPCS locations, downed aircraft recovery teams, and short term work performed away from the contractor's premises. Unless otherwise stated in the contract, the requirements of Section 7, Infrastructure Support, would not apply to these aircraft operations. Procedural requirements from Section 3 would apply but limited to the scope of the contract work. Procedural requirements from Section 6 would still apply but may be addressed through a combination of contractor Core Procedures with appropriate site annexes and local BPCS processes. **[NEW - See MFR: *Short-Duration* is when contractors perform Flight or Ground operations at a location for less than 6-months (collectively). Contractor personnel working at the same site several times (or several weeks) each month on a continuous basis beyond 6 months is not considered short-duration. *Limited-scope* is considered localized repairs/modifications that do not require movement (lifting/jacking/towing) of the aircraft by the contractor personnel. Examples of limited-scope operations are remove/replace components, making structural repairs (not requiring jacking, at least by the contractor personnel), adding new 'black boxes', etc.]**

9.8. Lease Agreements. Oversight of these agreements depends on whether the contractor is the lessee or lessor. For aircraft, the lessee has use of the aircraft while the lessor provides the aircraft for use.

9.8.1. Aircraft Where the Contractor is the Lessor. Aircraft leased from a contractor for Government use should be treated as normal DoD aircraft. These contracts are described in FAR Part 7.

9.8.2. Aircraft Where the Contractor is the Lessee. Although not specifically required when a Government-owned aircraft is provided to a contractor under a Lease Agreement for the contractor's use, including this Instruction as a requirement in the lease agreement is recommended. The Government normally does not assume any liability for aircraft it leases to contractors; however, per DoD Instruction 7230.08, Leases and Demonstrations of DoD Equipment, 4.b.(5), the Government may accept risk of loss of leased aircraft if and when DoD personnel operate the aircraft. **[NEW]**

9.9. Miscellaneous/Atypical Agreements. These are non-FAR contracts and therefore do not require either the GFRC or this Instruction. However, both have been found in these agreements. These atypical agreements include: Other Transactions (OT), Bailment Agreements, CRADAs, etc. The FAR and DFARS may not apply to these atypical agreements. If the GFRC or this Instruction are included in one of these agreements, GFRs must execute those requirements as written. Consult with the appropriate waiver authority for this Instruction when you are assigned to atypical programs that involve DoD aircraft without this Instruction. **[7.17 – expanded]**

APPENDIX 9A: PROCEDURES MATRIX FOR CONTRACTOR-OWNED AIRCRAFT PAO/STATE WITHOUT GFRC

This Appendix only applies to contracts that do not include the GFRC but involve PAO or state aircraft operations. If the GFRC is on the contract, follow Appendix 3A though many considerations will have to be made to accept FAA processes in lieu of Service Guidance. When contractors operate their own aircraft that have been designated PAO/State, GFR approved Procedures are still required; however, the expectations for Procedures change due to the change in aircraft damage liability to the Government. Appendix 3A provides the list of what is expected in Procedures as a baseline. This Appendix lists only those items that differ from the baseline and must be used in conjunction with Appendix 3A. **[Completely overhauled Attachment 16]**

Section 1: RESPONSIBILITIES

No change.

Section 2: PROCEDURES FOR WAIVERS AND APPROVALS

No change.

Section 3: PROCEDURES

No change.

Section 4: FLIGHT OPERATIONS

Follow Appendix 3A except as noted here:

4.2.1. General flight rules. A simple statement listing which Services' guidance aircrews must follow for requirements outside of FAA flight rules is sufficient.

4.3.1. GFR approval. The GFR must approve contracted flights. For COCO PAO/state operations, the Procedures must still address the process for gaining GFR approval via the DD-3062 or other GFR approved form.

4.6.1. Allow for communication. Not a required COCO procedure.

4.6.2. Identify flight areas. Not a required COCO procedure.

4.6.7. Minimum crew requirements. Procedure required for clarity. However, it does not need to meet Service Guidance.

4.7.1. Flight crew information file. Procedure needs to address the contractor's method of disseminating information that would be relevant to the contracted flight. However, it does not need to meet full FCIF requirements.

4.9.3. Government approval for crewmember qualification and training. Procedure needs to address the contractor's method of gaining qualification or upgrade if outside of Government processes. However, the GFR does not have to approve the training.

4.9.4. Government approval for crewmember status. GFR must still approve crewmember status via the DD-Form 2628 or approved equivalent. However, the DD Form 2627 process is not required. Bottom line, the GFR still must review the crewmember qualifications and authorize the individual to fly under contract.

4.9.5. Multiple aircraft qualification. Only required if there are multiple COCO aircraft under contract. Procedures need simply state number and type of aircraft the contractor crewmembers are maintaining an active qualification in. GFR is authorized to approve crewmember status for two different models.

4.11.2. Weather requirements. Procedures need only specify the weather requirement standards being followed, does not need to meet Service Guidance.

4.11.9. Aircrew flight equipment. Not a required COCO procedure.

4.11.10. Experimental and engineering test operations. Not a required COCO procedure.

4.11.14. Weight and balance. Procedures need only address the aircrew requirement to ensure the current weight and balance for the configuration is reviewed prior to flight.

4.12.1. Initial qualification training. Not a required COCO procedure. GFR does not need to approve commercial training.

4.12.2. Crewmember currency and/or proficiency requirements. Procedures need only identify what the currency/proficiency requirements are for their operations. If not based on Service Guidance, FAA currency requirements must be identified.

4.12.3. Multiple aircraft qualification currency requirements. Not a required COCO procedure.

4.12.5. Special flight events. Not a required COCO procedure unless required by contract.

4.12.6. Periods of reduced flight time availability. Not a required COCO procedure.

4.12.7. Re-currency/re-qualification. Procedures do not need to meet Service Guidance, but must describe how crewmembers regain their currency.

4.13.1. Crewmember and non-crewmember requirements. Not a required COCO procedure.

4.13.2. Additional requirements for crewmembers. Procedures need only cover the requirements for 4.13.2.4. However, the standard is to meet FAA CRM requirements vice Service Guidance.

4.14. Crewmember evaluations. Not a required COCO procedure. Expectation is the contractor will follow FAA requirements.

4.15.1. Requests for flight approval. Procedures need to cover requirements for completion and submission of the requests.

4.15.5. Records (non-crewmember). Not a required COCO procedure.

Section 5: GROUND OPERATIONS

As part of being designated PAO/state, maintenance procedures and processes have been evaluated by the contracting Service. Much of this section is still required (per Appendix 3A), but the standard for acceptable Procedures is safe and effective vice their equivalency to Service Guidance. Follow Appendix 3A except as noted here:

5.4.2. Employee qualification records. Procedures do not need to include 5.4.2.3.

5.4.3. Testing. Not a required COCO procedure.

5.4.4. Recurring training. Not a required COCO procedure.

5.4.5. Initial and annual egress. Not a required COCO procedure.

5.4.6. Medical/physical. Not a required COCO procedure.

5.7. Engine/APU/GTC qualification program. Not a required COCO procedure.

5.7.1. Engine/APU/GTC qualification requirements. Not a required COCO procedure.

5.7.2. Engine/APU/GTC currency/proficiency. Not a required COCO procedure.

5.7.3. Engine/APU/GTC/motoring/windmill run certifiers. Not a required COCO procedure.

5.8.1. Indirect support AGSE. Not a required COCO procedure.

5.8.2. Direct support AGSE. Not a required COCO procedure.

5.8.3. Small unmanned aircraft systems. Not a required COCO procedure.

5.9. Vehicle and powered equipment operation. Not a required COCO procedure.

5.10. Aircraft servicing. Not a required COCO procedure.

5.11. Aircraft ground handling. Not a required COCO procedure.

5.11.1. Towing. Not a required COCO procedure.

5.11.2. Marshalling. Not a required COCO procedure.

5.11.3. Parking, mooring and tie down. Not a required COCO procedure.

5.11.4. Jacking. Not a required COCO procedure.

5.11.5. Hoisting. Not a required COCO procedure.

5.11.6. Taxiing by ground personnel. Not a required COCO procedure.

5.12. Aircraft/equipment hydraulic fluid analysis program. Not a required COCO procedure.

5.12.1. Hydraulic fluid contamination. Not a required COCO procedure.

5.12.2. Sampling. Not a required COCO procedure.

5.12.3. Testing methods. Not a required COCO procedure.

5.12.4 Documentation of testing results. Not a required COCO procedure.

5.12.5. Required actions for abnormal results. Not a required COCO procedure.

5.13. Weight and balance. Procedures are limited to stating what process is used to determine the weight and balance of the aircraft for the contracted configuration. Adherence to specific Service Guidance is not required.

5.13.1. Maintenance. As limited by 5.13 comments.

5.13.2. Automated weight and balance. As limited by 5.13 comments.

5.13.3. Documentation of results. As limited by 5.13 comments.

5.16. Safe-for-flight release. Procedures do not need to adhere to Service Guidance, but the release process must be documented.

5.18. Hangaring of aircraft. Not a required COCO procedure unless required by contract or entering a Service hangar.

5.18.1. Aircraft fuel status. Not a required COCO procedure unless required by contract or entering a Service hangar.

5.18.2. Methods to ensure lower explosive limit. Not a required COCO procedure unless required by contract or entering a Service hangar.

5.18.3. Purging requirements. Not a required COCO procedure unless required by contract or entering a Service hangar.

5.18.4. Special hangar considerations. Not a required COCO procedure unless required by contract or entering a Service hangar.

Section 6: AVIATION SAFETY MANAGEMENT SYSTEM

Follow Appendix 3A except as noted here:

6.3.2. Aviation safety council. Not a required COCO procedure.

6.3.3. Severe weather. Not a required COCO procedure unless required by contract or operating on a Service BPCS. Procedures should reflect local Service requirements in this case.

6.3.4. BASH Program. Not a required COCO procedure.

6.3.5. MACA Program. Not a required COCO procedure.

6.4.2. Aircraft damage reporting procedures. Not a required COCO procedure.

6.4.3. Aircraft mishap notification procedures. As a COCO aircraft, mishap notification based on DoDI 6055.07 is not required. However, the Procedures need to establish a process for notifying the GFR of accidents or incidents that occurs during a contracted operation, particularly those that may be investigated by the National Transportation Safety Board.

6.4.4. Mishap response plan. Mishap response plan procedures are still required for COCO operations. However, paragraphs 6.4.4.3 and 6.4.4.8 do not need to be addressed.

6.5.1. Flight safety meetings. Not a required COCO procedure.

Section 7: INFRASTRUCTURE AND SUPPORT

Section 7 does not apply to COCO aircraft contracts without the GFRC.

Section 8: UNMANNED AIRCRAFT OPERATIONS

No change.

Section 9: NON-STANDARD APPLICATIONS

No change.

Section 10: GOVERNMENT FLIGHT REPRESENTATIVES

No change.

Glossary 1: DEFINITIONS

No change.

SECTION 10: GOVERNMENT FLIGHT REPRESENTATIVES

10.1. GFR Procedures. GFRs must administer the version of this Instruction found in the contract; however, GFRs must follow the most recent version of this Section. **[New]**

10.2. GFR Qualifications. **[7.1]**

10.2.1. GFR (Aircraft Flight and Ground Operations). A current or previously rated U.S. Military officer or previously rated Government civilian. GFRs are appointed to perform the Contract Administration Services (CAS) function, FAR 42.302(a)(56) "Maintain surveillance of flight operations." **[Clarified prerequisite requirements by adding "current or previous" and "previously rated"]**

10.2.2. Ground GFR (G-GFR). A U.S. Military aircraft maintenance officer or non-commissioned officer (NCO) (E-7 or above), or former U.S. Military aircraft maintenance officer/NCO Government civilian. G-GFRs are not authorized to approve contractor crewmembers, flights, flight related portions of the Procedures, or any function/procedure described in this Instruction's Section 4 (Flight Operations). G-GFRs must not be assigned where a GFR already exists. In these cases, assignment of a Government Ground Representative (GGR) as a member of the APT is appropriate.**[Clarified prerequisite requirements by adding " former U.S. Military aircraft maintenance officer/NCO Government civilian"]**

10.2.3. GFRs and Alternate GFRs for SUAS. A U.S. Military officer or NCO, E-7 or above, or a Government civilian with SUAS experience. Required SUAS operational experience is described in paragraph G.1.38.4**[NEW]**

10.3. GFR Selection and Appointment. **[7.2]**

10.3.1. To administer contracts which include flight and ground operations, the Approving Authority appoints a GFR (and Alternate GFRs as desired). To administer contracts with ground operations only, the Approving Authority may appoint a G-GFR or GFR (and alternates as desired).

10.3.2. Organization Providing GFR. The Services normally provide the GFR for contractor aircraft operations at Base, Post, Camp or Station locations. DCMA normally provides the GFR for contractor facilities IAW DFARS subpart 242.2, Contract Administration Services.

10.3.3. Only individuals granted FAR 42.302(a)(56) CAS authority per this Instruction are authorized to execute GFR responsibilities or work directly with the contractor for this function. The GFR will work directly with the assigned Contracting Officer to ensure compliance with this Instruction. **[New subparagraph]**

10.4. GFR Training. Prior to performing GFR/G-GFR duties, the GFR/G-GFR appointee must complete the DCMA approved GFR/G-GFR/Government Ground Representative (GGR) Certification Course. DCMA-AO is responsible for identifying and validating the GFR/G-GFR course content and delivery to ensure all training requirements are met as identified by the Service Waiver Authorities. GFRs/G-GFRs/GGRs who have not been involved in contractor aircraft operations oversight for a period of three years must re-attend the GFR course prior to being appointed as a GFR. Attendance at the GFR/G-GFR/GGR Certification Course is required every five years. Instructing the course counts as attending. **[7.3; Removed the DAU name of the course and "administered through DAU and added "DCMA approved…" Additionally added in DCMA-AO**

responsibility to the course. Highlight clarification- read 'not been involved in contractor aircraft operations' as 'not involved as a GFR/G-GFR/GGR']

10.5. GFR/G-GFR Appointment. The Approving Authority appoints a GFR/G-GFR for contractor aircraft operations where the contractor is required to comply with this Instruction. The Approving Authority may also appoint alternate GFRs/G-GFRs. GFRs/G-GFRs may be appointed to perform CAS for a maximum of six contractors/contractor locations (resident and non-resident). However, they may act as Primary GFR/G-GFR at no more than four of the six contractors/contractor locations. The GFR must provide a copy of the Appointment Letter to the ACO and to the contractor. See the Correspondence Guide on the Resource Page for an example GFR/G-GFR Appointment Letter. GFRs cannot re-delegate GFR authority. When re-delegating is necessary, refer to the process described in FAR 42.202 (See paragraph 10.14.2 for additional information on Supporting Contract Administration (SCA) delegation process. See the Correspondence Guide for an SCA delegation letter example). **[7.4; Added in the requirement to give a copy of the appointment to the ACO]**

10.5.1. U.S. Army Process. Heads of Contracting Activity (HCAs) or Senior Contracting Official. The authority may be delegated within the contracting activity no lower than the Procuring Contracting Officer (PCO). No delegations are authorized external to the contracting activity. Send a copy of your GFR Course completion certificate and Section A of your contract, to the Army Waiver Authority (paragraph 2.10.1). **[NEW – moved/updated from Att 6.1]**

10.5.2. U.S. Navy Process. In all cases, send the approving authority a copy of the GFR appointee's GFR Course completion certificate and Section A of the contract. Approving Authorities are: **[NEW – moved/updated from Att 6.1]**

10.5.2.1. Commander, Naval Air Systems Command. (Delegated to other Controlling Custodian Commanders who administer FAR 42.302 responsibilities for organizational level support and training contracts.) Send documentation to: NAVAIR_AviationSafety@navy.mil, or contact (301) 342-7233.

10.5.2.2. For Service appointed GFRs within NAVAIR, Wing Commanders are authorized as the appointing authority for designation of GFRs assigned to NAVAIR administered contracts supporting units under their operational chain of command. Contact the Wing GFR. Naval Test Wing Atlantic – (301) 342-8374. Naval Test Wing Pacific – (760) 939-7720.

10.5.2.3. For Chief of Naval Air Training administered contracts, contact your Chief of Naval Air Training command GFR at N33, (361) 961-9996 (DSN 861).

10.5.3. USAF Process. **[NEW – moved/updated from Att 6.1]**

10.5.3.1. GFR/G-GFR Appointment Letters are created by the appropriate HCA. Provide your full name and rank and a copy of GFR Course Completion certificate. The completed appointment letter is required prior to performing GFR/G-GFR duties. Forward a copy of the completed appointment letter to AFMC/A3V Workflow.

10.5.3.2. The HCA for the Air Force is the Deputy Assistant Secretary (Contracting) (DAS(C)). The authority granted to DAS(C) may also be exercised by the Associate Deputy Assistant Secretary (Contracting) (ADAS(C)). The HCA has delegated the responsibility to appoint GFRs to the Air Force Major Command (MAJCOM) or Direct Reporting Unit Senior Contracting Official (SCO). The SCO is the headquarters staff official with overall functional responsibility for contracting (e.g., AFMC/PK or AFRC/PK). Within AFMC, the SCO has further delegated

GFR appointment responsibilities to the local SCO. The local SCO is an individual in the position of Director of Contracting that reports directly to the Center Commander. The Centers considered within this delegation are: Air Force Life Cycle Management Center; Air Force Sustainment Center; Air Force Test Center; and Air Force Research Laboratory (AFRL). Further, the Directors of Contracting at Eglin AFB, Hanscom AFB, Tinker AFB, Hill AFB, and Robins AFB have delegated authority to appoint GFRs. The Air Force Installation Contracting Center is aligned with the Air Force Installation and Mission Support Center (AFIMSC) and may appoint GFRs. SCO duties may also be performed by the Deputy Director of Contracting, the Assistant Director, or the Technical Director.

10.5.3.3. DAS(C) is the HCA for Air Force component commands tasked to support a "supported commander" during Joint Chiefs of Staff declared contingency operations or exercises.

10.5.4. USCG Process. Contact Aviation Logistics Center Safety Environmental Health Office (ALC SEHO) at (252) 334-5478 for process direction.

10.5.5. DCMA Process. **[NEW – moved/updated from Att 6.1]**

10.5.5.1. GFR/G-GFR Appointment Letters are created by the Contract Management Office (CMO) staffs. Provide full name and rank, and copies of GFR/G-GFR Course Completion certificate and OJT completion checklist (AOI observation not required prior to performing GFR/G-GFR duties). Alternately, send requests along with the listed information to appropriate Regional DAO.

10.5.5.2. DCMA Approving Authorities are: DCMA Director; Deputy Director; DCMA East/ Central/ West/ International/ Special Programs Commanders/Directors; CMO Commanders (may not be re-delegated).

10.5.6. GSA. The Approving Authority for GSA contracts is the Service issuing the task order.

10.6. PCO Responsibility. When this Instruction is incorporated by reference or included in the contract, the PCO must ensure the contract is not executed without the appointment of a GFR. **[7.5]**

10.7. ACO Responsibility. When this Instruction is incorporated by reference or included in the contract, the ACO must ensure the contract is not performed without the appointment of a GFR. **[7.6]**

10.8. Contractor Field Team and Contract Logistics Support Operations. Locations where operational control and CAS oversight are split between the local unit and an outside agency require special attention from the approving authority and GFR. In these situations, the GFR should be selected from within the organization maintaining operational control of the aircraft. **[7.7; changed "shall be selected… to "should"]**

10.9. GFR General Responsibilities. The GFR is responsible for surveillance of those contractor aircraft flight and/or ground operations where the contractor is required to comply with this Instruction. The purpose of the surveillance is to enable the GFRs to validate contractor compliance with this Instruction and mitigate risks to contract aircraft. **[7.8; added in the purpose]**

10.9.1. Contractor's Procedures. **[7.8.1 – Updated to describe letter process]**

10.9.1.1. Procedures Approval Process. Procedures must be formally approved by the GFR through the use of a signed Approval Letter. Signatures may be electronic (see the Correspondence Guide for an example Approval Letter). GFRs may also sign a Procedures cover sheet, however, a separate Approval Letter must also be signed. The GFR must maintain a record of approval of the Procedures for 3 years. Send a copy of the Approval Letter to the ACO(s).

10.9.1.2. Existing Procedures. Must be reviewed for formal approval by the GFR at least every 12 months and within 90 days of a change of the primary GFR. GFRs should refer to Appendix 3A when reviewing Procedures. The GFR must complete the review and respond to the contractor in a timely manner (within 14 days). Should issues be discovered that would preclude approving the Procedures, the issues should be raised to the contractor. Contractors may continue aircraft operations under existing Procedures until the completion of the review process unless the GFR identifies an unsafe practice. See paragraph 3.12 for process for resolving deficiencies found in the Procedures. **[note change from 30 to 14 days 7.8.1.1]**

10.9.1.3. Procedures at Start-up Locations. For contractor aircraft operations with no existing approved Procedures, the contractor is encouraged to provide its Procedures, including portions thereof, to the GFR for approval as soon as possible. The GFR must give priority to approving those Procedures to prevent a delay in the execution of the contract. GFRs may approve portions of the Procedures, however, they must not approve crewmembers or flights until the entire set of Procedures have been approved.

10.9.1.4. GFR Authority to Approve Limited Procedures. When writing Procedures, contractors are only required to address those processes that are applicable to the aircraft operations conducted under contract. While GFRs cannot waive any requirements of this Instruction, they may determine which processes are not applicable to the contract effort. Items that are not applicable to specific contract/location must be place marked as N/A. GFRs should refer to Appendix 9A: Procedures Matrix for Contractor-owned Aircraft PAO/state without GFRC, when deciding which processes may not need to be addressed for contractor owned aircraft PAO/state. **[New – contains part of 7.18, but sub paragraphs moved to Section 9]**

10.9.1.5. GFR Procedure Review. Per paragraph 3.11, contractors must review their Procedures every 12 months. This 12 month cycle is based on the date of the GFR's last annual approval letter. Often the contractor will make changes in the individual procedures, which are frequently based on other company standards or instructions. When the contractor presents the GFR with a newly revised procedure, the GFR does not need to issue a new approval letter of the entire Procedures, but must individually approve each new procedure as the contractor updates it. An email is acceptable to approve individual procedure changes, but it is also necessary to track these out-of-cycle changes so the GFR can show the publication date of each procedure. The next annual Procedures approval letter will then reflect the current revision date of each procedure. See the sample approval letter on the resource page. **[NEW]**

10.9.1.6. For questions of interpretation, paragraph 3.3 is intended to provide contractors an avenue for elevating their concerns when the disagreement cannot be resolved between the contractor, GFR and ACO. Given the complexity of this Instruction and Service Guidance, the GFR and contractor may disagree on the proper interpretation of this Instruction. The SWAs fully expect the contractor to exercise this opportunity to request clarification whenever they believe clarification is necessary. This is not to be interpreted as a resistance to GFR authority.

The SWAs for this Instruction are the ultimate arbitrators for resolving these disagreements. GFRs may make comments on contractor written requests for interpretation. Service GFRs must forward the contractor's requests directly to the waiver authority. DCMA GFRs will forward the contractor's requests through their chain of command to DCMA-AO. DCMA-AO will either adjudicate the request in the contractor's favor or forward it to the SWA. **[7.8.1.4 Revised]**

10.9.2. Contract Administration. Contract administration is performed to ensure mission effectiveness, flight safety, and contractor compliance with FAR and DFARS clauses and other specific clauses which are cited in the contract. General procedures regarding contract administration for GFRs are contained in this Instruction. Contract administration functions are listed in FAR 42.302, and DFARS 242.302. **[7.8.2; added in specific clause numbers]**

10.9.2.1. In order to effectively perform their delegated duties and determine the scope of their responsibility, the GFR must achieve a thorough working knowledge of this Instruction and the regulations, manuals, technical publications, and documents referenced in the contract. They must also become thoroughly familiar with the requirements of the contract including annexes and appendices.

10.9.2.2. The GFR, in the role as functional expert, must evaluate contracts and changes to contracts and participate in preaward surveys to ensure that contracts contain appropriate vehicles for adequately performing contractor surveillance, and contain referenced standards which protect Government resources while in the custody of the contractor. In the performance of this and other GFR responsibilities, the GFR must maintain a record of noteworthy observations, discrepancies, recommendations, and contractor corrective actions.

10.9.2.3. Conclusion of GFR CAS Responsibility. GFRs are responsible for performing CAS for each aircraft on contract. When the GFR CAS efforts end for a specific aircraft will depend on the terms and conditions of each contract. Refer to the contract and ACO for additional guidance. **[New wording and changed from 7.8.2.3]**

10.9.3. Contract Deficiencies/Concerns. The GFR must be alert during the contract review to detect deficient procedures/omissions which could affect the safety, both ground and flight, of the aircraft. Examples include: Fire protection, special flight test programs, waivers, foreign object damage (FOD) programs, towing procedures, unique aerodrome requirements, tool control programs, and engine run procedures. These situations require special attention from the GFR. GFRs should work with ACOs and PCOs to ensure that contracts do not contain verbiage that negates or removes all or part of this Instruction. If these efforts are unsuccessful, the GFR must inform the SWA of the contract and issues involved. **[7.8.3]**

10.9.4. Temporary Duty (TDY) Support. The GFR must ensure that TDY military aircrews arriving on site to support the contract effort, are briefed on facility aerodrome procedures and applicable Procedures and local flight rules. The GFR should also ensure that TDY crews have access to contractor flight planning and briefing facilities. See paragraph 10.9.8.3 for more information on TDY crew flight approval. **[7.8.4]**

10.9.5. Experimental Flight Operations. Experimental test profiles require a Government approved test plan. GFR flight approval does not constitute test plan approval. GFRs need to understand crew, flight profile, and aircraft configuration requirements from the test plan. Sources of information, education, and advice on these and other flight test profiles include contractor test personnel or procurement office flight and test safety officers. **[7.8.5]**

10.9.6. Crewmember Approval. One of the most important duties performed by GFRs involves approval of contractor crewmembers. All contractor crewmembers must be approved as a requisite step for Government assumption of risk under the GFRC. The GFR must not approve any crewmember until the Procedures have been approved. When CAS authority is split between GFRs (e.g., separate locations, contracts or programs), the GFR responsible for approving flights must have access to the most current crewmember qualification documentation, or a statement from the GFR possessing the documentation that the crewmembers are current and qualified. **[7.8.7 – Revised/expanded to include accepting current/qualified from another GFR]**

10.9.6.1. GFRs must base their crewmember training, qualification, approval, and removal from flight status decisions primarily on the requirements of the contract, this Instruction, and the current/projected operations tempo of the contractor. GFRs must also consider the same factors described in paragraph 4.9.7, Removal from Crewmember Status, prior to approving a crewmember in the first place.

10.9.6.2. The GFR must coordinate with the contractor to ensure that the appropriate numbers of crewmembers are approved, and that programs include sufficient flying time for currency IAW this Instruction.

10.9.6.3. Using Civil Aircraft to Maintain Currency on Contract Aircraft (paragraph 4.12.2.2). The use of the civil aircraft may only be used to satisfy requirements when the contracted aircraft is not available. Normally, use of civil aircraft to substitute for contract aircraft is for fulfilling flight hour requirements. In a few cases, it may be appropriate to use a civil aircraft to fulfill specific currency requirements such as instrument approaches. A similar aircraft may be a new variant of an existing model (F-15SA and F-15E). Similar aircraft may fly related flight profiles such as low altitude instrument approaches (King Air 350 and C-130). The aircraft may be similar in flight characteristics and / or handling qualities (Do-328 and C-146). The aircraft may use a common form of flight management systems (The H-60 and S-70). When it is not clear whether aircraft are similar, GFRs may consult with the SWA. **[New guidance to GFRs for use of civil aircraft for currency]**

10.9.6.4. Multiple Aircraft Qualifications. GFRs may authorize contractor crewmembers to maintain qualification in two different series of the same aircraft design (model). Authority to approve multiple qualifications in two or more different design (model) aircraft, three or more series of the same aircraft design (model), or any other combination of mission/design/series, rests with the SWA for this Instruction. IAW paragraph 4.9.5, contractors will annually re-validate the need for multiple qualifications with the GFR. Exception: Contractor aircrews embedded in Service units may be qualified in multiple model/series aircraft IAW local unit directives at the discretion of the GFR. (USAF): If the AFMC Form 80 is used, the GFR will be listed as the Action Officer in Section IV (block 25). Submission of the multiple qualification package signifies GFR concurrence with the contractor request. The CMO/CC, if a rated officer, will electronically sign Section IV (block 23), in the operations group/commander (OG/CC) block. If the CMO/CC is not a rated officer, forward the multiple qualification request to DCMA-AO for signature. DCMA-AO will electronically sign Section V (block 27) in the WG/CC block in both cases. Service GFR waiver requests will be signed by the OG/CC providing oversight of contractor aircraft operations. Forward the Form 80 to AFMC/A3V for final actions/approval. Submit validated requests to the CMO commander (if rated) for endorsement. If the CMO commander is not a rated officer, forward the validated request to

DCMA-AO for endorsement. Multiple qualifications are at the mission and design levels, IAW AFMAN 11-202 Vol 2 (AFMC Supplement), "Aircrew Standardization and Evaluation Program." Use of the AFMC Form 80 will expedite consideration for approval. (UAS see paragraph 8.5) **[7.8.7.3 greatly expanded]**

10.9.7. Non-Crewmember Approval. GFRs do not approve non-crewmembers. However, GFRs must only approve flights that include non-crewmembers when the non-crewmembers are on the CRO's authorized list and have a mission need to be on the aircraft. **[7.8.8]**

10.9.8. Flight Approval. The GFR must not approve any flight until the Procedures have been approved. **[7.8.9]**

10.9.8.1. GFR approval is required for all flights under this Instruction. Flight approvals are requested through the use of DD Form 3062 or an alternate form approved by the GFR. Ideally, the GFR approves flight requests on the work day prior to the scheduled flight. This allows the GFR to evaluate the effects of all the factors (such as aircraft condition, weather, aircrew life stressors, etc.) which influence flight effectiveness and safety. GFRs must not authorize operations that are outside the scope of the contract. GFR approval of operations not allowed by the contract could create serious liability issues for both the Government and the contractor. Ensure the contractor's risk management program incorporates a flight risk assessment for each flight. The GFR must follow Service rules to ensure the appropriate approval level for elevated risk flights is accomplished. When aircraft operations are split between multiple locations and multiple GFRs, the GFRs will coordinate flight approvals. **[Highlight is a new addition]**

10.9.8.2. GFR approved equivalent forms must contain the same requisite information found in DD Form 3062 including the contractor certification statement, "I CERTIFY that this flight is IAW the flight program authorized by the contract and will be conducted IAW the approved flight operations Procedures."

10.9.8.3. GFRs must confirm that each contractor crewmember on the flight approval request form is current, qualified, or in an approved training status. When a GFR is approving a flight with crewmembers provided under a separate contract having a different GFR, the approving GFR must ensure the guest crewmembers are current and qualified IAW the contract they are now flying under.

10.9.8.4. When Government crews fly aircraft under this Instruction, the GFR must verify Government personnel are properly qualified, current, authorized, and required to participate. Valid aircrew travel orders stating in essence, "The purpose of the travel is to perform the specific flight operations activity listed on the DD Form 3062 (e.g., FCF, ACF, Test Flight)," is considered sufficient validation for the purposes of this paragraph. A letter from the home unit commander, though not required, is also considered sufficient validation. (USAF: Verification includes the determination, based on AFMAN 11-2FT Vol 1, "Flight Test Aircrew Training," that primary aircrew currency requirements have been met for the mission/mission elements as stated on the DD Form 3062. GFRs will accept maintenance personnel that are required for inflight checks (Example: H-60 vibration analysis and adjustment) as non-crewmembers. **[7.8.9.4 – added Government non-crewmembers example – talking about Service maintenance personnel]**

10.9.8.5. Flights not Under GFR Cognizance. Occasionally contractor flight operations include formations, chase, pace, intercept/target, or in-flight refueling (receiver or tanker) with non-contract/non-Government aircraft. GFRs may approve such missions but must not approve the

non-contract flight itself. GFRs require insight into the qualifications and capabilities of the non-contract aircrew and aircraft. For flights addressed in this paragraph, this insight is not required when the aircrew or aircraft is provided by the U.S. Government. See paragraph 4.5 for contractor responsibilities in providing this information. GFRs must not approve DD Form 3062s for missions that cannot be accomplished safely. **[7.8.9.5]**

10.9.8.6. Multiple Flight Approvals. Highly repetitive flights (such as flight instruction or a repeated flight involving the same aircrew, mission, and flight profile, including flights defined under paragraph G.1.31) may be authorized 7 days in advance. GFRs should know the profile and objectives for each contractor flight as well as the currency and qualifications of the flight/ground crews involved for the duration of the approval period. Multiple flight approvals must only be for the minimum time period consistent with mission requirements. When the GFR is not collocated with the flight operations, either as a non-resident GFR or because of off station operations, the GFR may authorize the proposed flights up to one month in advance. In no case must flight approvals be issued for more than one month. Contractor crewmembers and non-crewmembers embedded in Service flying organizations (flight services) may be pre-approved by the GFR for up to one month in advance. The GFR will list any ground training items/prerequisites and flying training events that will expire during the requested time period. (USAF: This information will be provided and attached to the AF Form 4327, "ARMS Flight Authorization," or AF Form 4327A, "Crew Flight (FA) Authorization," to complete the flight approval process.)

10.9.8.7. Orientation Flights. GFRs must follow Service guidance when requesting orientation flights on contract aircraft. Requests for orientation flights on Government aircraft must be routed to the waiver authority for this Instruction (see paragraph 2.10.) for approval. The GFR must consult with the ACO to ensure that such requests are within scope of the contract, and request that the PCO adjust the contract to fund the requested flights when necessary. Individuals receiving orientations are restricted from the following types of flights: experimental test flights; initial acceptance, functional check flights, maintenance test, or point to point flights.

10.10. Aviation Program Teams. **[7.8.6]**

10.10.1. The APT's purpose is to support the GFR in ensuring all aspects of aircraft safety (flight, ground, and industrial) which could adversely affect the aircraft are adequately addressed. The GFR heads the APT. The GFR cannot be an expert in all areas of aircraft operations. Due to the complexity and risks involved, it is imperative that appropriate expertise is available to perform the flight operations CAS mission. The experts that assist the GFR in performing flight operations CAS comprise the APT. If the contract involves ground operations and the GFR does not have a background in aircraft ground operations or ground safety, the command must make available a GGR, and other experts necessary to assist the GFR in performing CAS. Service GFRs are strongly encouraged to use available personnel to form their own APTs.

10.10.2. The APT should maintain a close liaison with the other CAS and contractor organization functional offices. If surveillance of a contract reveals problem areas outside the scope of flight operations, ground operations or industrial safety, the GFR should advise the responsible CAS personnel or ACO, as appropriate. Conversely, GFRs should not hesitate to seek advice on matters of safety (ground/explosive) or quality assurance (QA) from functional specialists. As team leader, the GFR should coordinate survey findings and observations

regarding procedures, and conditions with the quality assurance specialist (QAS), maintenance personnel, and the rest of the APT. Such findings can then be presented to the contractor and ACO through the GFR.

10.11. Processing and Routing Waivers. **[NEW]**

10.11.1. Contractor Requests. GFRs must incorporate the contractor's waiver letter and RM (as required) into the appropriate forms. GFRs must process and route complete contractor waiver requests within 10 working days. Neither the GFR nor the chain of command may reject or delay the contractor's waiver request. The contractor has the right to expect a timely response to their request.

10.11.2. Waivers to this Instruction generated by the Government (e.g., G-GFR rank waiver request). Government agencies submit and address a risk mitigation plan for the requested operation/situation. Waiver requests must be in written or electronic format. DCMA organizations should forward waiver requests with recommendations through their chain of command to DCMA-AO. DCMA-AO will endorse the waiver with recommendations, and forward it to the waiver authority of this Instruction. Service organizations must forward waiver requests with recommendations directly to the SWA (paragraph 2.10). (USAF: To expedite the waiver process, contractors should document/submit waiver requests on an AFMC Form 73.)

10.12. Mishap Response. **[7.9]**

10.12.1. GFRs must notify the CSSO (DoD Accident/Mishap/Incident Classification, Reporting Guide, and CSSO List – Job Aid) of ALL mishaps (Class D or above). The CSSO determines if a Service or contractor investigation is required. The GFR must coordinate contractor investigations with the CSSO.

10.12.2. Perform surveillance of the contractor's mishap investigation effort with the assistance of the Contract Safety Manager (CSM) or a CAS flight safety officer. Provide updates (as required) and a final report to the CSSO. **[Highlight is new addition]**

10.12.3. Aircraft impoundment following a mishap. Neither CSSOs nor GFRs have the authority to impound contract aircraft. Directions to the contractor to impound aircraft must come from the contracting officer (ACO or PCO). The contracting officers may cite DFARS 252.228-7005(b), "If the Government conducts an investigation of the mishap, the Contractor shall cooperate and assist the Government's personnel until the investigation is complete," in their directions to the contractor. Coordinate with the CSSO on aircraft release procedures following impoundment. **[7.9.3 expanded to clarify KO role]**

10.13. Subcontractor Flight Operations. GFRs are responsible for all crewmember and flight approval regardless of whether the crewmembers are prime or subcontractor personnel. IAW paragraph 4.8, prime contractors may appoint subcontractor personnel to act as the CRO. **[7.10]**

10.14. CAS Responsibilities. **[7.11]**

10.14.1. Delegating Administration Responsibility/Authority. Assignment of a contract to a CAS component listed in the Federal Directory of Contract Administration Services (CAS) Components, for administration automatically carries with it the authority to perform all of the normal functions listed in FAR 42.302 to the extent that those functions apply to the contract, including surveillance of flight and ground operations and safety requirements. The procuring activity may elect to withhold the assignment of specific CAS functions IAW DFARS 242.202,

or via FAR 42.202, assign additional functions. In these cases, the procuring activity notifies the CMO of the functions withheld or added.

10.14.2. SCA. SCA delegations are used to transfer FAR 42.302 requirements. This is done when, for example, contract work is performed at geographically separated locations or at base, post, camp or station locations. To properly re-delegate FAR 42.302 CAS functions, the supporting commander should be a CASC commander (listed in the Federal Directory of Contract Administration Services Components (available at https://pubapp.dcma.mil/CASD/main.jsp)). If the supporting unit commander is not a CASC commander, see DFARS 242.202(e)(1)(A) for the process. An example is a situation where the contractor's work site is on a military base and a base organization is asked to provide support. Before formally sending the request, coordinate with the office concerned to ensure that resources are available and capable of providing the support. **[7.11.2 expanded]**

10.14.2.1. SCA Delegations. Delegations must be in writing, (letter, email, or .pdf) or by use of DCMA's system of record. The applicable CAS services to be transferred must be stated in the request. Use of the example SCA delegation format found in the Correspondence Guide ensures the correct CAS services are identified and included in the SCA delegation. **[revised 7.11.2.1]**

10.14.2.2. In lieu of transferring CAS responsibility through an SCA delegation, a GFR from one unit may be delegated GFR responsibility from an outside CASC organization that has retained CAS responsibility. This is accomplished through the use of a formal Letter of Agreement (LOA) functionally assigning the GFR to the outside CAS organization for the limited purpose of performing FAR subpart 42.302(a)(56) CAS. A sample GFR/G-GFR Cross Organizational LOA can be found in the Correspondence Guide.

10.14.2.3. Copies of necessary contractual documents are provided from the requesting CAS component. When the SCA delegation (or LOA) includes flight and ground operations, the GFRs from the two CAS components should keep each other informed of important activity concerning the contractor, and notify the CROs for each location on which GFR will be approving Procedures, crewmembers and flights. **[Highlight is a new addition]**

10.14.3. PAS. The PAS is an evaluation of a prospective contractor's ability to perform under the specified terms of a contract proposal. It differs in scope from a regular survey in that the determination is whether the contractor "can" comply with the safety requirements of the contract, not "is" the contractor in compliance. The Preaward monitor will provide the GFR with the solicitation, date, time, and location of the survey as well as the reporting requirements. Written reports should include a clear statement that the contractor is/is not capable of performing work in compliance with contract flight operations and safety requirements. Also include a specific recommendation for award or no award. When an existing contractor is bidding on a new contract and their capabilities are already known, the Preaward monitor may request a desk audit in lieu of a survey. GFRs should still recommend award/no award. **[7.11.3]**

10.15. GFR Routine Surveillance. GFRs must 'maintain surveillance of flight operations' per FAR 42.302(a)(56). The purpose of this surveillance is to validate contractor compliance with the requirements of this Instruction and their own Procedures. Surveillance consists of scheduled, unscheduled, and follow-up audits. For resident GFRs, this should consist of daily/weekly audits. For non-resident GFRs, the minimum surveillance frequency requirement is semi-annual (see paragraph 10.16.2.2), however in all cases, frequency of surveillance must be based on risk. **[All NEW]**

10.15.1. Service GFRs should develop a surveillance plan to standardize and prioritize areas for surveillance. The results of the surveillance execution should be recorded for trend analysis and used to identify systemic non-compliances (see paragraph 10.17.1.1). The GFR should adjust the surveillance plan based on these results.

10.15.2. For DCMA APTs, see DCMA-MAN 8210-2, "Aircraft Operations," and associated APT Surveillance Plan Guide for detailed requirements.

10.16. Contractor Flight and Ground Operations Surveys. The flight and ground operations/flight safety survey is an onsite evaluation of the effectiveness of the contractor flight and ground operations programs and Procedures for protecting Government resources while under the cognizance of the CASC at contractor facilities. Observations determine the adequacy of written Procedures, compliance with those procedures, and their effectiveness in protecting Government resources. The intent of the APT Survey is to validate contract compliance to minimize the risk of loss, and to indicate what management attention is necessary to prevent occurrence/recurrences. USAF GFRs, can locate the Management Internal Control Toolset on the website by searching for 'AFI 10-220.' **[7.12]**

10.16.1. The GFR must conduct surveys of each designated contractor's flight and ground operations. The survey is conducted to:

10.16.1.1. Verify contractor conformance with contractual flight and ground operations, and safety requirements,

10.16.1.2. Verify the qualification of contractor crewmembers, non-crewmembers, and ground personnel. When circumstances (e.g., aircraft type, flying schedule) permit, an in-flight evaluation of contractor crewmembers should be accomplished. Flight examiners who are current, qualified, and designated in writing by their flying unit to perform flight evaluations may perform flight evaluations. As an alternative, the GFR may perform an in-flight supervisory flight evaluation of the performance of contractor flight crew members. Flight evaluation findings must be debriefed to the GFR prior to the formal out briefing. A formal flight evaluation report must be entered into the tested individual's flight records. For no-notice evaluations, the GFR should notify the Chief Pilot prior to brief time.

10.16.2. Frequency of Surveys. The frequency of the surveys must be based upon the degree of risk and magnitude of potential Government loss associated with the types of aircraft flight and ground operations. In addition, the individual contractor's safety history, current level of performance, and complexity of operations must also be considered. The designated GFR is the most knowledgeable judge of these factors and therefore is charged with the responsibility of determining the frequency of the surveys.

10.16.2.1. Resident GFRs must perform a minimum of one survey every 12 months in addition to their routine surveillance of the contractor (paragraph 10.15).

10.16.2.2. Nonresident GFRs must determine the survey frequencies after initial fact finding visits to the contractor's facility. Nonresident GFRs must perform an annual survey and at least one mid cycle survey 5 to 7 months later. These mid-cycle (semi-annual) surveys need not be as comprehensive as the annual survey. At a minimum, mid cycle surveys should still include an analysis of the current state of the contractor's aircraft safety program, the status of corrective actions from previous surveys, and a review of any high interest items. **["6 months" now 5-7 months]**

10.16.2.3. Annual Surveys may be conducted plus or minus two months of the anniversary of the previous survey dates. DCMA CMO commanders, with concurrence of the DCMA Executive Director for Aircraft Operations, may authorize conducting the annual Survey plus or minus three months of the Survey anniversary to align the Survey with a DCMA AOI. **[one month now two months and DCMA three months for alignment with the AOI]**

10.16.2.4. Surveys for Short-Duration/Limited-Scope Operations. Surveys conducted on a fixed schedule may not coincide with actual contractor aircraft operations and therefore have no operations to inspect/audit. Surveys should be conducted during actual contractor aircraft operations in order to verify contractor compliance with procedures. GFRs are authorized to fit their surveillance to match the contractor's aircraft operations, and are not tied to the semi-annual/annual time frames. APT will ensure maximum presence, as scheduling permits, during contractor aircraft operations. **[NEW]**

10.16.3. Preparation for Flight and Ground Operations Survey. GFRs should review the following items before beginning the survey: **[7.12.4]**

10.16.3.1. Procedures for currency and validity,

10.16.3.2. Historical data, including past surveys (e.g., preaward, postaward), Inspector General (IG) reports, and mishap reports. Make a list of follow up items. Note the nature of any problems, the proposed corrective action and responsible office and the anticipated "get well" date. Attempt to identify trends and root causes which may be contributing to the symptoms. Don't overlook findings from other locations which may have application,

10.16.3.3. Waivers. Review all waivers to ensure the requirements for the waiver are still valid,

10.16.3.4. The contract, including modifications and attachments. Verify the inclusion of the appropriate FAR and DFARS clauses and status of any Contract Deficiency Reports, related to aircraft operations. **[added 'modifications']**

10.16.4. Notification. Notify the contractor in writing at least 30 days prior and request that the contractor provide an appropriate escort to accompany the Government team during the survey. GFRs may wish to include a copy of the survey process to the contractor. Send a copy of notification letter to the ACO. When mishap reports, deficiency reports, etc., demonstrate the need for additional evaluations of the contractor's aircraft operations, unannounced surveys may be performed. **[7.12.5]**

10.16.5. Team Composition. Prior to the survey, the GFR forms a team including applicable aircraft operations, quality, safety and other appropriate technical personnel to effectively evaluate contractor performance. Letters of invitations to participate in annual surveys may be sent to the procuring Service organizations as appropriate. **[7.12.6]**

10.16.6. Conducting the Survey. To ensure the Government team is integrated and areas of responsibility are established a Government-only meeting should be conducted prior to the in-brief and out brief with the contractor. **[7.12.7]**

10.16.6.1. Conduct a formal in-brief. A formal in-brief with the contractor and Government team provides the setting for the conduct of the survey.

10.16.6.2. Visit, review, interview, and observe, as necessary. Compare the observations with contract requirements and written Procedures. Caution should be exercised to avoid directing the contractor to perform actions outside the scope of the contract. Make notes of

outstanding/exemplary processes and discrepancies for use in the formal report. Cite a specific contract reference (e.g., DCMA INST 8210-1, Section 5, paragraph 5.8.2.2.) for each discrepancy.

10.16.6.3. Some observations or deficiencies may be discussed directly during the progress of the survey. If the GFR has sufficient confidence in the contractor's supervisory personnel and is confident that the deficiency does not warrant a root cause analysis, these items need not appear in the final report. If doubt exists, items should be included in the written report for review by the ACO and formally forwarded to the contractor. Upon discovering a deficiency which is an obvious serious hazard (e.g., smoking while performing fueling operations), immediately notify appropriate contractor supervisory personnel so they can direct immediate hazard correction.

10.16.6.4. Exit Briefing. Conduct a Government only out-brief to coordinate findings and prepare for the contractor out-briefing. Conduct a final out-brief with the contractor with those who attended the in-briefing.

10.16.6.5. Reports. Prepare and distribute a written report as follows:

10.16.6.5.1. The survey report using the format found in the Correspondence Guide, or any appropriate substitute format. Describe the program elements and sub-elements which were observed during the survey. Findings must include documentation of facts and reference(s) to the written requirement (e.g., the contract, the Procedures, applicable TOs). Coordinate the writing of the final report with the survey team participants.

10.16.6.5.2. The Facility Data Sheet (FDS). The GFR creates the FDS as a concise summary of the contractor facility and its level of activity. An example format in Excel is available on the resource page. The FDS should include the following items of information:

10.16.6.5.2.1. Contractor name and address,

10.16.6.5.2.2. Primary Government and contractor personnel and phone numbers,

10.16.6.5.2.3. Number of Government and contractor crewmembers assigned,

10.16.6.5.2.4. Current contract number(s) that contain the Ground and Flight Risk Clause,

10.16.6.5.2.5. Contract flight and ground operations clause/ requirement reference(s) and safety clause/requirement reference(s),

10.16.6.5.2.6. Type/Design/Series of aircraft,

10.16.6.5.2.7. Procuring Service, PCO, ACO,

10.16.6.5.2.8. Quantity of aircraft scheduled by year and,

10.16.6.5.2.9. Current issues.

10.16.6.5.3. The ACO ensures proper interpretation of contractual requirements identified during the survey. The ACO will make comments and forward the report to the contractor requesting corrective actions to any documented non-compliances. The GFR must not send the report directly to the contractor. USAF Service GFRs will forward a copy of the annual survey to the Air Force lead MAJCOM office (see paragraph 2.10). **[7.12.7.5.4 – added USAF guidance, no change from existing AFI 10-220 AFMC Supplement for Change 1]**

10.16.6.5.4. The survey report distribution schedule for contractor aircraft operations is as follows:

10.16.6.5.4.1. The GFR provides a report to the CASC Commander and ACO within 10 working days after completion of the survey.

10.16.6.5.4.2. The ACO makes comments and endorses the report to the contractor within 5 working days.

10.16.6.5.4.3. The contractor replies to survey findings within 30 days, unless a specific case warrants other action.

10.16.6.5.4.4. Follow up. Establish a follow up system to monitor the contractor's corrective actions. Provide status report as necessary to the ACO and the CASC commander. When conditions warrant, a follow up survey must be performed, as determined by the GFR.

10.17. Other GFR Responsibilities. **[7.13 – Note Format error, next para should be 10.17.1 not 10.17.1.1 the next 3 paragraphs are subs of 10.17.1]**

10.17.1.1. Noncompliances and Discrepancies. When the contractor is not acting IAW Procedures, the contract, test plans, this Instruction, other applicable directives, or if safety is jeopardized, the GFR must take prompt actions to rectify the issue. GFRs cannot issue stop work orders but can intervene to prevent an imminent incident from occurring. The GFR may issue a corrective action request (CAR) and/or elect to withdraw approval of the flights, crewmembers, and/or Procedures to address safety deficiencies. Should the GFR discover contractor aircraft operations conducted without approved Procedures, noncompliance with approved Procedures, or use of unsafe practices, the GFR must notify the contractor and ACO. Contracting officers may pursue other remedies. **[7.13.1 Mostly New; expanded on authorities]**

10.17.1.2. Not all noncompliances or discrepancies require formal notifications. Minor issues may be addressed verbally or via email, and often corrected on the spot. However, even minor issues should be documented in the GFR logbook or other database methods for historical and tracking purposes.

10.17.1.3. Noncompliances or discrepancies that require formal notifications. Noncompliances and/or discrepancies that cannot be adequately addressed through informal methods (including serious or systemic issues), must be addressed through more formal methods. Formal written statements must be included in the Survey Report (when applicable), or through a CAR. During routine surveillance, APTs may initially address such issues orally. Oral notifications must be followed-up with a formal written statement fully outlining the deficiency.

10.17.1.4. Subcontractor compliance. The U.S. Government only has a direct contractual relationship with prime contractors. Notify the prime contractor when subcontractor noncompliance is observed. GFRs may also notify the subcontractor of the noncompliance.

10.17.2. Coordinate in advance with the ACO to ensure full contractor participation in interviews required by the safety investigators. Some contractor personnel may not wish to participate when a safety investigator needs to interview their personnel. If necessary the GFR should bring the ACO into the discussion to stress to the contractor that failure to cooperate will be viewed as a contract violation IAW paragraph 6.4.4.4 and, if on contract, DFARS 252.228-7005, Accident Reporting and Investigation Involving Aircraft, Missiles, and Space Launch Vehicles. **[7.13.2]**

10.17.3. Review special interest items (e.g., Quality Deficiency Reports, CARs, ATC facilities, maintenance facilities) to identify conditions or trends which have potential impact on flight operations or safety. **[7.13.3]**

10.17.4. Participate with Government QA personnel in the review of safety-of-flight related customer complaints (e.g., Maintenance Deficiency Report). This review must be of sufficient depth to ensure that both contractor and Government surveillance corrective actions (revisions of procedures, work cards, etc.) resulting from the analysis of these reports are adequate to prevent recurrence of the deficiency. **[7.13.4]**

10.17.5. The GFR along with the Property Administrator must review all Loss, Theft, Damaged, Destroyed incidents involving aircraft under the GFRC and provide recommendations to the ACO concerning the applicability of the GFRC's contractor's cost share for each relevant incident. **[7.13.5 Replaced "deductible" with "cost share"]**

10.17.6. Maintain records of contractor flight/ground operations. This file must include, as a minimum: **[7.13.7 – note 7.13.6 deleted]**

10.17.6.1. The Procedures,

10.17.6.2. Procedures approval letters (retain for 3 years),

10.17.6.3. Approval of contractor flights and flight profiles (retain 1 year),

10.17.6.4. Current listings of contractor crewmembers,

10.17.6.5. Flight operations/safety evaluation reports, follow up results, and contractor related correspondence (retain 3 years) and,

10.17.6.6. Waivers (as long as they are valid).

10.18. Infrastructure. **[All NEW]**

10.18.1. Emerging Technology, Alternate Methods, and/or Equivalencies. Requirements in Section 7 are not intended to restrict emerging technologies or alternate methods/arrangements, provided the level of safety is the same or greater with respect to the protection of the aircraft. Appropriate technical documentation must be provided to demonstrate equivalent functionality. Accepting these technologies/methods/equivalencies is done through the waiver process.

10.18.2. Contractor Infrastructure Evaluation. The GFR must ensure the contractor completes the evaluation required by paragraph 7.2 in a timely manner. The GFR must evaluate the report for completeness and accuracy. If shortfalls/issues have been identified, DCMA GFRs (in consultation with the CSM) will coordinate with DCMA AO to determine what level of involvement, notification, and approval (e.g., PCO, SWA, authority having jurisdiction, combination of offices) is required to make decisions for acceptance and approval of corrective actions and risk mitigations. Service GFRs will coordinate directly with the SWA.

10.18.3. Where contractor's ARFF, aircraft facility fire response, and/or aircraft facilities have been considered suitable for similar aircraft work under previous versions of this Instruction or existing U.S. Government contracts, they may continue to operate under those conditions for 90 days while corrective actions and/or associated waiver request packages (when appropriate) are being completed.

10.18.4. When contractors identify shortfalls in their facility assessments per paragraph 7.6.2, forward the information to applicable aircraft program office(s), facility owners, specific Service points of contact, and SWAs so that the shortfalls may be addressed if the contracting organization chooses.

10.18.5. Processes described in paragraph 7.10 do not always require GFR approved Procedures. However, the GFR must be familiar with the contractor's processes and procedures covering these areas. During routine surveillance activities, the GFR should review the contractor's processes and procedures. If issues are discovered, the GFR could require further evaluation of the contractor's processes/procedures.

10.19. Other Areas. **[NEW – Note 7.14-7.17 moved to Section 9]**

10.19.1. Contractor "Required" NDAs.

10.19.1.1. An NDA is a contract between two parties agreeing to not disclose certain information to third parties. As a Government employee, you do not have authority to commit the Government not to use the contractor's information for whatever may be legitimate Government purposes. Executing such an agreement would bind the individual, and not the Government. By signing such a NDA, one incurs a risk of personal liability to the contractor if information is disclosed in a way the contractor finds inappropriate (for instance, to a DoD IG investigator, or in response to a Freedom of Information Act request). Government employees must not rely upon assurances from contractors that they will not seek to enforce an NDA.

10.19.1.2. Agreements may have a variety of names; they may not all use the words "Non-Disclosure." They may be included in "routine" notices when entering the plant or the database. One must approach any document or agreement that could be considered an NDA with caution, and sign an agreement only after full consultation with assigned legal counsel.

10.19.2. Contracting Officer's Representatives (COR). A COR is an individual designated IAW FAR 1.602-2(d) and DFARS 201.602-2(d) and authorized in writing by the contracting officer to perform specific technical or administrative functions. The role of a COR is separate from that of a GFR/G-GFR. CORs cannot perform GFR duties unless they are qualified, trained and appointed as GFRs/G-GFRs IAW this Instruction.

GLOSSARY 1: DEFINITIONS

[New – moved from old Chapter 1 – only updates will be highlighted. The following definitions were removed: 1.14 Certified, 1.18 Component, 1.29 DD Form 250, 1.32 FAR and DFARS References, 1.45 Leased Aircraft, 1.59 Shall, 1.71 WAWF RR. The following were moved out of order embedded under FOD Protection Program: 1.19 Composite Tool Kits, 1.27 Control, 1.42 Hardware Control.]

G.1. Definitions. Terms listed in this Glossary are defined as they apply to this Instruction.

G.1.1. Aircraft. For the purposes of this Instruction means:

G.1.1.1. Aircraft to be delivered to the Government under contract (either before or after Government acceptance), including complete aircraft and aircraft in the process of being manufactured, disassembled, or reassembled; provided that an engine, portion of a wing, or a wing is attached to a fuselage of the aircraft;

G.1.1.2. Aircraft, whether in a state of disassembly or reassembly, furnished by the Government to the Contractor under contract, including all Government property installed, in the process of installation, or temporarily removed; provided that the aircraft and property are not covered by a separate bailment agreement;

G.1.1.3. Aircraft furnished or used by the Contractor to perform a service under contract; or

G.1.1.4. Conventional winged aircraft, as well as helicopters, vertical take-off or landing aircraft, lighter-than air airships, unmanned/optionally piloted aircraft, or other nonconventional aircraft specified in contract.

G.1.2. Aircraft Acceptance.

G.1.2.1. Accepted Aircraft. Any aircraft which has been formally transferred to the Government.

G.1.2.2. Pre-Accepted Aircraft (New Production). Any aircraft for which the government has an equitable or vested interest, but has not been formally transferred to the Government.

G.1.2.3. Pre-Accepted Aircraft (Post Production). Aircraft already in the DoD inventory that are under contract but the DD Form 250, Material Inspection and Receiving Report, or the Invoicing, Receipt, Acceptance, and Property Transfer (IRAPT) (formally Wide Area Workflow Receiving Report) has not been completed. **[updated terminology]**

G.1.2.4. Acceptance Documents. Acceptance may be accomplished via the DD Form 250, or IRAPT. The DD Form 250 and IRAPT are multipurpose reports used: (1) to provide evidence of Government contract quality assurance at origin or destination; (2) to provide evidence of acceptance at origin or destination; (3) for packing lists; (4) for receiving; (5) for shipping; (6) as a contractor invoice; and (7) as commercial invoice support. The primary acceptance document is the IRAPT, which is now required by most DoD contracts. See paragraph G.1.15, for additional information on care, custody and control (possession). **[updated terminology]**

G.1.3. Aircraft Identification Conventions.

G.1.3.1. Aircraft Basic Mission (Class/Type). Identifies the primary function and capability of an aerospace vehicle (e.g., Attack, Fighter, Helicopter, Patrol, Transport, Trainer). Aircraft Basic Mission is represented by a letter of the alphabet (e.g., Fighter (F-16); Transport (C-135); Trainer (T-38); Bomber (B-1)).

G.1.3.2. Modified Mission. Identifies modifications to the Basic Mission of an aircraft. The modified mission identification appears to the left of the Basic Mission symbol (e.g., Multi-Mission (MQ-1B); tanker (KC-135R); cargo (CH-47D), anti-submarine (SH-60B).

G.1.3.3. Aircraft Design (Model). Identifies major changes within the same Basic Mission. Design numbers appear to the right of the Basic Mission symbol, separated by a dash (e.g., F-16; H-60; C-17).

G.1.3.4. Aircraft Series. Identifies the production model of a particular design number representing major modifications significantly altering systems components. Consecutive series symbols appear to the immediate right of the design number (e.g., the F-16A and F-16C, the KC-135A and KC-135R, the AH-64A and AH-64D).

G.1.4. Aircraft Operations. For the purpose of this Instruction, "aircraft operations" and "flight operations" as listed in FAR 42.302(a)(56) "Maintain surveillance of flight operations," includes both flight and ground aircraft operations. **[New]**

G.1.5. Aircraft Operations (Types).

G.1.5.1. Operations inside U.S. territory and it's airspace. As defined by U.S. Code, in the U.S. National Airspace System, aircraft operations are divided into two categories, Civil Aircraft Operations (CAO) and Public Aircraft Operations (PAO). Aircraft Operations are not necessarily static and may shift between CAO and PAO depending on flight/mission intent. **[added clarification]**

G.1.5.1.1. Civil Aircraft Operations. Anything other than those determined to be Public Aircraft Operations.

G.1.5.1.2. Public Aircraft Operations. In order to operate as a public aircraft, the aircraft must meet one of the definitions in 49 USC 40102(a)(41) and the qualifications in 49 USC 40125. The Services make PAO determinations on a case by case basis. **[updated to definition only, guidance moved to Section 9]**

G.1.5.2. Operations outside U.S. territory as defined by ICAO. Under the Convention on International Civil Aviation (also known as the Chicago Convention), aircraft that are owned and operated by a sovereign government (e.g., the United Kingdom) (also referred to as a "state") for military, police or customs services are normally considered to be state aircraft. Aircraft operated by contractors for the armed forces are NOT automatically considered state aircraft. The United States recognizes state aircraft status only if the particular aircraft has been

designated as such, in writing, for the particular mission or operation by a responsible U.S. official. See DoDD 4500.54, DoD Foreign Clearance Program. This applies to both manned and unmanned aircraft. **[completely revised]**

G.1.6. Aircraft Operations (contract arrangements). Contracts that support Government operations can involve the following variations that describe the roles of the contractors and the Government: GOGO, GOCO, COCO, or COGO. **[completely revised old 1.5]**

G.1.7. ARFF. The fire fighting action taken to prevent, control, or extinguish fire involving, or adjacent to, an aircraft. The purpose of ARFF is to suppress the fire long enough to rescue any incapacitated crewmembers and non-crewmembers, maintain maximum escape routes for ambulatory aircraft occupants, protect fire fighting personnel, and minimize the damage to the aircraft.

G.1.8. Airworthiness. The property of an air system configuration to safely attain, sustain, and complete flight IAW approved usage limits. **[completely revised to simple definition]**

G.1.9. Annual. For the purpose of this Instruction a requirement that is marked as "annual" means that the requirement is to be repeated no later than 12 calendar months (to the end of the month) after the previous event. Conducting the required event earlier (e.g., 10 months) rebases the next required annual event. **[New]**

G.1.10. Approving Authority. The commander or designee of one of the following organizations having the administrative responsibility for a particular contract. **[updated to current organization]**

G.1.10.1. Army – Heads of Contracting Activity (HCAs) or Senior Contracting Official. The authority may be delegated within the contracting activity no lower than the Procuring Contracting Officer (PCO). No delegations are authorized external to the contracting activity.

G.1.10.2. Navy – Commander, Naval Air Systems Command (COMNAVAIRSYSCOM). Delegated to other Controlling Custodian Commanders who administer FAR subpart 42.302 responsibilities for organizational level support and training contracts.

G.1.10.3. Air Force – Head of Contracting Activity (HCA). The HCA for the USAF is the Deputy Assistant Secretary (Contracting) (DAS(C)). The authority granted to DAS(C) may also be exercised by the Associate Deputy Assistant Secretary (Contracting) (ADAS(C)).

G.1.10.4. U.S. Coast Guard – Commanding Officer, USCG ALC.

G.1.10.5. DCMA – DCMA Director; Deputy Director; DCMA East/ Central/ West/ International/ Special Programs Commanders/Directors; CMO Commanders (May not be re-delegated).

G.1.10.6. GSA – The Service authority, as defined in this definition, that places/funds the purchase order through a GSA contract vehicle will act as the approving authority. **[New]**

G.1.10.7. Non-DoD/Other – Head of the Procuring Activity.

G.1.11. Army Nonstandard Aircraft. Army aircraft not classified standard or aircraft obtained from other DoD activities or commercial sources.

G.1.12. Aviation Program Team. The Aviation Program Team (APT) is responsible for performing CAS functions under FAR 42.302. APTs consist of the ~~GGFR/G-GFR~~GFR/G-GFR and GGR, and alternates; where the CAS function under FAR 42.302(a)(39) is assigned, the Contract Safety Manager (CSM); where the CAS function under FAR 42.302(a)(38) is assigned, the Quality Assurance Specialist (QAS). The GFR/G-GFR leads the APT. **[revised – Note Typo in -1D should read as highlighted]**

G.1.13. Aviation Safety Official. The ASO is the individual assigned by the contractor with primary responsibility for developing and administering the aviation safety program elements of the contractor's SMS. **[revised]**

G.1.14. Bailed Aircraft. Any Government-owned aircraft provided to a contractor under a Bailment agreement for use in conjunction with a specific contractual requirement. Bailment agreements are separate from lease agreements. **[revised to definition only]**

G.1.15. Care, Custody, Control, or Possession (CCCP). CCCP can occur formally or informally. An aircraft is under the care of the contractor when performing routine/normal maintenance functions and support functions. A contractor can take custody of an aircraft for modification or major aircraft maintenance (e.g., program depot maintenance (PDM)) when the work takes place at the contractor's facility. A contractor can take control of an aircraft when the aircraft remains on a Government base/post/camp/station for modification or specific major maintenance tasks (e.g., Contract Field Team). CCCP relates to the legal term "duty of care" but is not related to the terms "title" or "ownership". **[New]**

G.1.16. Certificate. Documentation-reflecting successful completion of training or qualification. **[revised to definition only]**

G.1.17. COA. COAs are issued by the FAA authorizing UAS operations in the National Airspace per specifically stated requirements, restrictions, and limitations.

G.1.18. Check Flights. Flights to determine compliance with contractual requirements, such as ACFs and FCFs, which include:

G.1.18.1. Any flight performed to accept or functionally check new aircraft production.

G.1.18.2. Any flight performed to accept or functionally check accomplishment of depot maintenance, contract maintenance, or modification.

G.1.18.3. Any flight performed to determine whether an aircraft or its various components are functioning according to predetermined specifications when subjected to the flight environment.

G.1.19. CSSO. The CSSO is the Service safety office that has primary responsibility for mishap investigation and reporting on a specific aircraft and contract. **[revised to definition only – removed example]**

G.1.20. Combat Operations. A military action that may involve carrying out a strategic, operational, or tactical mission against a hostile or unfriendly force, to include carrying on combat and any related movement, supply, attack, defense, and maneuvers needed to gain the objectives of a battle or campaign. **[New]**

G.1.21. CAS. CAS, those actions accomplished by the Government including quality assurance, safety, flight operations, and others listed in Federal Acquisition Regulation (FAR) 42.302, Contract Administration Functions.

G.1.22. CASC. CASC is a CMO of DCMA, or a contract administration office of a Service which performs CAS in a designated geographical area or a specific contractor's facility as listed in the Federal Directory of Contract Administration Services Components.

G.1.23. Contract Flight. Any flight under contract regardless of crewmember organization.

G.1.24. CLS. A CLS contract is a service contract where the contractor conducts required maintenance or modification on a Government owned operational unit aircraft. These contracts may or may not involve functional check (maintenance test) flights. **[New]**

G.1.25. CMO. CMO, the DCMA office which performs assigned functions related to the administration of contracts and preaward functions. The focal point is the ACO.

G.1.26. Contracting Officer.

G.1.26.1. ACO. Individual possessing a contracting warrant who has been delegated authority to perform transactions on behalf of the Government in support of assigned contracts pursuant to FAR subpart 42.302.

G.1.26.2. PCO. The only individual authorized to issue a solicitation and award a contract. The PCO is warranted and appointed by the Head of the Contracting Activity. In most instances, the term "contracting officer" refers to the PCO.

G.1.27. Contractor. Any individual, corporation, or other entity whose personnel may operate aircraft; or perform aircraft maintenance, modification or production.

G.1.28. CRO. The individual appointed by the contractor and authorized to sign a "Request for Approval for Qualification Training," "Request for Approval of Contractor Crewmember," and "Request for Flight Approval." Prime contractors may appoint a subcontractor individual as CRO.

G.1.29. Covered Aircraft. The 2023 GFRC replaces the definition for "in the open" with one for "covered aircraft." This term applies to aircraft that are covered by the Government's assumption of risk under the GFRC. The term cannot be modified except as provided within the GFRC or as provided at DFARS 201.4. **[New]**

G.1.30. Crewmember. Any instructor/flight examiner, pilot, copilot, UA operator, UA system operator, flight engineer, navigator, weapons system operator, bombardier navigator, combat systems operator, radar intercept operator, boom operator, crew chief, loadmaster,

defensive/offensive system operator, special mission aviator (USAF), and other flight manual or applicable document handbook identified crewmember when assigned to their respective crew positions to conduct any flight under the contract. **[revised]**

G.1.31. Engineering Test Flights.

G.1.31.1. Subsystem development flights (e.g., bombing/navigation, autopilot, fire control, systems).

G.1.31.2. Flights where the aircraft serves as the vehicle carrying the item to be checked (e.g., electronic countermeasure stores, a radar system, a missile).

G.1.31.3. Component development and reliability flights not included under paragraph G.1.31.2

G.1.32. Experimental Test Flights. Flights that are conducted to determine or demonstrate critical operating characteristics of an aircraft. These flights often involve greater than normal risk. These include, but are not limited to:

G.1.32.1. Initial flights of a new mission, type/design or series aircraft, high angle of attack tests, flutter and loads tests, and critical stores separation tests.

G.1.32.2. Flights to determine or expand flight or propulsion system envelopes.

G.1.32.3. Flights to initially determine the performance, flight characteristics, and handling qualities.

G.1.32.4. Flights of an aircraft whose flight characteristics may have been altered by configuration changes.

G.1.32.5. Initial flights of the first production aircraft of a new mission, type/design, or series.

G.1.32.6. Initial flights of the first of those aircraft which have undergone "major modification" as determined by the Program Manager.

G.1.32.7. Component development flights where failure of the test component would make the flight hazardous in nature and/or involve greater than normal risk as determined by the Program Manager, with advice from the contractor and GFR.

G.1.33. Flight Crews. Includes crewmembers and non-crewmembers.

G.1.34. Flight Operations. Those aircraft operations where intent for flight exists. This instruction uses the term "flight" as defined in the GFRC. High speed taxi and helicopter/tiltrotor hover taxi are also considered flight operations. **[1.34]**

G.1.35. Flight Services. A flight services contract or contract line item number involves a contractor flying, or flying in, a government owned operational unit aircraft as a crewmember or non-crewmember. These services augment Service personnel to complete operational missions such as: Training services, developmental/operational flight test, UAS operators in theater, etc. **[NEW]**

G.1.36. FMS. FMS refers to that portion of U.S. Security Assistance authorized by Section 2751 of Title 22 U.S.C., (also known as the "Arms Export Control Act"), and conducted on the basis of formal contracts or agreements between the United States Government and an authorized recipient government or international organization. FMS includes government-to-government sales of defense articles or defense services, from DoD stocks or through new procurements under DoD-managed contracts, regardless of the source of financing. Simply stated, FMS cases occur when the U.S. Government brokers with a contractor to manufacture/maintain/modify/test aircraft, and the U.S. Government sells it to a foreign country. When operated by Service personnel, or contractors on behalf of a Service, the aircraft operations under a FMS case in U.S. National Airspace, the operations are PAO, and come with responsibilities for airworthiness.

G.1.37. FOD Prevention Definitions. **[NEW – Includes related definitions moved for this grouping (e.g., old 1.19, 1.27). These correlate with AS9146 and NAS412 definitions]**

G.1.37.1. Accountability. Methods or processes used to establish traceability or tracking of tooling, tools, production aids, or items.

G.1.37.2. Clean-As-You-Go. Practice of cleaning the immediate work area of the product at appropriate intervals to eliminate the accumulation or migration of Foreign Objects (FO) that may potentially become entrapped within the product (i.e., Foreign Object Debris (FOd)) or cause damage (i.e., FOD).

G.1.37.3. Consumables. Supplies, materials, and miscellaneous items required for product and operations processes that are expected to be consumed during work performed, or discarded after useful function (e.g., glue, paint, sealant, rags, sandpaper, brushes, applicators, paper towels, gloves, respirator cartridges, cotton swabs, abrasives, tape, safety wire, sanding discs, knife blades).

G.1.37.4. Control. To prevent the unintentional spread of, to verify, or regulate.

G.1.37.5. Equipment.

G.1.37.5.1. Test/Servicing Kits. Any combination of instruments, tools or items needed for servicing or testing of a product or system,

G.1.37.5.2. Production Aids. A set of specialized items used during the performance of a particular task (e.g., dies, fixtures, gauges, jigs, molds),

G.1.37.5.3. Production/Maintenance Support Equipment. Miscellaneous items used in the support of maintenance activities (e.g., air hoses, lights, power cords, mats, FO bags, vacuums, placards (e.g., lock-out-tag-out)).

G.1.37.6. Expendables. Items used during the manufacturing/maintenance process that, after extended usage or reconditioning, become non-functional (e.g., plastic knives, apex tips, plastic insertion/removal tools, rivet sets, drill bits, reamers, clamps, clecos, end mills, counter sinks, counter bores).

G.1.37.7. Foreign Object (FO). An alien substance or article that could potentially enter and/or migrate into/on the product or system becoming FOd and potentially causing FOD, if not removed and controlled.

G.1.37.8. Foreign Object Debris (FOd). Any FO that has entered and/or migrated into/on the product or system, and could potentially cause FOD, if not removed and controlled.

G.1.37.9. Foreign Object Damage (FOD). Any damage attributed to FOd that can be expressed in physical or economic terms, which could potentially degrade the product or system's required safety and/or performance characteristics.

G.1.37.10. FOD Prevention Focal Point. (Also known as the FOD Prevention Area Focal) Site, Program, Product, or Function personnel assigned to provide guidance, support FOD Prevention initiatives, and ensure coverage with sufficient authority, time, budget and organizational freedom to identify and implement FOD Prevention measures.

G.1.37.11. Hardware. Bill of Materials (BOM) parts used in manufacturing/maintenance (e.g., fasteners, nuts, rivets, washers, screws, bolts, spacers, cotter keys, wire terminals/splices).

G.1.37.12. Housekeeping. A process to maintain general cleanliness and ensure all work areas are orderly and free of potential FO at appropriate intervals.

G.1.37.13. Item. An individual article or unit, especially one that is part of a list, collection, or set.

G.1.37.14. Personal Items. Items owned by individuals or distributed by the contractor for personal use (e.g., badges, stamps, keys, cell phones, wallets, personal protective equipment, food, drink, tobacco products, tool chits, pens, pencils, jewelry, MP3 players, watches, lighters, coins).

G.1.37.15. Tool. A device used in the performance of a maintenance, manufacturing, or assembly/disassembly task, or operation.

G.1.37.16. Tool Container. A storage medium (e.g., tool box, kit or bag, cabinet, shadow board, shadowbox).

G.1.38. GFR. See Section 10, for the GFR selection and appointment process. GFRs are: **[revised]**

G.1.38.1. GFR (Aircraft Flight and Ground Operations). A current or previously rated U.S. Military officer or previously rated Government civilian to whom the Approving Authority has delegated responsibility for approval of contractor flights, Procedures, crewmembers, and ensuring contractor compliance with applicable provisions of this Instruction Correspondence Guide for an example GFR/G-GFR Appointment Letter.

G.1.38.2. Alternate GFR. A current or previously rated U.S. Military officer or previously rated Government civilian to whom the Approving Authority has delegated responsibility to perform GFR duties in the absence of the primary GFR (as defined in paragraph G.1.38.1).

G.1.38.3. G-GFR. A G-GFR is a U.S. Military aircraft maintenance officer or NCO (E-7 or above), or former U.S. Military aircraft maintenance officer/NCO Government civilian, to whom the Approving Authority has delegated responsibility for approval of Procedures related to aircraft ground operations and ensuring contractor compliance with applicable provisions of this Instruction See the Correspondence Guide for an example GFR/G-GFR Appointment Letter. G-GFRs (as defined by this paragraph) are not authorized to act as a GFR (Aircraft Flight and Ground Operations (paragraph G.1.38.1)) or an alternate GFR (paragraph G.1.38.2), approve contractor crewmembers, flights, flight related portions of the Procedures, or any function/procedure described in this Instruction's Section 4 (Flight Operations). The Approving Authority may appoint alternate G-GFRs.

G.1.38.4. GFRs for SUAS. GFRs for SUAS are not required to be rated or a military officer. SUAS GFR must be an E-7 or above, or Government civilian. The candidate will have 5 years as a government UAS operator or 200 flight hours as an operator in government operations (or have been qualified as an Army Master Trainer). Individuals meeting the requirements of paragraph G.1.38.1 may be appointed as GFRs for SUAS without the UAS experience. **[NEW]**

G.1.38.5. Resident GFRs/G-GFR "Locations". Includes the duty locations for the GFR/G-GFR, and those locations they can travel to, execute surveillance, and return to their duty location in a standard workday. For a site to be "resident," the GFR/G-GFR must be able to accomplish persistent/routine surveillance at the site, at least one day each week, on average. **[NEW]**

G.1.38.6. Non-Resident GFRs/G-GFR "Sites". Those locations not meeting the criteria in paragraph G.1.38.5 Approving Authorities must use discretion regarding appropriate workload assignments based upon the number of contractors at each location, the complexity of the work being accomplished, etc. **[NEW]**

G.1.39. GGR. A GGR is a U.S. Military aircraft maintenance officer or NCO (E-7 or above), or former U.S. Military aircraft maintenance officer/NCO Government civilian, with responsibility for surveillance of contractor aircraft ground operations (specifically Section 5 of this Instruction) as part of an Aviation Program Team (APT). GGRs differ from G-GFRs in that GGRs have no authority to approve GOPs. **[revised]**

G.1.40. GFE/Government-Furnished Property. GFE and Government-furnished property is any Government-owned equipment, including aircraft, aircraft parts, or AGSE provided to a contractor for use in conjunction with a specific contractual requirement. **[revised]**

G.1.41. Ground Operations. Activities performed on/in/or around the aircraft without the intent for flight. Ground Operations are separate and distinct from quality and industrial processes, but may facilitate those processes. Specific ground operations include those identified in Section 5. **[revised significantly]**

G.1.42. Ground Personnel. Personnel designated by the contractor to perform ground operations.

G.1.43. Industrial Procedures. Technical instructions (Service or contractor) that describe assembly, disassembly, repair, removal and installation process steps, maintenance, general

aircraft manufacturing guidance/plans, build plans, sub-assembly manufacture, and engineering instructions.

G.1.44. IPI. An IPI is an additional inspection or verification step at a critical point in the installation, assembly, or reassembly of a system, subsystem or component. An IPI is accomplished by a qualified individual other than the technician performing the task. **[New]**

G.1.45. In The Open. The GFRC defines "in the open" to mean, aircraft located wholly outside of buildings on the contractor's premises or other places described in the Schedule as being "in the open." Contracting officers may modify the term per DFARS 228.370. **[New]**

G.1.46. Integrated Maintenance. An integrated maintenance contract is a contract or CLIN where the contractor maintenance personnel conduct ongoing maintenance on government owned operational unit aircraft. These services augment Service personnel to complete scheduled and unscheduled maintenance tasks. **[New]**

G.1.47. Intent for Flight. For operations under contract use the specific Service definition.

G.1.48. MTF (Army).

G.1.48.1. Any flight performed to accept or check accomplishment of maintenance or modification.

G.1.48.2. Flight performed to determine whether an aircraft and its various components are functioning according to predetermined specifications while subjected to the flight environment.

G.1.49. May. Denotes the permissive. However, the term "no person may..." means that no person is required, authorized, or permitted to do the act described.

G.1.50. MEP. MEPs (USAF) are Service or contractor personnel who are required for the execution of the aircraft or unit mission. Maintenance MEP may be tasked to perform ground support duties at enroute locations or destinations that are directly related and essential to accomplishment of the aircraft or unit mission. Maintenance MEP may be contractor personnel observing the performance of equipment or software to help ascertain the cause of equipment failure or making inflight adjustments. Non-crewmember MEP may be subject matter experts observing the operation of equipment or software inflight. **[New]**

G.1.51. Mixed Crews. Flight crews composed of a mix of Government and contractor personnel, or multiple contractors.

G.1.52. Must. Denotes the imperative. **[New – replaced 'shall']**

G.1.53. Non-crewmember. Personnel, other than crewmembers or passengers, designated by the CRO whose presence is required to perform, or is associated with the performance of, a necessary function while the aircraft is in flight (e.g., maintenance personnel observing the performance of malfunctioning equipment to help ascertain the cause of the equipment failure, maintenance personnel required to dampen rotor vibrations or tune electronic equipment, personnel required to perform ground support duties at enroute locations or destinations that are

directly related and essential to accomplishment of the aircraft or unit mission, photographers, and systems operators). The term includes Service specific designations (e.g., USAF MEP, Navy Project Specialists). The term non-crewmember does not apply to UAS operations. **[Expanded examples]**

G.1.54. Ordnance. Weapons (e.g., bombs, missiles, rockets, gun ammunition) used by aircraft. **[New]**

G.1.55. Orientation Flight. A flight (usually performed within the local flying area) to familiarize selected personnel with the mission of the aircraft. Orientation flights are always Point A to Point A.

G.1.56. PC/PIC. The PC/PIC is the aircrew member designated by competent authority as being in command of an aircraft and responsible for its safe operation. **[New]**

G.1.57. Privileged Safety Information. Statements, reports or testimony given to a Service safety investigator or board pursuant to a promise of confidentiality, and any direct references to any such statements or testimony elsewhere in a report. The findings, evaluations, analyses, opinions, conclusions, recommendations and other indications of the deliberative processes of a safety investigator, safety investigation boards, endorsers and reviewers are also privileged safety information.

G.1.58. Procedures. Separate and distinct written instructions developed by the contractor and approved by the GFR, which delineate the processes contractor personnel must follow while conducting aircraft operations affecting aircraft subject, by contract, to the requirements of this Instruction. Procedures may be divided into parts such as FOPs, GOPs, and SPs. The terms Procedures and Contractor's Procedures are synonymous. **[revised]**

G.1.59. Program Manager. The program manager is designated, under DoDD 5000.01, The Defense Acquisition System, as the Service's individual responsible for the management of a system acquisition program. He/she depends on the PCO to assist him/her in the critical steps of fulfilling program objectives.

G.1.60. Program Office. The program office (also system program office, program management office, Program Management Aircraft) is the office which provides life cycle management of aircraft programs.

G.1.61. Public Aircraft Operations. For PAO definition see paragraph G.1.5.1.2

G.1.62. Qualified. Possesses the necessary knowledge, skills and abilities to perform assigned duties and responsibilities; satisfies the proficiency/competency requirements needed to correctly complete all elements of a task without direct supervision; maintains required certification for special processes (e.g., welding). **[Revised]**

G.1.63. Quality Procedures. Those procedures related to ensuring product form, fit or functionality. Examples include company quality manuals, and published quality management systems standards like International Organization for Standardization (ISO) 9000/AS9100.

G.1.64. Rated. Refers to aeronautical ratings as authorized by Title 10, U.S. Code. For example, pilots, navigators, naval aviators, and naval flight officers are "rated." **[New]**

G.1.65. Service Guidance. "Service Guidance" is the procuring Service's listed regulations, instructions (and associated manuals), flight manuals, and technical publications, and those specified in the contract in effect on the date of contract award (unless the contract is modified with respect to specific Service Guidance changes), which are applicable to the specific flight and/or ground operations conducted by the contractor. Service Guidance is not to be interpreted as requiring the day to day administrative functions that govern operations in Government organizations. As stated, contractors are only bound by the portion of Service Guidance that is applicable to the aircraft operations being performed under contract. If a Service Guidance instruction/regulation addresses a specific topic by referencing a second tier instruction/regulation, that referenced section in the second tier document must be considered required Service Guidance for that contract operation. Third tier Service instructions/regulations are not considered contractual requirements. Service Guidance (tier one) includes the following: **[slight revisions, clarifies status of 'third tier' and note that 'instructions (and associated manuals)' together are First Tier]**

G.1.65.1. For USAF aircraft contracts: AFI 10-220 AFMC Supplement, "Contractor's Flight and Ground Operations;" (Manned/UA Group 4-5) AFMAN 11-202, Volume 1, "Aircrew Training," AFMAN 11-202 Volume 2, "Aircrew Standardization and Evaluation Program," AFMAN 11-202 Volume 3, "Flight Operations," and applicable AFMC supplements; AFMAN 11-2FT, Volume 1, AFMAN 11-2FT Volume 2, "Flight Test Aircrew Evaluation," AFMAN 11-2FT Volume 3, "Flight Test Operations Procedures;" Department of the Air Force Manual 11-401, "Aviation Management," AFI 11-301, Volume 1, "Aircrew Flight Equipment (AFE) Program," AFI 16-1301, "Survival, Evasion, Resistance, and Escape (SERE) Program," and applicable AFMC supplements. (SUAS) AFMAN 11-502, "Small Unmanned Aircraft Systems," and applicable AFMC Supplement. For contractor personnel integrated with Air Force maintenance personnel on Air Force installations only, Department of the Air Force Instruction 21-101, Aircraft and Equipment Maintenance Management," and MAJCOM/local supplements are also Service Guidance. AFMC/A3V is the Office of Primary Responsibility for the set of flight test instructions containing attachments for each weapon system. AFMAN 11-2FT Volumes 1 through 3 contain the training, evaluation criteria, and operations procedures, respectively for each weapon system. Use these instructions in lieu of AFMAN 11-2 mission design series specific volumes for flying operations. In the absence of applicable guidance contact AFMC/A3V for direction. **[Revised]**

G.1.65.2. For USN/USMC aircraft contracts: OPNAV Instruction 3710.7, "Naval Air Training and Operating Procedures Standardization Program," Commander, Naval Air Forces M-3710.7, "Naval Air Training and Operating Procedures Standardization General Flight and Operating Instructions Manual," and applicable aircraft general NATOPS flight manuals. For non-production contracts covering upkeep, repair, overhaul, and modification of Naval Type/Model/Series aircraft, use OEM or applicable NAVAIR/TO maintenance manuals. For contracts that require ordnance handling in direct support of military ordnance personnel on base/post/camp/station, Office of the Chief of Naval Operations Instruction 8023.24D, "Navy Personnel Conventional Ammunition and Explosives Handling Qualification and Certification

Program," applies. For COCO PAO/state contracts, Navy Service Guidance is: Applicable aircraft NATOPS flight and OEM manuals. **[Revised]**

G.1.65.3. For USA aircraft contracts: AR 70-62, "Airworthiness of Aircraft Systems," AR 95 (series), AR 40-501, "Standards of Medical Fitness," AR 385 series, and applicable technical manuals. **[No Change]**

G.1.65.4. For USCG aircraft contracts: COMDTINST M3710.1 (series), "Coast Guard Air Operations Manual," and COMDTINST M13020.1 (series), "Aeronautical Engineering Maintenance Management Manual."

G.1.65.5. For non U.S. Armed Service contracts use applicable agency guidance as specified in the contract in lieu of Service Guidance. **[New]**

G.1.66. Should. Indicates a desired, though not required, outcome.

G.1.67. Similar Aircraft. Aircraft are considered similar when the aircraft are comparable in flight characteristics, handling qualities, and have basically the same aircraft systems (e.g., fuel, electrical, hydraulic, emergency procedures). The purpose is to use a substitute aircraft that provides beneficial learning without generating negative habit pattern transfers. **[New]**

G.1.68. Sortie. For record and reporting purposes of this Instruction, use the Service definition. **[Revised]**

G.1.69. Support Flights. These include, but are not limited to:

G.1.69.1. Photographic,

G.1.69.2. Chase,

G.1.69.3. Rescue and recovery,

G.1.69.4. Target or target towing,

G.1.69.5. Aircraft delivery,

G.1.69.6. Orientation,

G.1.69.7. Demonstration flights,

G.1.69.8. Severe weather evacuation flights,

G.1.69.9. Cargo and/or personnel transport flights. This includes flights of an emergency nature,

G.1.69.10. Aircrew evaluation, training, and currency and,

G.1.69.11. Product, or mission support flights (including deployments) as directed by the Services.

G.1.70. SCA. SCA delegations are formal written agreements between the administering CASC organization and another CASC organization, and are the preferred method used to transfer FAR 42.302(a) requirements from one CASC organization to another. This is done when, for example, contract work is performed at geographically separated locations. If the supporting unit commander is not a CASC commander see DFARS 242.202(e)(1)(A).

G.1.71. Technical Data. Documents/instructions/procedures which can be in the form of Service Guidance, or OEM procedures, contractor engineering instructions, etc.

G.1.72. Test Aircraft. Any aircraft used for research, development or test and evaluation purposes.

G.1.73. UA. UAs includes any aircraft that is operated without an operator onboard (piloted remotely or autonomously). UAs have been known as Unmanned Aerial Vehicles, Remotely Operated Aircraft, Remotely Piloted Aircraft, Remotely Piloted Vehicles, UASs and SUASs. Optionally piloted aircraft will be treated as UAs when unmanned. UA may also include aerostat balloons.

G.1.74. UA. Group determinations are made by the Services. The UA Groups are:

G.1.74.1. UA Group 1. Typically weigh less than 20 pounds. Normally operate VFR in Class E, G, Special Use Airspace, or Uncontrolled Airspace. Normal operations are below 1200 feet above ground level and at speeds less than 100 knots.

G.1.74.2. UA Group 2. Typically weigh 21-55 pounds. Normally operate VFR in Class D, E, G, or Special Use Airspace. Normal operations are below 3500 feet above ground level and at speeds less than 250 knots.

G.1.74.3. UA Group 3. Typically weigh more than 55 pounds but less than 1320 pounds. Normally operate VFR in Class D, E, G, or Special Use Airspace. Normal operations are below 18,000 feet MSL and at speeds less than 250 knots.

G.1.74.4. UA Group 4. Typically weigh more 1320 pounds. Normally operate VFR in all airspace below 18,000 feet MSL and at any airspeed.

G.1.74.5. UA Group 5. Typically weigh more 1320 pounds. May operate VFR or IFR in all airspace above or below 18,000 feet MSL and at any airspeed.

G.1.75. UA Observer. Individual required to perform the see-and-avoid function for UA operations through direct visual contact.

G.1.76. UAS. An UAS, includes the aircraft, communication equipment, control systems, and ground support elements. Army SUAS include UAS in Group 1 only. Navy SUAS include UAS in UA Groups 1 and 2. Air Force SUAS include UAS in Groups 1, 2 and 3. **[New]**

G.1.77. Workmanship Error. "Workmanship error" means damage to the aircraft that is the result of an incorrectly performed skill-based task, operation, or action that was originally planned or intended. For example, a mechanic was scraping coating off an inlet and removed too

much. The intent of the task was to scrape the inlet coating, but too much was removed. This would not be considered aircraft damage reimbursed under the GFRC. **[New]**

GLOSSARY 2: ACRONYMS

ACF	acceptance check flight
ACO	administrative contracting officer
ACT	aircrew coordination training
AD	airworthiness directive
ADAS (C)	Associate Deputy Assistant Secretary (Contracting)
AF Form 4327	ARMS Flight Authorization
AF Form 4327A	Crew Flight (FA) Authorization
AFE	aircrew flight equipment
AFI	Air Force instruction
AFMAN	Air Force Manual
AFMC	Air Force Materiel Command
AFMC Form 73	AFMC Waiver and Approval Request
AFMC Form 80	Multiple Qualification Request and Authorization
AFRL	Air Force Research Laboratory
AGSE	aircraft ground support equipment
ALC	Aviation Logistics Center
ALSE	aviation life support equipment
ALSS	aviation life support systems
AMC	U.S. Army Materiel Command
AOI	(DCMA) Aircraft Operations Inspection
APT	aviation program team
APU	auxiliary power unit
AR	Army regulation
ARFF	aircraft rescue and fire fighting
AS	aerospace standard
ASO	aviation safety officer/official
ATC	air traffic control
ATP	aircrew training program (Army)
BASH	bird/animal avoidance and strike hazard
BPCS	base, post, camp, or station
CAO	civil aircraft operations
CAR	corrective action request
CAS	contract administration services
CASC	contract administration services component
CCCP	care, custody, control, or possession
CFR	Code of Federal Regulations
CLS	contractor logistics support
CMO	contract management office
CO	contracting officer
COA	Certificate of Waiver or Authorization
COCO	contractor-owned/contractor-operated
COGO	contractor-owner/Government-operated

COR	Contracting Officer's Representative
CRADA	Cooperative Research and Development Agreement
CRM	crew/cockpit resource management
CRO	Contractor's Requesting Official
CSM	contract safety manager
CSSO	cognizant service safety office
DAS(C)	Deputy Assistant Secretary (Contracting)
DES	Directorate for Evaluation and Standardization (Army)
DFARS	Defense Federal Acquisition Regulation Supplement
DCMA	Defense Contract Management Agency
DCMA-AO	DCMA Aircraft Operations
DCS	direct commercial sales
DD Form 250	Material Inspection and Receiving Report
DD Form 1821	Contractor Crewmember Record
DD Form 2627	Request for Government Approval for Aircrew Qualification and Training
DD Form 2628	Request for Approval of Contractor Flight Crewmember
DD Form 3062	Request for Flight Approval
DoDD	DoD Directive
FAA	Federal Aviation Administration
FAA Form 5200-7	Bird/Other Wildlife Strike Report
FAR	Federal Acquisition Regulation
FBO	fixed-base operator
FCF	functional check flight
FCIF	flight crew information file
FDS	facility data sheet
FE	flight fxaminer
FMS	foreign military sales
FO	foreign object
FOD	foreign object damage
FOd	foreign object debris
FOP	flight operations procedures
GCS	ground control station
GFE	government-furnished equipment
GFRC	Ground and Flight Risk clause
GFR	Government Flight Representative
GGR	Government Ground Representative
G-GFR	Ground Government Flight Representative
GOCO	Government-owned/contractor-operated
GOGO	Government-owned/Government-operated
GOP	ground operations procedures
GSA	General Services Administration
GTC	gas turbine compressor

HATR	hazardous air traffic reports
HCA	Head of Contracting Activity
HIPAA	Health Insurance Portability and Accountability Act
IAW	in accordance with
ICAO	International Civil Aviation Organization
IE	instrument flight examiner (Army)
IFR	instrument flight rules
IG	inspector general
IMC	instrument meteorological conditions
IP	instructor pilot
IPI	in-process inspection
IRAPT	Invoicing, Receipt, Acceptance, and Property Transfer
ISO	International Organization for Standardization
LOA	letter of agreement
MACA	mid-air collision avoidance
MAJCOM	Major Command (Air Force)
ME	maintenance evaluator (Army)
MEP	mission essential personnel
MRP	mishap response plan
MSL	mean sea level
MTF	maintenance test flight
MTP	maintenance test pilot (Army)
NAS	National Aerospace Standard
NCO	non-commissioned officer
NDA	non-disclosure agreements
NFPA	National Fire Protection Association
NOTAM	notice to airmen
OEM	original equipment manufacturer
OJT	on-the-job-training
PAO	public aircraft operations
PAS	preaward survey
PCO	procuring contracting officer
PC/PIC	pilot in command
QA	quality assurance
QAS	quality assurance specialist
RM	Risk Management

SCA	supporting contract administration
SCO	senior contracting official
SMS	safety management system
SP	standardization instructor pilot (Army)
SPs	safety procedures
SRM	safety risk management
SUAS	small unmanned aircraft system
SWA	Service waiver authority
TD	technical directive
TDY	temporary duty
TM	technical manual
TO	technical order
TPS	test pilot school
UA	unmanned aircraft
UAS	unmanned aircraft system
USA	U.S. Army
USAF	U.S. Air Force
USMC	U.S. Marine Corps
USN	U.S. Navy
U.S.C.	United States Code
USCG	United States Coast Guard
VFR	visual flight rules

REFERENCES

Aerospace Standard 9100, "Quality Management Systems – Requirements for Aviation, Space, and Defense Organizations," September 20, 2016
Aerospace Standard 9146, "Foreign Object Damage (FOD) Prevention Program – Requirements for Aviation, Space, and Defense Organizations," September 8, 2022
Air Force Instruction 10-220 Air Force Material Command Supplement, "Contractor's Flight and Ground Operations," September 6, 2017, as amended
Air Force Instruction 11-301, Volume 1, "Aircrew Flight Equipment (AFE) Program," October 13, 2022
Air Force Instruction 16-1301, "Survival, Evasion, Resistance, and Escape (SERE) Program," August 3, 2017
Air Force Instruction 48-123, "AFMC Supplement, Medical Examinations and Standards," December 8, 2020
Air Force Manual 11-202, Volume 1, "Aircrew Training," September 26, 2019
Air Force Manual 11-202, Volume 2, "Aircrew Standardization and Evaluation Program," August 30, 2021
Air Force Manual 11-202 Volume 2 (AFMC Supplement), "Aircrew Standardization and Evaluation Program," March 25, 2022
Air Force Manual 11-202, Volume 3, "Flight Operations," January 10, 2022
Air Force Manual 11-2FT, Volume 1, "Flight Test Aircrew Training," March 7, 2019, as amended
Air Force Manual 11-2FT, Volume 2, "Flight Test Aircrew Evaluation," March 21, 2019, as amended
Air Force Manual 11-2FT, Volume 3, "Flight Test Operations Procedures," December 29, 2020
Air Force Manual 11-301 Volume 2, "Management and Configuration Requirements for Aircrew Flight Equipment (AFE)," February 13, 2020
Air Force Manual 11-502, "Small Unmanned Aircraft Systems," July 29, 2019
Air Transport Association Spec 103, "Standard for Jet Fuel Quality Control at Airports," September 2019
Army Regulation 70-62, "Airworthiness of Aircraft Systems," May 11, 2016
Army Regulation 40-501, "Standards of Medical Fitness," June 27, 2019
Army Regulation 95-1, "Flight Regulations," March 22, 2018
Army Regulation 385-10, "The Army Safety Program," February 24, 2017
Army Technical Publication 4-43, "Petroleum Supply Operations," April 18, 2022
Coast Guard Technical Order 1-1B-50, "Aircraft Weight and Balance," August 1, 2015
Code of Federal Regulations (CFR), Title 14, Part 107 Remote Pilot Certificate
Commandant Instruction Manual 3710.1, "Coast Guard Air Operations Manual," March 29, 2021
Commandant Instruction Manual 5100.47, "Safety and Environmental Health Manual," February 17, 2022
Commandant Instruction Manual 13020.1, "Aeronautical Engineering Maintenance Management Manual," May 22 2019
Commander, Naval Air Forces M-3710.7, "Naval Air Training and Operating Procedures Standardization General Flight and Operating Instructions Manual," May 15, 2022
DCMA Manual 8210-2, "Aircraft Operations," July 6, 2022

Defense Federal Acquisition Regulation Supplement, current edition
Department of the Air Force Instruction 21-101, "Aircraft and Equipment Maintenance Management," October 1, 2021
Department of the Air Force Manual 11-401, "Aviation Management," October 22, 2020, as amended
DoD Directive 4500.54, "DoD Foreign Clearance Program," May 31, 2022
DoD Directive 5000.01, "The Defense Acquisition System," September 9, 2020, as amended
DoD Directive 5105.64, "Defense Contract Management Agency (DCMA)," January 10, 2013
DoD Handbook (MIL-HDBK) 274A, "Electrical Grounding for Aircraft Safety," November 14, 2011
DoD Instruction 5025.01, "DoD Issuances Program," August 1, 2016, as amended
DoD Instruction 6055.07, "Mishap Notification, Investigation, Reporting, and Record Keeping," June 6, 2011, as amended
DoD Standard Practice (Mil-Std) 1518, "Storage, Handling, and Servicing of Aviation Fuels, Lubricating Oils and Hydraulic Fluids at Contractor Facilities," January 17, 2014
DoD Standard Practice (Mil-Std) 1548, "Into-Plane Servicing of Fuels at Commercial Airports, November 13, 2014, as amended
Federal Acquisition Regulation, current edition
Federal Aviation Administration Advisory Circular 120-72A, "Maintenance Human Factors Training," April 11, 2017
National Aerospace Standard 3306, "Facility Requirements for Aircraft Operations," May 29, 2020
National Aerospace Standard 412, "Foreign Object Damage (FOD) Prevention Program Guidance Document," April 30, 2018
National Fire Protection Association 33, "Standard for Spray Application Using Flammable or Combustible Materials," 2021
National Fire Protection Association 407, "Standard for Aircraft Fuel Servicing," 2022
National Fire Protection Association 410, "Standard on Aircraft Maintenance," 2020
Naval Air Systems Command Instruction 3960.4C, "Project Test Plan Policy and Guide for Testing Air Vehicles, Air Vehicle Weapons, and Air Vehicle Installed Systems," January 1, 2012
Naval Air Systems Command 00-80T-109, "Aircraft Refueling NATOPS Manual," October 15, 2022
Naval Air Systems Command Technical Order 01-1B-50, "Weight and Balance, "August 1, 2019
Office of the Chief of Naval Operations Instruction 3710.7V, "Naval Air Training and Operating Procedures Standardization Program," November 22, 2016
Office of the Chief of Naval Operations Instruction 8023.24D, "Navy Personnel Conventional Ammunition and Explosives Handling Qualification and Certification Program," June 1, 2021
Technical Manual 55-1500-342-23 (US Army), "Weight and Balance," August 1, 2019
Technical Order 14-1-1, "U.S. Air Force Aircrew Flight Equipment Clothing and Equipment," June 4, 2022
Technical Order 1-1B-50, "Weight and Balance," August 1, 2019
Technical Order 42B-1-1, "Fuels for USAF Aircraft," July 23, 2012
United States Code, Title 5, Section 552a (also known as the "Privacy Act of 1974")
United States Code, Title 10

United States Code, Title 22, Section 2751 (also known as the “Arms Export Control Act”)D
United States Code, Title 49, Section 40102
United States Code, Title 49, Section 40125