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OF THE AIR FORCE**



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***Flying Operations***

**COCKPIT/CREW RESOURCE  
MANAGEMENT PROGRAM**

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This Instruction implements AFPD 11-4, *Aviation Service*, and AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*. It establishes the USAF cockpit/crew resource management program and is applicable to all units assigned to or gained by major commands (MAJCOMs) and applies to commanders, operations supervisors, and aircrews assigned or attached to all flying activities of these commands. This publication applies to the Air Force Reserve (AFR) and the Air National Guard (ANG). This Instruction may be supplemented. Coordinate supplements with AF/A3O-AI prior to publication. Submit suggested improvements to this Instruction on AF Form 847, *Recommendation for Change of Publication*, through training channels, to AF/A3O-AI, [afa3oai.workflow@pentagon.af.mil](mailto:afa3oai.workflow@pentagon.af.mil). Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records

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**(PACAF) AFI 11-290 is supplemented as follows:** This supplement provides additional information for the PACAF Cockpit/Crew Resource Management (CRM) Program. This supplement does not apply to Air National Guard (ANG) and Air Force Reserve Command (AFRC). Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Send comments and suggested improvements to this supplement on AF Form 847, Recommendation for Change of Publication, through training channels, to PACAF A3/6T, [PACAFa3t@us.af.mil](mailto:PACAFa3t@us.af.mil). This publication may be supplemented at any level, but all direct supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The authority to waive wing/unit level requirements in this publication are identified with a Tier (T-0, T-1, T-2, T-3) number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. All compliance items in this supplement are annotated at the “T-3” level only.

## SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Format is revised and procedural guidance is reduced throughout the AFI to place emphasis on MAJCOM/FOA/DRU program oversight. Program goals are updated ([paragraph 1.1](#)), program requirements are modified ([paragraph 2](#)), Steering Committee and Working Group information is updated ([paragraph 6](#) and [paragraph 7](#)), oversight responsibility is specified ([paragraph 8](#)) and waiver guidance is added ([paragraph 9](#)). Updates reflect administrative changes and prescribed format requirements.

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### ***Section A—CRM Program Description***

**1. General.** The Air Force Cockpit/Crew Resource Management (CRM) program provides crewmembers with performance-enhancing knowledge and skills directly applicable to their roles in the aerospace mission of the Air Force. CRM training is a key component of a combined effort to identify and manage threats to safe and effective mission operations. The CRM program begins with crewmembers' initial Air Force flying training and is continuously built upon throughout their operational careers. Training objectives will be tailored to the knowledge and skill level of the aircrew member. As the aircrew member becomes more proficient, CRM training should emphasize performance skills more than academic objectives. Lead commands define "crewmember" in terms of their own operational mission requirements.

**1. (PACAF) General.** At its simplest, CRM is "things aircrews do." Successful CRM training is designed to enable crews to manage resources and tasks and to improve mission performance. Quality skill practice and training leading to maximum operational effectiveness and combat capability is the central theme of PACAF's CRM training program. Five different CRM courses (outlined in paragraph 4 of AFI 11-290, as supplemented) are the keystones of an integrated program that provides operationally oriented repetitive practice in the use of CRM skills. Each course is built around a CRM skill practice opportunity that motivates the combat crewmember to use a core CRM curriculum skill and provides feedback on the use of that skill.

#### **1.1. The CRM program goals are:**

1.1.1. Maximize operational effectiveness and combat capability.

1.1.2. Preserve personnel and material resources.

1.1.3. Ensure the safety of non-combatant civilians.

1.1.4. Facilitate mishap reduction by providing skills, processes, tools and techniques to aircrew members to effectively identify threats and mitigate errors in aviation operations.

#### **1.2. CRM training will be designed and managed to accomplish the following objectives:**

1.2.1. Develop aircrew skills in recognizing and responding to the conditions and/or threats that lead to aircrew error.

1.2.2. Develop aircrew proficiency in CRM skills to anticipate conditions and/or threats and minimize their impact in order to safely and effectively meet mission requirements.

**2. Program Requirements .** MAJCOMs, field operating agencies (FOAs) and HQ USAF direct reporting units (DRUs) are responsible for establishing and managing their respective programs in accordance with this Instruction. CRM programs are mandatory for aircrew members.

2.1. Lead Commands will publish guidance in AFI 11-2 mission design series (MDS) specific vol. 1 and vol. 2 AFIs (**Note:** guidance may also be published in a Ready Aircrew Program (RAP) tasking memo or similar product), regarding CRM requirements, currency, tracking, and evaluation, to include:

**2.1. (PACAF) HQ PACAF Guidance :**

2.1.1. Establishing training frequency, required attendees, and method for tracking crewmember currencies.

**2.1.1. (PACAF) PACAF aircrews, mission crewmembers,** Remotely Piloted Aircraft (RPA) crewmembers and aircrew training contract instructor personnel are required to take CRM continuation training (CT) every 2 years. CT training will be required by the end of the month, 2 years after receiving previous CRM training. Aircrews taking the instructor CRM course will receive credit for CT training requirements. **(T-3).**

2.1.1.1. **(Added-PACAF)** PACAF aircrews are identified as any pilot, navigator, combat system officer, air battle manager, flight surgeon, career enlisted aviators, mission crew officer and enlisted specialist assigned to PACAF and assigned flight duties on a PACAF weapon system. This includes all staff MAJCOM, numbered AF, and wing aircrew members who fly as part of their official duties.

2.1.1.2. **(Added-PACAF)** CRM training will be tracked via the Aviation Resource Management System (ARMS). Aircrew members who do not accomplish CRM training within a 2-year period will be grounded from flying duties until training is accomplished or a waiver is granted for the training. Waivers to CRM training will be at the operations group commander level and only valid for 24 months. **(T-3).**

2.1.1.3. **(Added-PACAF)** Operations group (OG) CRM offices will determine if new aircrew member's previous CRM training fulfills PACAF CRM training requirements. Aircrews must present documentation of completed CRM training (by ARMS for example) to OG CRM Office for approval. Aircrews and crewmembers can substitute CRM training received from other MAJCOMs as meeting their biennial PACAF CRM training requirement.

2.1.1.4. **(Added-PACAF)** Aircrews that receive CRM training from other MAJCOMs (EC-130H and E-4 aircrews for example) during simulator refresher training meet their biennial CRM training requirement. In the event that simulator CRM training is not available, flight deck crew members may attend their respective unit's mission crew CRM class.

2.1.1.5. **(Added-PACAF)** Unit instructors and evaluators must document CRM performance during all simulator, flight training and evaluation missions (i.e. local grade sheets and Form 8s). Any CRM trends that have been identified by units

(either positive or negative) should be documented and reported to PACAF A3/6TC CRM Program Manager to be incorporated into future CRM training. **(T-3)**.

2.1.2. Use of AF Form 4031, *CRM Skills Criteria Training/Evaluation Form*, or MAJCOM/FOA/DRU- approved substitute, to establish the skills training/evaluation criteria.

2.1.3. If using a contract vehicle, provide a uniform CRM program via a contract vehicle that covers all applicable units to include units gained from AFRC or ANG.

2.2. Each MAJCOM, FOA and DRU CRM training program must:

2.2.1. Provide training to develop and improve CRM knowledge and skills based on **paragraph 3** and AF Form 4031. MAJCOM/FOA/DRU- approved substitute may be used in lieu of AF Form 4031.

2.2.2. Be updated annually to incorporate: "real-world" operational experiences, sanitized mishap data, research data, critiques, and flight evaluation trends.

2.2.3. Identify the process for gathering, analyzing and incorporating trend data from MAJCOMs into existing training and evaluation programs.

2.2.4. MAJCOM, FOA and DRU CRM managers will ensure continuity of course content with AETC's introductory courses.

2.2.5. Ensure that data collected and/or generated through CRM and trend gathering processes is not used for monitoring aircrew performance to initiate punitive or adverse action.

2.2.6. Provide proportional funding as necessary to support the lead MAJCOM CRM program.

2.3. CRM skills will:

2.3.1. Be integrated into flight briefings and debriefings.

2.3.2. Be integrated into training syllabi.

2.3.3. Be evaluated during initial qualification and recurring evaluations.

2.3.4. **(Added-PACAF)** PACAF's CRM training program will be data driven, skills-based and operationally integrated to improve the daily mission performance of PACAF combat crewmembers. Data sources should include USAF Safety Center data, local standardization and evaluation reports, mission reports, training summaries and grade sheet analysis. AFSC 43A3 is authorized to perform duties as Program Coordinator (PC) for local CRM if assigned duties by the local OG/CC and will assist the rated PC in fulfilling those CRM training and evaluation requirements per AFI 11-403 PACAF Supplement.

**3. CRM core curricula** . Core curricula will include the following knowledge and skill sets:

3.1. Communication. Includes knowledge of common errors, cultural influences, and barriers (i.e., rank, age, experience, position, etc.). Skills will encompass listening, feedback, precision and efficiency of communication with all members and agencies (i.e., Crewmembers, Wingmen, Weather, ATC, Intelligence, etc.).

3.2. Crew/Flight Coordination. Knowledge and skills required within (internal) and outside the crew/flight members (external) for mission coordination, flight/mission integrity contracts, team-building, leadership, command authority, responsibility, behavioral styles, assertiveness, persistence, conflict resolution, hazardous attitudes, legitimate avenues/methods of dissent, and solution driven statements.

3.3. Mission Analysis. Includes pre-mission analysis and planning, briefing, ongoing mission evaluation, and post mission debrief. Analysis instruction will include specific Threat and Error Management tools and techniques. Debrief instruction will include aircrew responses and outcomes to threats and errors.

3.4. Risk Management (RM)/Decision Making. Includes risk assessment, the risk management processes (Deliberate, Real Time RM)/tools, breakdowns in judgment and flight discipline, problem-solving, evaluation of hazards, and control measures.

3.5. Situational Awareness. Includes knowledge and skill objectives for identifying errors, preventing the loss of situational awareness, recognizing the loss of situational awareness, and techniques for recovering from the loss of situational awareness.

3.6. Task Management. Includes establishing priorities, overload, under-load, complacency, management of automation, available resources, checklist discipline, and standard operating procedures.

**4. CRM Training Phases** . Each phase of training should prepare individuals to apply the knowledge and skills acquired in their specialty and motivate participants for the next phase of training.

**4. (PACAF) CRM Training Phases.** PACAF CRM training curriculum is designed to build upon CRM training learned at the AETC Undergraduate Pilot Training/Undergraduate Navigator Training (UPT/UNT), Undergraduate Air Battle Manager Training (UABMT) and Formal Training Unit (FTU) levels.

4.1. Introductory or Awareness Training. Normally conducted in a formal training environment by AETC. Trainees learn standard CRM terminology and core concepts. Lesson plans will include a description of the building block approach to CRM training the individual will participate in throughout their operational career.

4.2. Formal Training Unit (FTU)/Combat Crew Training School (CCTS) CRM Training. Students learn to apply knowledge and skills related to their assigned aircraft. Academic training is complemented during aircraft/simulator training. Emphasis should be placed on preflight planning, briefing, in-flight utilization, and debrief techniques for CRM. This should include a brief review of CRM core concepts identified in [paragraph 3](#). Mission-Oriented Simulator Training (MOST) sessions or other simulated or actual operational scenarios may be used as an integral part of CRM training. Evaluate students for technical expertise, as well as the skills based on the six core concepts. If aircrew training devices are not available, students should participate in group problem-solving exercises.

4.2.1. **(Added-PACAF)** The purpose of FTU training is to build a solid foundation of CRM principles and set the stage for CT and Web/LAN-based training that will permeate day-to-day operations and flight briefings. The FTU CRM courses will form the bedrock upon which all subsequent MDS CRM training is based and will advance the Air Force

philosophy of career-spanning training in the critical area of Human Factors/CRM skills. All aircrews and crewmembers attending a FTU will take the FTU CRM course in their respective MDS aircraft. This includes students transitioning to dissimilar aircraft. Aircrews cannot substitute CRM training received between dissimilar aircraft (i.e., single vs. multi-crew; heavy vs. fighter aircraft). Aircraft Transition CRM courses should leverage CRM knowledge gained in other aircraft and focus on the unique CRM requirements for the new aircraft. CRM training is to be included in all FTU training syllabi. The 4-hour FTU course can be set up in one of the following ways (as outlined in each MDS syllabi): one 4-hour block; two, 2-hour blocks; or 3 separate blocks of instruction at 2 hours, 1 hour, and 1 hour.

**4.2.2. (Added-PACAF) FTU CRM Training (Basic).** This training is intended for all PACAF aircrew members attending a FTU or initial qualifications training course. The FTU course is designed for the recent graduate of UPT/UNT, Basic Flight Engineer School, UABMT and Enlisted Aircrew Undergraduate Course and is a onetime only training requirement. The six core CRM curriculum skills will be introduced through the use of mission relevant scenarios and interactive group exercises. The training will be designed to convey the learning objectives as flight essential skills that contribute to and enhance mission effectiveness and flight safety. Aircrew members will be taught specific skills to be used during pre-flight planning, briefing, in-flight utilization and debrief techniques. Improved mission effectiveness remains the primary goal.

**4.2.3. (Added-PACAF) FTU CRM Training (Advanced).** This course is designed for the second tour crewmember with previous experience in the assigned MDS aircraft or fighter experienced aircrew transitioning to another fighter aircraft. The courseware acknowledges the aircrew member's experience while refreshing his/her skills in all core CRM curriculum skills. Fighter transition CRM courses should take the current CRM Fighter Continuation training class with additional emphasis on the unique CRM aspects of the new aircraft. For non-fighter weapon systems, second tour aircrews should take CRM Continuation Training versus FTU CRM training.

**4.2.4. (Added-PACAF) Weapon System Trainer (WST) and Aircraft Sorties.** CRM skills should be discussed as part of all training event pre-briefs and debriefs. Positive and negative CRM skill application observations will be used to generate post flight discussion. CRM skills will be debriefed, critiqued and documented on all training aircraft and simulator sorties.

**4.2.5. (Added-PACAF) Flight and Simulator Grade Sheets.** Aircrew flight and simulator grade sheets will contain CRM grading items as specified in [Table 1](#). below. Instructors may use the CRM skill behaviors listed in AF Form 4031 or the examples in [Table 2](#). as a debriefing guide.

**Table 1. (Added-PACAF) Aircrew Grade Sheet Requirements.**

| ITEM | Grade Sheet                      | CRM Grading Items                                                                                         |
|------|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1    | Flight And Simulator             | Mission Analysis, Situational Awareness, Communications, Risk Management/Decision Making, Task Management |
| 2    | Formation or tactical employment | Flight Coordination                                                                                       |
| 3    | Crew Aircraft                    | Crew Coordination                                                                                         |

**Table 2. (Added-PACAF) Instructor Brief/Debrief Guide.**

| ITEM | CRM Skill                         | Positive Factors                                                                                                                                                                                                                                            | Negative Factors                                                               |
|------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 1    | Communication                     | Clear, concise, listens, interprets, efficient, gets or gives constructive feedback.                                                                                                                                                                        | Interrupts, withholds, discounts, ambiguous, mumbles.                          |
| 2    | Crew / Flight Coordination        | Leads, identifies roles and expectations, sets tone, respects, encourages, assertive.                                                                                                                                                                       | Judges, ridicules, overreacts, ignores, imposes, accepts error.                |
| 3    | Mission Analysis                  | Organized, clearly assesses and defines mission, environment, aircraft, and situation; covers contingencies; checks understanding. Provides objective, thorough feedback, non-threatening, recaps key points, solicits inputs, provided corrective actions. | Neglects, rushed, incomplete, blames, vague, ignores.                          |
| 4    | Risk Management / Decision Making | Identifies and assesses problems, explores solutions, makes appropriate decisions, involves and informs flight members/crew.                                                                                                                                | Avoids delays, vacillates, argues, fails to consider consequences of decision. |
| 5    | Situational Awareness             | Anticipates, monitors, prevents loss, recognizes own/other loss, regains.                                                                                                                                                                                   | Disorientated, confused, lost, fixated.                                        |
| 6    | Task Management                   | Prioritizes, assigns tasks, creates time, plans, delegates, checklist discipline, system knowledge.                                                                                                                                                         | Rushed, overloaded, complacent, misprioritizes.                                |

4.3. Mission-Specific Continuation Training. MAJCOMs, FOAs and DRUs are responsible for CRM continuation training. This training will reinforce the aircrew's CRM academic knowledge and refocus on skills to accomplish the mission. It also helps aircrews identify and respond to the conditions and/or threats that lead to error.

**4.3. (PACAF) Continuation Training** . These courses will build on FTU training and will emphasize skills needed for specific weapons systems and mission requirements. The course contains an overview of the six core CRM skills and the associated observable behaviors that apply to the MDS. Following the overview, two of the six core skills will be covered in depth, directly related to the MDS-specific case studies. Skill practice opportunities will include MDS and mission-specific exercises, case studies, group interaction and skill assessment techniques. Realistic exercise and practice scenarios, designed to require specific actions by the student, will be based on the most current incidents and combat or operational case studies available for that MDS. These exercises are used by the student to practice the effective use of CRM skills and by the instructors to validate and assess the crewmember's understanding of the skill.

4.3.1. Emphasize CRM skills in the mission qualification and continuation training programs so they become inseparable parts of operational practices.

4.3.2. Frequency for recurring CRM continuation training is defined in the AFI 11-2 MDS specific volumes 1, a RAP tasking memorandum, or a similar product. Lead commands are responsible for providing guidance to standardize CRM MDS specific training policy and requirements. All aircrew require Mission-Specific Continuation Training. Separating training by crew position should be avoided. However, it is not mandatory to conduct this training with a complete aircrew.

4.3.2.1. **(Added-PACAF)** Additional CRM Training Opportunities. CRM practice opportunities will be provided through Web/LAN-based presentations developed for aircrew member use to avoid skill degradation. Aircrew members can use these presentations during unit training days, safety days or any type of squadron meeting where CRM would be a useful topic of discussion. The Web/LAN training can be conducted individually or in a group setting. Presentations will include all materials required to present the topic of interest. A different CRM skill will be emphasized each quarter. Quarterly training is not mandatory but is highly encouraged to augment the biennial CRM continuation training. Wing level Aerospace and Operational Physiologists (AOPs), Flight Surgeons (FS)/SMEs are encouraged to utilize these presentations during wing/squadron/unit training sessions and during quarterly/annual safety meetings. Additional CRM training is located at [www.cti-crm.com/caf](http://www.cti-crm.com/caf). (T-3).

4.3.2.1.1. **(Added-PACAF)** Unit Quarterly Training. Unit level presentations will be designed for flight or squadron-wide training. This training is intended for use during flight meetings, safety meetings, IP/flight lead/mission commander meetings or any other appropriate unit activity. Every effort should be made to include a CRM topic in conjunction with quarterly wing flight safety meetings in order to minimize redundancy of additional training sessions. Downloaded from the Internet or local base LAN, each module contains approximately 5 minutes of academics and 10 minutes of CRM skills practice using group exercise and/or case study evaluation. Each downloadable file will contain all of the training materials required to conduct the training, including an instructor guide. It will be designed to be compatible with unit audio/visual training devices. Additional CRM training is located at [www.cti-crm.com/caf](http://www.cti-crm.com/caf).

4.3.3. **(Added-PACAF)** AOPs are encouraged to work with local units to further integrate CRM skills into daily operations. Examples of ways that AOPs can help integrate CRM training into daily operations are: attending flight briefings/debriefings; observation of mission planning; review and discussion of mission recording data; and presenting CRM training materials at aircrew meetings, aircrew human performance briefs, safety meetings, Air Force Safety Automated System (AFSAS) analysis, and other squadron functions.

4.4. Flight Instructor Training. All flight and simulator instructors will complete instructor specific CRM training. This training will normally be accomplished as part of instructor upgrade program. Courseware must build upon the previous blocks of training, both to reacquaint candidates with CRM fundamentals and to maintain continuity of terminology and techniques. MAJCOMs, FOAs and DRUs develop courseware related to instructing and evaluating key skills that apply to command and aircraft-specific missions. Personnel may conduct this training at operational units, flying training units, or a combination, as required. Training will include, but is not limited to, proper use of AF Form 4031 (or approved substitute).

4.4. **(PACAF) Flight instructors are key to a successful CRM training program.** CRM Instructor training courses are designed to prepare the instructor to recognize, analyze, and evaluate CRM principles and document CRM performance in the FTU and operational unit. Critical to the success of such a course is the continuous and daily involvement of the instructor/evaluator at the unit level. Instructors and evaluators will be provided with the tools and courseware instruction to allow them to integrate CRM principles into the unit's routine, from briefings to flight, from simulator training to safety meetings. **(T-3).**

4.4.1. CRM instructor or evaluator training will be included into instructor upgrade programs.

4.4.1. **(PACAF)** Flight Instructor Training Objectives. CRM Instructor Training Course will provide proficiency in three specific areas:

4.4.1.1. **(Added-PACAF)** Observing, assessing and documenting CRM skills used by aircrew members in a mission environment.

4.4.1.2. **(Added-PACAF)** Provide specific, meaningful, and standardized feedback to aircrews regarding their CRM skills and overall mission effectiveness.

4.4.1.2.1. **(Added-PACAF)** Web/LAN-based training applications, including the Daily Training Objectives (DTO).

4.4.2. CRM instructors and evaluators must be highly proficient in all CRM skills and be experts in the recognition, observation, and reinforcement of these skills as they are applied by aircrew members in a mission environment.

4.4.2. **(PACAF) Instructor Training Requirements .** All instructors will complete CRM instructor training prior to assuming duties as an instructor. Aircrew members may take Instructor CRM training just prior to formally entering instructor upgrade training. Instructor CRM training is a one-time requirement, exclusive of a particular weapons system and must be included in all instructor upgrade syllabi as a 2 hour block of instruction. Instructors who have previously attended the Instructor CRM course should

attend CT CRM training to meet their every 2 year continuation training requirement. PACAF A3/6TC CRM Program Manager maintains a list of approved CRM instructor/facilitator programs. If contractor training is not available during the period of instructor upgrade, waivers can be requested IAW 2.1.1.2. until the next available training date but no later than one year after upgrade. Aircrews taking the instructor CRM course will receive credit for CT training requirements.

4.4.2.1. **(Added-PACAF)** Stop Gap CRM Training. Unit AOPs may provide CRM stop gap training (CRM continuation training courses only) in lieu of contracted services if the following guidelines have been met:

4.4.2.1.1. **(Added-PACAF)** Contracted services are unavailable in a timely manner necessary to ensure compliance with this supplement.

4.4.2.1.2. **(Added-PACAF)** AOPs will be a certified CRM facilitator IAW AFI 11-290, Cockpit/Crew Resource Management Program, paragraph 4.5., and by attending a certified CRM facilitator's course approved by PACAF A3/6TC CRM Program Manager. AOPs must use the current contractor provided continuation training courseware appropriate for the MDS instructing. The AOP must complete a courseware review and practice-teach with a certified CRM facilitator prior to teaching CRM. AOPs will monitor CRM classes for all assigned MDSs during contractor provided training to better familiarize themselves with current facilitation techniques, case studies, and classroom interaction. If simulator training observation is available and practical, AOP will observe CRM procedures during training. If simulators are geographically separated or unavailable to observe simulator training, AOP personnel will monitor CRM during a local training sortie. Once all requirements are achieved, each AOP will be approved by PACAF A3/6TC CRM Program Manager (or PACAF AOP Program Manager) in writing and this appointment will be maintained in the AOP's instructor folder. PACAF A3/6TC CRM Program Manager (or PACAF AOP Program Manager) will maintain a current list of PACAF AOPs approved to teach.

4.5. Facilitator Training. Formal CRM academic curricula must be delivered by a trained CRM facilitator. Facilitator training will include training in running exercises, structured crew observation, and effective academic feedback.

**5. Supporting Information** . HQ Air Force Safety Center, MAJCOM, FOA, and DRU safety staffs will screen mishap reports for human performance errors. This safety information should be available for use at all phases of CRM training, either as part of simulator scenarios or for CRM case studies. Sanitized "Limited Use" information will be provided to CRM program managers in a timely manner by command/unit safety staff(s) according to AFI 91-204, *Safety and Investigation Reports*.

5.1. **(Added-PACAF)** HQ PACAF SAFETY (PACAF/SEF). HQ PACAF/SEF is the focal point for providing mishap information and Military Flight Operations Quality Assurance (MFOQA) data to CRM contractor personnel for case study and courseware development. PACAF/SEF will work with PACAF A3/6TC CRM Program Manager, the Air Force Safety Center (AFSEC), and CRM contractor personnel in determining case studies to be developed for CRM courses and case studies. Upon request, HQ PACAF/SEF will provide sanitized aircraft mishap information to include USAF produced mishap animations as well as

controlled access to AFSAS for CRM contractor personnel IAW AFI 91-204, *Safety Investigations and Reports*.

### **Section B—Program Management**

**6. The USAF CRM Steering Committee .** The Steering Committee standardizes CRM program requirements and terminology.

6.1. Steering Committee Membership:

6.1.1. AF/A3O-AI, Chair.

6.1.2. AF/A3O-AC

6.1.3. AF/A3O-AM

6.1.4. AF/A3O-AS

**7. USAF CRM Working Group .** The CRM Working Group will consist of members of the Steering Committee, AFSEC/SE representative, plus MAJCOM/FOA/DRU A3 (or equivalent) representatives and additional personnel as designated by the Steering Committee. The working group reviews program execution and policy issues and will meet in conjunction with Aircrew Management Executive Council (AMEC) meetings.

**8. Oversight .** Oversight of Air Force CRM programs will rest within the MAJCOM, FOA and DRU operations directorates. MAJCOM, FOA and DRU safety and surgeon general directorates will act as advisors and respective subject matter experts to the operations directorates for providing input to course content and delivery.

**8. (PACAF) Oversight.** Operational control of PACAF's CRM program will rest in PACAF Aviation Management Branch (PACAF A3/6TC). Command policy and guidance related to CRM content and delivery will rest within HQ PACAF A3/6T.

8.1. Each MAJCOM, FOA and DRU will appoint a CRM program manager within the operations (or equivalent) function. The program manager is responsible for:

8.1. **(PACAF)** CRM Program Manager resides in PACAF A3/6TC, DSN 315-449-1959, comm. 808-449-1959.

8.1.1. Ensuring Lead Command's AFI 11-2 MDS specific vol. 1 and vol. 2 publications (or RAP tasking memo/similar product) provide CRM policy guidance.

8.1.2. Implementing Lead Command CRM policy guidance.

8.1.3. Ensuring each applicable CRM training phase (paragraph 4) is implemented and evaluated.

8.1.4. The forwarding of AF Form 4031 (or approved substitute) trend data to CRM Instructors/Facilitators.

8.1.4. **(PACAF) The forwarding of AF Form 4031** (or approved substitute) trend data (i.e. Stan/Eval trends (Skills criteria), sanitized mishap data, Hazardous Air Traffic Reports (HATR), and Inspector General (IG) reports), and send to CRM instructors and facilitators.

8.1.5. Ensuring a system is in place to collect performance data (i.e. Stan/Eval trends (Skills criteria), sanitized mishap data, Hazardous Air Traffic Reports (HATR), and Inspector General reports), and send to CRM instructors and facilitators.

8.1.6. Evaluating contractor implementation of CRM program objectives. Where discrepancies are identified, initiate corrective actions.

8.1.7. Ensuring Quality Assurance Representatives (QARs) and IGs have current evaluation guidance to evaluate CRM program objectives. Where discrepancies are identified, initiate corrective actions.

8.1.8. Providing feedback to CRM Working Group regarding program status covering: Training Continuum, Standardization, and Research and Development needs.

8.1.9. Interacting with MAJCOM, FOA or DRU CRM advisors (Safety, Aerospace Physiology, etc.) ensuring CRM training is effective and minimizes redundancies with other programs given by Safety, Aerospace Physiology, etc.

8.1.9. **(PACAF)** Specific responsibilities within PACAF are:

8.1.9.1. **(Added-PACAF)** PACAF A3/6TC. PACAF A3/6TC is responsible for managing the CRM training contract to include courseware approval and implementation. PACAF A3/6TC is responsible for overseeing contractor development of CRM program courseware and continuation training programs to meet the requirements of AFI 11-290, AFI 11-2MDS-Specific vol 1 and vol 2 and associated lead MAJCOM supplements. PACAF A3/6TC CRM Program Manager is also the CRM contract Contracting Officer's Representative (COR).

8.1.9.2. **(Added-PACAF)** HQ PACAF A3/6 Functional Managers. HQ PACAF/A3/6 functional managers are responsible for assisting in CRM courseware review as required. HQ PACAF A3/6TC and/or AOP Program Manager may be required to provide points of contact responsible for interfacing with the PACAF program manager on matters related to command policy and guidance.

8.1.9.3. **(Added-PACAF)** Operations Groups. Operations group commanders (OG/CC) will appoint an office within the group responsible for their units' CRM program. This office must have experienced aircrew member(s) in a primary weapon system of their wing/unit and attended an approved PACAF CRM Instructor/Facilitator course. **(T-3)**.

8.1.9.4. **(Added-PACAF)** CRM Class Size. CRM CT class sizes will have at least 4 aircrew members but no more than 20. CRM CT classes that do not have the minimum required number of participants may be cancelled. Unit schedulers must notify the contractor of any scheduling changes at least 48 hours in advance. CRM FTU and instructor class sizes should normally be at least 4 aircrew members but no more than 20. Exceptions will be made for smaller FTU and instructor classes.

8.2. Command Steering Committees. MAJCOMs, FOAs and DRUs may establish command steering committees to identify the most effective methods for delivering and administering CRM programs.

8.2. **(PACAF) AF Command Steering Committee**, chaired by HQ PACAF A3/6TC CRM Program Manager (PACAF A3/6TC), will meet as required.

8.2.1. **(Added-PACAF)** Mandatory members are representatives from HQ PACAF AOP Program Manager, A3/6TV, 15 WG Aerospace & Operational Physiologist, and PACAF SEF.

8.2.2. **(Added-PACAF)** Specific responsibilities of the PACAF CRM Steering Committee include:

8.2.2.1. **(Added-PACAF)** Review CRM program training and critiques (OPR: PACAF A3/6TC).

8.2.2.2. **(Added-PACAF)** Review syllabi for CRM compliance (OPR: PACAF A3/6TC).

8.2.2.3. **(Added-PACAF)** Review mishap report information of significance for CRM case study development (OPR: HQ PACAF/SEF).

8.2.2.4. **(Added-PACAF)** Review Stan/Eval CRM trends (OPR: HQ PACAF/A3/6TV).

8.2.2.5. **(Added-PACAF)** Recommend improvements for CRM program (OPR: All).

## 9. **Waivers .**

9.1. AF/A3O is the waiver authority for provisions of this Instruction. Request waivers through applicable channels to MAJCOM/A3 (or equivalent). As applicable, MAJCOM/A3s will forward requests to AF/A3O, with an info copy to AF/A3O-AI.

9.2. Waiver authority for supplemental guidance will be as specified in the supplement and approved through higher level coordination authority.

9.3. Waiver authority for MAJCOM/DRU/FOA CRM guidance is the MAJCOM/FOA/DRU A3 or equivalent.

BURTON M. FIELD, Lt Gen, USAF  
DCS, Operations, Plans and Requirements

**(PACAF)**

DIRK D. SMITH, Brig Gen, USAF  
Director of Air and Cyber Operations

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

**(Added-PACAF)** AFMAN 33-363, *Management of Records*, 1 Mar 08

**(Added-PACAF)** DoD 5400.7-R\_AF SUP 1\_PACAF SUP 1, *DoD Freedom of Information Act Program*, 11 Feb 03

AFPD 11-4, *Aviation Service*, 1 Sep 2004

**(Added-PACAF)** AFI 91-204, *Safety Investigations and Reports*, 12 February 14

AFI 11-200, *Aircrew Training, Standardization/Evaluation, and General Operations Structure*, 19 Jan 2012

AFI 11-403, *Air Force Aerospace Physiological Training Program*, 20 Feb 2001

AFI 91-204, *Safety Investigations and Reports*, 24 Sep 2008

***Prescribed Form***

AF Form 4031, *CRM Skills Criteria Training/Evaluation Form* (MAJCOM/FOA/DRU-approved substitute may be used in lieu of AF Form 4031.)

***Adopted Form***

AF Form 847, *Recommendation for Change of Publication*.

**(Added-PACAF)** AF Form 4031, *CRM Skills Criteria Training/Evaluation*

***Abbreviations and Acronyms***

AMEC—Aircrew Management Executive Council

**(Added-PACAF)** AFSEC—Air Force Safety Center

**(Added-PACAF)** AFSAS—Air Force Safety Automated System

**(Added-PACAF)** AOP—Aerospace and Operational Physiologist

**(Added-PACAF)** AOPT—Aerospace and Operational Physiology Team

**(Added-PACAF)** ARMS—Aviation Resource Management System

CCTS—Combat Crew Training School

**(Added-PACAF)** COR—Contracting Officer's Representative

CRM—Cockpit/Crew Resource Management

**(Added-PACAF)** CT—Continuation Training

DRU—Direct Reporting Unit

**(Added-PACAF)** DTO—Daily Training Objective

FOA—Field Operating Agency

**(Added-PACAF) FTU**—Formal Training Unit

**HATR**—Hazardous Air Traffic Report

**(Added-PACAF) LAN**—Local Area Network

**MAJCOM**—Major Command

**MDS**—Mission Design Series

**MOST**—Mission-Oriented Simulator Training

**(Added-PACAF) OG/CC**—Operations Group Commander

**RAP**—Ready Aircrew Program

**QAR**—Quality Assurance Representative

**RM**—Risk Management

**(Added-PACAF) RPA**—Remotely Piloted Aircraft

**SA**—Situational Awareness

**(Added-PACAF) SEB**—Standardization and Evaluation Board

**(Added-PACAF) STAN/EVAL**—Standardization and Evaluation

**TEM**—Threat and Error Management

**(Added-PACAF) UPT/UNT**—Undergraduate Pilot Training/Undergraduate Navigator Training

**(Added-PACAF) WST**—Weapon System Trainer

### ***Terms***

**Cockpit/Crew Resource Management (CRM)**—The effective use of all available resources-- people, weapon systems, facilities, and equipment, and environment -- by individuals or crews to safely and efficiently accomplish an assigned mission or task. The term "CRM" will be used to refer to the training program, objectives, and key skills directed to this end. MAJCOMs may implement their programs as either "cockpit" or "crew" resource management based on their respective missions.

**Communication**—The act of sharing information with others to cause some kind of action: to direct, to inform, to question, or to persuade.

**Coordination**—As used in this Instruction the act of working with all the members of the crew/flight to accomplish the tasks of the mission.

**Crew**—As used in this Instruction, any collection of Air Force personnel who routinely work together to accomplish an Air Force mission. For example, an air task order-designated team of fighter pilots and airborne battle managers prosecuting an interdiction mission uses "crew" skills to maximize its effectiveness.

**Decision Making**—The ability to choose a course of action using logical and sound judgment based on available information.

**Errors**—Actions or inactions that lead to deviations from organizational or flight crew intentions or expectations. Unmanaged and/or mismanaged errors can lead to undesired aircraft states. Errors in the operational context tend to reduce the margins of safety and increase the probability of adverse events.

**Flight Discipline**—The judgment and actions exercised by AF personnel to adhere to the spirit, intent, and written word of governing guidelines in the presence of temptation to do otherwise, while executing the Air Force flying mission. It also includes the prioritization of tasks based on crew responsibilities to ensure safe mission accomplishment while demonstrating the highest degree of integrity in the performance of flight duties.

**Flight Integrity**—Utilizing all the members of a flying package to accomplish the mission at hand.

**Mission Debrief**—Reviewing and discussing mission accomplishment looking at what was achieved, what barriers were encountered and how the mission could be accomplished better next time.

**Mission-Oriented Simulator Training (MOST)**—Training presented as a part of a CRM program in a realistic, operationally-based simulator environment in real time.

**Mission Planning**—Taking all of the information for a mission and developing short term, long term, and contingency plans to coordinate, allocate, and monitor crew/flight and aircraft resources. Effective planning leads to flight conduct that removes uncertainty, increases mission effectiveness and enhances safety.

**Risk Management**—The systematic process of identifying hazards, assessing risk, making control decisions, implementing control decisions and supervising/reviewing the activity for effectiveness for both on- and off-duty missions/activities.

**Situational Awareness (SA)**—In flying, this refers to a aircrew member's continuous perception of self and aircraft in relation to the dynamic environment of flight, threats, and mission, and the ability to forecast, then execute, tasks based upon that perception.

**Skills Criteria**—Defined skills used as the basis for operational training and evaluation. The characteristics of the skill are that they are easily identifiable and offer consistency in grading evaluation.

**Task Management**—The ability to alter a course of action based on new information, maintain constructive behavior under pressure, and adapt to internal and external environment changes.

**Threat**—An event or error that occurs outside the influence of the aircrew (i.e., it was not caused by the crew), increases the operational complexity of a flight, and requires crew attention and management if safety margins are to be maintained.

**Threat and Error Management**—Crews and flight members proactively using a combination of CRM skills and automation to address internal and external threats to avoid, trap or mitigate their impacts on mission safety and effectiveness.