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Test and Evaluation

**AERONAUTICAL OPERATIONS
AND TESTING IN THE WCOOA**



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This instruction implements AFI 99-103, *Capabilities Based Test and Evaluation*, and defines the general boundaries of the West Coast Offshore Operating Area (WCOOA) and the resources available for aeronautical operations and testing. It establishes the policies, responsibilities, and procedures for supporting operations and testing. The provisions of this instruction apply to 30th Space Wing (30 SW) subordinate activities and special program offices supporting aeronautical operations and testing in the WCOOA. Refer recommended changes and questions about this supplement to 2 ROPS/DON, 1602 California Blvd, Suite 146 VAFB CA 93437-5233 using AF IMT 847, **Recommendation for Change of Publications**. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 37-123 (will convert to AFMAN 33-363), *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://afirms.amc.af.mil/>.

SUMMARY OF CHANGES

This revision incorporates the following changes: Throughout the document, 30 RANS has been changed to 2 ROPS; "Flight Safety Analyst (30 SW/SEY)" has been changed to "30th Space Wing Launch Safety (30 SW/SEL)." Airspace and Offshore Management Flight (2 ROPS/DON) has been added (paragraph 1.1.); "Area Control Center" has been changed to "ACC" (paragraph 1.2.); "Aeronautical Operations Control Officer" has been changed to "AOCO" (paragraph 1.3.); "the" has been removed (paragraph 1.4.1.); "according to this instruction" has been removed (paragraph 1.5.1.); "system" has been changed to "system's" (paragraph 1.5.2.); "Range Tasking Office (RTO)" has been changed to "2 ROPS Range Scheduling Office (2 ROPS/DOS)" (paragraph 1.6.); "WR" has been changed to "30 SW" and "DoD-directed equipment" has been added (paragraph 2.); "2 ROPS" has been added (paragraph 3.1.); "Flight Safety Analysis" has been removed (paragraph 3.1.3.); "Range Tasking Office (RTO)" has been changed to "2 ROPS/DOS" (paragraph 3.2.); removed paragraph (paragraph 3.2.4.); "2 ROPS" has been added (paragraph 3.3.); "Range Operations Maintenance Support Services and Contract (ROMSSC)" has been changed to "range support contractor" (paragraph 3.3.4.); "Flight Safety Analyst" has been removed (paragraph 3.4.); "system" has been changed to "system's;" (paragraph 3.4.2.); "the first WR mission" has

been changed to “30 SW mission;” a comma has been added after “commence” (paragraph 3.4.4.); Approval Authority has been updated; Department of Defense (DoD) Directive 3200.11, *Major Range and Test Facility Base Summary of Capabilities*, has been replaced with AFI 99-103, *Capabilities Based Test and Evaluation* in **Attachment 1**; format has been changed to include bolding of titles in the reference section; ACC has been added; “WR” has been changed to “30 SW;” “Aeronautical Operations Control Officer” has been added; “West Coast Offshore Operating Area” has been added; WCOOA Handbook has been added; “states” has been changed to “identifies **A3.1.**,” “unmanned remotely piloted vehicle (RPV)” has been changed to “Unmanned Aerial System (UAS)”**A3.11.**. A bar (|) indicates a revision from the previous edition.

1. Responsibilities:

1.1. The 2d Range Operations Squadron (2 ROPS) Airspace and Offshore Management Flight (2 ROPS/DON) will:

1.1.1. Optimize range support to meet aeronautical test and operational requirements in an environment that ensures flight safety for all participating and nonparticipating aircraft. This includes the operational planning, scheduling, and control for all test and support aircraft operating within the defined limits of the WCOOA.

1.1.2. Manage the Area Control Center (ACC) for support of aeronautical operations and testing in the WCOOA.

1.1.3. Request Aeronautical Operations Control Officer (AOCO) to monitor ACC personnel during aeronautical operations and testing.

1.2. The ACC will provide radar services (vectors and surveillance), flight following, Federal Aviation Administration (FAA) and Air Traffic Control (ATC) flight plan coordination, radar handoff, and related services for mission and participating aircraft.

1.3. The AOCO will monitor ACC personnel and manage range assets during aircraft testing operations.

1.4. Program Support Manager (PSM) will:

1.4.1. Act as an interface between range user or test agency and the 2 ROPS. PSM will be responsible for program support planning and documentation necessary to conduct operations.

1.4.2. Monitor the operation and provide information to the AOCO, if needed, for real-time decisions.

1.5. 30th Space Wing Launch Safety (30 SW/SEL) will:

1.5.1. Provide operational safety analysis.

1.5.2. Evaluate safety approval on missions involving supersonic flights and the discharge of any weapon system's ordnance.

1.6. 2 ROPS Range Scheduling Office (2 ROPS/DOS) will schedule all activities which require Western Range (WR) resources and coordinate scheduling activities of support ranges.

2. 30 SW Support Policy. 30 SW is dedicated to the support of all DoD-directed equipment and weapon system testing and operation. This DoD directed equipment includes newly developed aircraft and aeronautical systems requiring the specialized resources of the WCOOA. When designated as lead range, 30 SW support will include: planning, analysis and development of flight safety criteria, scheduling of facilities and airspace, and real-time operational control of aircraft. When operating as a support range for operations in the WCOOA, 30 SW will ensure the provisions of this instruction are fulfilled.

3. Procedures for WCOOA Test:

3.1. 2 ROPS Program Support Manager (PSM) will:

3.1.1. Ensure proper conceptual planning and organization of support requirements.

3.1.2. Coordinate with range user to determine requirements.

3.1.3. Obtain pre-operation safety approval from 30 SW/SEL for each mission involving supersonic flight or the discharge of any weapon system's ordnance, whether live or inert.

3.1.4. Provide necessary documents defining safety and support requirements to the users, support aircraft agencies, and support agencies. This includes operational directives, vehicle-peculiar supplements, operational requirements extracts, and special instructions (as required).

3.2. 2 ROPS/DOS will:

3.2.1. Respond to user requests for operation schedules.

3.2.2. Schedule required airspace in accordance with mission planning requirements.

3.2.3. Interface directly with the scheduling functions of other ranges as required.

3.3. 2 ROPS Aeronautical Operations Control Officer (AOCO) will:

3.3.1. Manage aircraft and aeronautical systems tests in real-time.

3.3.2. Manage all facets of support for test operations.

3.3.3. Approve configuration and support changes.

3.3.4. Ensure that range support contractor complies with the Statement of Work.

3.4. 30 SW/SEL will:

3.4.1. Provide operational safety analysis, as required ([Attachment 3](#)).

3.4.2. Evaluate requests for safety approval on all missions involving supersonic flight or the discharge of any weapon system's ordnance (live or inert).

3.4.3. Evaluate the need for changes in the established flight safety criteria on a case-by-case basis.

3.4.4. Provide the results of the above items to the appropriate PSM in sufficient time for 30 SW mission support to commence, as planned.

4. Adopted Forms:

4.1. AF IMT 847, **Recommendation for Change of Publications.**

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Commander

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

AFI 99-103, *Capabilities Based Test and Evaluation*, 6 August 2004.

DoD Flight Information Publication, “*Area Planning, Special Use Airspace, North and South America.*”

Federal Aviation Administration Handbook (FAAH) 7610.4, *Special Military Operations.*

Range Users Handbook.

Memorandum of Understanding concerning the WCOOA.

WCOOA Handbook

Terms

Area Control Center (ACC)—The WR Military Radar Unit (MRU) which controls mission aircraft in the WCOOA, monitors non-mission aircraft, and is certified by both 30 SW and the FAA. It is manned by certified contractor personnel.

Aeronautical Operations Control Officer (AOCO)—The real-time interface between the range user and Range Scheduling Office so that optimum support is provided.

Test Agency—An agency which has established a requirement for aeronautical operations in the WCOOA.

Real-time—The relatively small amount of time spent during the actual operation. For 30 SW aeronautical operations real-time commences with the launching of the range user’s aircraft and terminates when the aircraft departs 30 SW control.

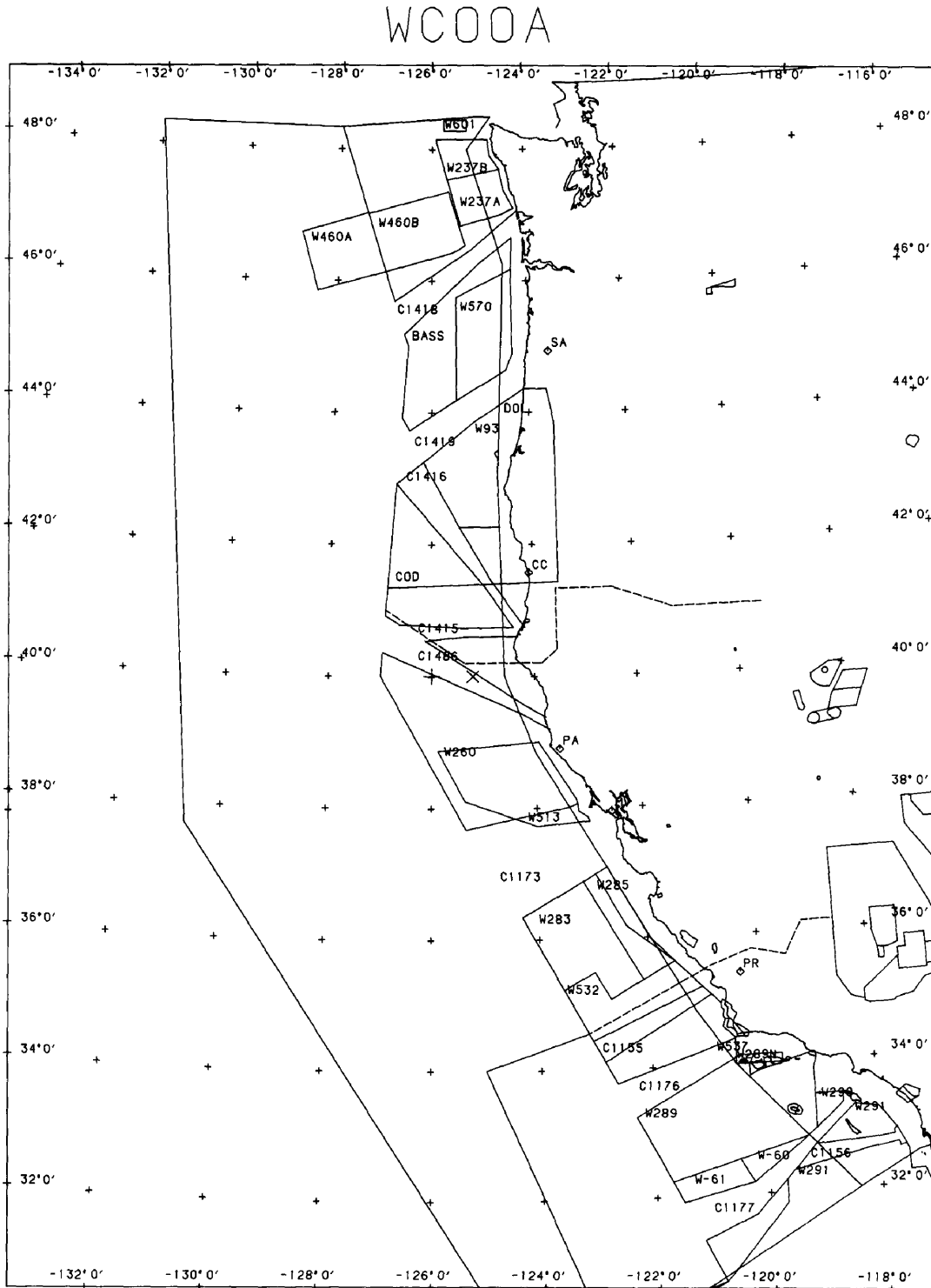
Support Aircraft—Any aeronautical vehicle, perhaps mission essential, which is not itself being evaluated. Examples of support aircraft include: chase, tankers, airborne sensors, photographic support, and communications relay aircraft.

West Coast Offshore Operating Area (WCOOA)—The WCOOA is generally that airspace west of the coastline extending seaward about 200 nautical miles (NM) to the extent of range instrumentation coverage ([Attachment 2](#)). The southern and northern extremities vary with program requirement, but generally extend from the latitude of the Canadian border to the latitude of the Mexican border. Most aircraft test flights are conducted in a 30 NM wide corridor immediately west of and parallel to the Air Defense Identification Zone (ADIZ) line. This 30 NM-wide corridor generally provides optimum instrumentation from the shore-based radar, telemetry, and communications sites. Flight operations may be scheduled outside of this 30 NM corridor if required by special flight profiles. The WCOOA is entirely over water and does not encompass any island masses, although generally contained with Warning Areas, flight profiles cross open airspace and FAA control area extensions to the composite oceanic route structure.

Attachment 2

WCOOA RADAR COVERAGE AND AIRSPACE

Figure A2.1.



Attachment 3**AIRSPACE UTILIZATION SAFETY CRITERIA**

A3.1. The safety criteria developed for use in the WCOOA are the result of requirements associated with specific programs. This attachment identifies general safety criteria established for previous programs and serves as a guide to prospective range users. It describes the nature of the safety criteria constraints that may be encountered. Additional specific safety criteria for each mission will be contained in the safety approval letter.

A3.2. Flights involving radar controlled intercepts or simulated attacks will not close to less than 3 nautical miles (NM) relative range unless the pilot reports visual reference to the target or vertical separation is assured. Actual closure range should be no less than mission requirements and never less than safe operating practices would deem appropriate.

A3.3. Simulated attacks on manned aircraft or surface units with other than captive ordnance are not permitted. All weapon systems will be “test-fired” in a safe area to ensure they are not charged with live ammunition prior to simulated attacks on manned targets.

A3.4. Unless the test aircraft’s agency or requirements dictate otherwise, all “head-on” intercepts will break to the right (starboard) no later than minimum weapon release range or 5 NM, whichever is greater. Tests involving “overhead” intercepts must include specific procedures to ensure that the aircraft maneuver on diverging courses.

A3.5. The safety weapon discharge at supersonic speeds must be reasonably substantiated by weapon system development tests or laboratory verification tests.

A3.6. The operation of all weather systems through clouds, undercast or overcast, rain or fog requires a plan for total surveillance of the associated ground and air environment to meet the desired level of mission safety.

A3.7. Aerial and surface targets will be positioned to avoid FAA control area extensions and associated intersections.

A3.8. Air carrier, general aviation, and transient military aircraft will not be used as “targets of opportunity” for simulated attacks.

A3.9. Itinerant surface craft will not be used as “targets of opportunity” for simulated attacks.

A3.10. Upon completion of live firing operations, and prior to departing the firing area, the pilot will verify and report “no hung ordnance, guns safe, and armament switches off” as appropriate.

A3.11. Mission aircraft will not be vectored or cleared to fly beneath a drone or Unmanned Aerial System (UAS).

A3.12. Active firing areas may be overflowed if a minimum of 5,000 feet clearance over the maximum ordinate of the weapons system is obtained.

A3.13. The hazard envelope for aircraft weapons systems test must clear land areas by a minimum of 5 NM. The hazard envelope should also be positioned clear of air corridors and shipping lanes.

A3.14. All supersonic runs should be away from or parallel to the coast. Under no conditions, should a supersonic run be towards land.