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**BY ORDER OF THE COMMANDER  
45TH SPACE WING**

**45TH SPACE WING INSTRUCTION 13-201**

**28 MAY 2014**



***Nuclear, Space, Missile, Command and Control***

***EASTERN RANGE AIRSPACE***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: 1 ROPS/DOUS

Certified by: 45 OG/CC  
(Col Douglas A. Schiess)

Pages: 20

Supersedes: 45 SWI 13-201,  
12 April 2012

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This instruction implements AFD 13-2, *Air Traffic Control, Airspace, Airfield and Range Management*. It provides guidance and procedures for the safe operation of all airspace operations supporting launch and other scheduled operations on the Eastern Range (ER). It applies to all participating 45 SW units, organizations providing support aircraft, ER agencies and users. A coordinated effort is required by range and flight personnel, range users and participating staff agencies to ensure safety of operations, mission accomplishment, conservation of resources, and to prevent violations of diplomatic agreements. Aircraft providing support will operate IAW pertinent technical orders, parent directives and the provisions of this instruction. All 45 SW staff support agencies will provide any required assistance to ensure safe aircraft operations and will fulfill the provisions of this instruction and the tasking set forth in applicable Operations Directives (OD). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Requests for waivers must be submitted to the OPR listed above for consideration and approval. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management Systems (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

**SUMMARY OF CHANGES**

This document has been revised to show changes in Military Radar Unit responsible organization due to contact descope. It clarifies Cape Control MRU duties and responsibilities, updates office symbols and publication references, and corrects definitions and acronyms while consolidating unwritten local guidance into one document. There are also minor editorial changes throughout the document.

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**1. General.**

1.1. The ER is responsible for the authorization, scheduling, control and safety of all aircraft operations on the ER and within ER Special Use Airspace (SUA). The ER exercises control through the 1st Range Operations Squadron Commander (1 ROPS/CC) by authority of the Commander, 45th Space Wing (45 SW/CC). The 45 SW is the using agency for the airspace defined herein.

1.2. Restricted and Warning Areas, as defined in DoD Flight Information Publications, are operated as outlined in that publication. When these areas are open, Air Traffic Control (ATC) is authorized to approve Instrument Flight Rules (IFR) flights without prior approval from the ER. These and other areas used for special activities and mission operations are specified in the scheduled Operations Directive (OD). Special ER areas and impact areas used during launch operations are determined and requested individually for each mission.

1.3. Range Surveillance is accomplished IAW the scheduled OD, special support instructions or remarks in the published operations schedule.

1.4. Control of mission support aircraft by 45 SW agencies is terminated after completion of all mission requirements and release of the support aircraft.

**2. Supporting Aircraft/Aircrew Operations.**

2.1. Aircraft/Aircrews supporting Launch Operations will:

- 2.1.1. Attend the mission aircrew briefing to review mission support procedures, positions, times, call signs, assigned MODE-3 codes, operating frequencies, weather forecast and special instructions.
  - 2.1.2. Review all Notices to Airmen (NOTAMs).
  - 2.1.3. Prior to entering Restricted Airspace/ER SUA, contact CAPE CONTROL on 133.8 / 264.8 and advise of intentions.
  - 2.1.4. Squawk assigned Mode-3 code when operating in ER assigned airspace.
  - 2.1.5. Provide CAPE CONTROL with departure time, remaining fuel on board (in hours), number of persons on board and aircraft tail number.
  - 2.1.6. Monitor assigned frequencies and maintain radio contact with CAPE CONTROL while operating in ER assigned airspace.
  - 2.1.7. Report any unidentified aircraft within ER assigned airspace to CAPE CONTROL.
  - 2.1.8. Report Return to Base (RTB) at mission completion to CAPE CONTROL.
- 2.2. Aircraft/Aircrew supporting Daily Operations will:
- 2.2.1. Coordinate approval and receive Prior Permission Required (PPR) with 1 ROPS/DOUS for operations in ER SUA.
  - 2.2.2. Contact CAPE ADVISORY prior to entering ER SUA.
  - 2.2.3. Maintain radio contact with CAPE ADVISORY while operating in ER SUA.
  - 2.2.4. Report Return to Base (RTB) at mission completion to CAPE ADVISORY.
  - 2.2.5. When Cape Advisory is not operational aircraft shall contact Orlando Approach for entry into and departure from Eastern Range Restricted Areas. Orlando is authorized to monitor aircraft in Eastern Range Restricted Areas that have been prior coordinated and issued a PPR as well as emergency aircraft missions such as Police and Life support flights.

### **3. General Responsibilities.**

- 3.1. The 1st Range Operations Squadron (1 ROPS):
  - 3.1.1. The 1ROPS Commander: The 1 ROPS/CC has overall responsibility for processing, coordinating and approving requests for operations, scheduling and control of all aircraft operating on the ER, as well as monitoring all activities within the scope of this instruction to ensure compliance with its provisions.
  - 3.1.2. The 1 ROPS Operations Officer (1 ROPS/DO): The 1 ROPS/DO is responsible for processing, coordinating, and approving requests for operations involving aircraft on the ER.
  - 3.1.3. Range Scheduling (1 ROPS/DOUS):
    - 3.1.3.1. Publishes the ER 90-Day Forecast Schedule and provides adequate notification of any changes to affected agencies.
    - 3.1.3.2. Sends Altitude Reservation (ALTRV) Approval Request (APREQ) for Launch Hazard Areas to FAA Central Altitude Reservation Facility (CARF).

3.1.3.3. Sends NOTAM APREQ to FAA Miami Air Route Traffic Control Center (ARTCC), Military Operations Specialist (MOS) and other agencies as appropriate.

3.1.3.4. Sends Notice to Mariner (NOTMAR) APREQ to National Geospatial Agency (NGA) and other agencies as appropriate.

3.1.4. Program Support Manager (PSM):

3.1.4.1. Performs as the coordinating function that identifies all aeronautical requirements requiring ER support.

3.1.4.2. Reviews the Program Requirements Document (PRD), Operations Requirement (OR), Schedule Request and Operations Directive (OD) for aircraft requirements.

3.1.4.3. Briefs range users on the requirements of this instruction and Intended Support Plans (IAW EWR 127-1, Chapter 2, paragraph 2.4.2 or AFSPCMAN 91-710, Vol 4, *Airborne Flight Safety System Design, Test, and Documentation Requirements*, paragraph 2.3) when they have requested aircraft support or are conducting aircraft operations.

3.1.4.4. Will monitor Eastern Range Restricted Area airspace and provide traffic advisories during non-launch operation periods using call sign CAPE ADVISORY.

3.1.5. Surveillance Control Officer (SCO):

3.1.5.1. Performs launch area surveillance ensuring hazard areas are clear of unauthorized boats, ships and aircraft prior to giving the Launch Area Surveillance "Go/No-Go" determination to the Mission Flight Control Officer (MFCO) based on current hit-probability criteria per AFSPCMAN 91-710, Volume 2, *Flight Safety Requirements*, for ships/boats and for aircraft.

3.1.5.2. Conducts aircrew briefings in support of launch and aerospace operations as required.

3.1.5.3. Directs the ACO and SSO to have the Range Safety surveillance aircraft leave their Mission Support Position (MSP) to re-scan the launch danger zone during countdown holds as required.

3.1.5.4. Authorizes alternate MSPs for support aircraft with assistance from the Surveillance Risk Analyst (SRA) as required.

3.1.5.5. Directs the ACO and MRU to release support aircraft and SUA IAW 45 SW/SEL Hazardous Area letter or when authorized by the MFCO.

3.1.5.6. Directs the ACO and MRU to issue breakaway instructions to supporting aircraft when directed by the MFCO.

3.1.6. Aerospace Control Officer (ACO):

3.1.6.1. ACO Call sign is CAPE LEADER.

3.1.6.2. Focal point for the coordination of all aircraft support requirements documented in the PRD, OR and OD. The ACO will review these documents for aircraft requirements.

3.1.6.3. Schedules and conducts aircrew briefings in support of launch and aerospace operations as required.

3.1.6.4. Monitors SUA, notifies SCO of any violations of the airspace and/or the aircraft hit-probability contour and coordinates with MRU Controller to ensure that intruder aircraft departs ER airspace and the aircraft flight path is tracked and reported to FAA.

3.1.6.5. Monitors support aircraft status including:

3.1.6.5.1. Mode-3 codes, aircraft track status and mission frequencies.

3.1.6.5.2. Coordinating support aircraft actions with other positions and agencies and reporting status to the SCO.

3.1.6.5.3. Ensuring all support aircraft are clear of the support aircraft hit-probability contour and are at, or will be at, their assigned MSP prior to T-0.

3.1.6.5.4. Coordinates any requests for, or assignment of, alternate MSP(s) with the SCO. Unless previously evaluated, SEL must assess risks to support aircraft at alternate MSP(s) prior to SCO approval.

3.1.6.6. Performs contingency notifications to the MRU Controller and the support aircraft to include severe weather, holds/hold extensions, countdown recycles, new T-0s, hangfire/misfire events and anomalous vehicle flight. Coordinates or relays notifications to support aircraft through other support positions as required.

3.1.6.7. Performs terminal countdown notifications to the support aircraft.

3.1.6.8. Performs countdown status, contingency, and mission completion notifications to Patrick Tower to de-conflict aircraft operations and launch vehicle tracking operations at PAFB.

3.1.6.9. Verifies with the MRU Controller that ATC contingency notifications with Miami ARTCC are made.

3.1.6.10. Verifies balloon release notifications to support aircraft are accomplished.

3.1.6.11. Upon authorization by the SCO, the ACO directs the MRU Controller to release airspace and support aircraft after a launch or scrub. Airspace will normally be released IAW instruction provided in the 45 SW/SELR Hazardous Areas Letter for each launch. Notification of launch time, if releasing airspace, should be provided ASAP. However, if not releasing airspace, notification should be made within four (4) minutes of launch with the reason for delay. Airspace may be held longer if necessary to safe the missile.

3.1.6.12. When directed by the SCO, the ACO directs the MRU Controller to issue breakaway instructions to support aircraft.

3.1.7. Sea Surveillance Officer (SSO):

3.1.7.1. SSO Call sign is VARIETY ONE.

3.1.7.2. Provides supporting aircraft units with the sea surveillance requirements for the launch danger zone.

3.1.7.3. Monitors and controls movement and positions of Range Safety surveillance aircraft.

3.1.7.4. Relays contingency countdown notifications to Range Safety surveillance aircraft for the ACO as required.

### 3.2. Military Radar Unit (MRU) Call Sign, CAPE CONTROL.

3.2.1. MRU Shall;

3.2.2. Provide command and control instructions and monitor mission support aircraft during launch operations to ensure the safe, expeditious and timely movement of participating aircraft.

3.2.3. Assist participating aircraft in avoiding observed aircraft by issuance of traffic advisories and/or control instructions and altitude assignments.

3.2.4. Coordinate aircraft movement with SCO/ACO/SSO, as required.

3.2.5. Inform ACO when support aircraft reach assigned Mission Support Point (MSP).

3.2.6. Coordinate aircraft movement with Air Traffic Control, as required.

3.2.7. Make balloon launch notifications.

3.2.8. Ensure MRU position is operational when airspace activation for launch begins; normally three (3) hours prior to launch (T-180).

3.2.9. Notify Miami ARTCC when ER launch operations have been completed or cancelled and airspace can be returned to Miami ARTCC IAW the 45 SW/SEL Hazardous Areas Letter.

3.2.10. Attend launch aircrew briefings.

### 3.3. MRU Training and Evaluation

3.3.1. MRU training will be conducted by 1 ROPS/DOUS, 45 Space Wing Airspace Manager.

3.3.2. MRU training materials are maintained by 1 ROPS/DOUS, 45 Space Wing Airspace Manager.

3.3.3. MRU evaluations will be conducted by 1 ROPS/DOUS, 45 Space Wing Airspace Manager.

3.3.4. MRU evaluations will be maintained by 1 ROPS/DOUS, 45 Space Wing Airspace Manager.

### 3.4. Miami ARTCC (Miami ARTCC has agreed to the following IAW 45 SW/Miami Letter of Agreement):

3.4.1. Miami ARTCC MOS will NOTAM airspace, as requested by 1 ROPS/DOUS, for ER launch operations. NOTAM notification includes, but is not limited to, Boston ARTCC, New York ARTCC, Washington ARTCC, Jacksonville ARTCC, San Juan CERAP, NASSAU and other agencies and countries affected by ER airspace closures.

3.4.2. Permits normal flow of air traffic within the Warning Areas for flights that will clear the area at least 5 minutes before closure as determined by the latest count

forwarded by the ER. Due to uncertainty in launch schedules, the Miami ARTCC will not begin re-routing air traffic prior to receipt of the L-90 count from the ER. Aircraft that will not clear active airspace by required times will be re-routed.

3.4.3. Immediately notifies ER and provides flight details to the MRU when, for any reason, diversion cannot be or has not been accomplished.

3.4.4. Advises all Air Traffic Control agencies when ER operations have been completed, altitude blocks terminated and normal routing of air traffic can be resumed.

3.4.5. Upon request, activates ER-published Special Use airspace for use on a real-time basis. Such requests will be made at least three (3) hours prior to the anticipated use by the ER.

### 3.5. Range Users:

3.5.1. Documents requirements for supporting aircraft in the appropriate PRD and OR.

3.5.2. Documents in the PRD and OR all requirements for equipment, storage and maintenance support of all aircraft intending to stage from or use ER facilities during the course of the operation.

3.5.3. Ensures only mission-essential personnel are scheduled aboard the aircraft.

3.5.4. Provides 45 SW/SEL and 1 ROPS/DOUF with the designation, type and number of support aircraft and a mission itinerary and ISP at least 21 working days prior to launch. All ISPs will be finalized and coordinated through required agencies NLT 5 working days prior to the operation. The ER user may require additional coordination with 45 SW/SE to modify the ISPs in the case of an unacceptable risk to the support aircraft. This information may be supplied by an agency other than the specified range user (i.e., lead range, aircraft operator, etc.).

3.5.5. ISPs are not required for any aircraft in support of routine surveillance, security or weather reconnaissance that are not a designated launch support aircraft.

### 3.6. Launch Safety (45 SW/SEL):

3.6.1. Provides written ISP approval to 1 ROPS/DO within 5 working days prior to a scheduled operation (provided the ISP is received 21 working days prior to the launch).

3.6.2. Provides 1 ROPS personnel with applicable files in the required SCDS ICD format that represent SEA/AIR Surveillance hit-probability contours for a specific mission on F-10 day to include mission support aircraft contours for specific support aircraft. This delivery includes a printable file that contains all required Sea/Air Surveillance hit-probability contours for a specific mission.

3.6.3. Reviews and approves aircraft ISPs to ensure maximum operational flexibility with current safety constraints.

3.6.4. Provides 1ROPS personnel with NOTAM/NOTMAR information contained in Hazardous Area Letter for a specific mission NLT F-10 day.

3.6.5. Establishes time constraints for hazardous areas and approves any aircraft entering these areas.



- 3.6.6. Establishes aircraft breakaway procedures in the event of anomalous launch vehicle performance that could endanger supporting aircraft.
- 3.7. Flight Safety: Reviews, for approval, all drone and Remotely Piloted Vehicle (RPV) flights to ensure compliance of acceptable standards.
- 3.8. The 45th Weather Squadron:
- 3.8.1. Provides weather forecast for supporting aircrews as required.
  - 3.8.2. Coordinates and provides required weather support requested by UDS OPLAN.
- 3.9. The 45 OG Detachments 1 and 2: Downrange Station Commanders at Antigua (Det 1, 45 OG) and Ascension (Det 2, 45 OG) are responsible for providing normal base support to range support aircraft/aircrews staging and recovering at their stations.
- 3.10. Radiation Protection Officer (45 AMDS/SGPB) ensures all appropriate controls are employed to protect the health of both military and civilian aircrew personnel when range atmospheric laser operations are conducted.
- 4. Aircraft In-Flight Emergency (IFE):** Aircraft experiencing an IFE will, when able, advise the MRU of the IFE and provide nature of emergency, number of persons on board and pilot's intentions. MRU will provide assistance as requested by the pilot, provide flight following and record all applicable information. ACO will relay applicable information to 45 SW Command Post and ensure that SCO is apprised of developments.

ROBERT J. PAVELKO, Colonel, USAF  
Vice Commander

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

**ACO**—Aerospace Control Officer (CAPE LEADER)

**ALTRV**—Altitude Reservation

**ARTCC**—Air Route Traffic Control Center (FAA)

**ATCAA**—Air Traffic Control Assigned Airspace

**ATC**—Air Traffic Control

**CARF**—Central Altitude Reservation Facility (FAA)

**CCAFS**—Cape Canaveral Air Force Station

**COF**—Patrick AFB Airfield

**DoD**—Department of Defense

**EOM**—End of Mission

**ER**—Eastern Range

**FAA**—Federal Aviation Administration

**FCO**—Flight Control Officer

**FHA**—Flight Hazard Area

**IFE**—In-Flight Emergency

**IFR**—Instrument Flight Rules

**ILL**—Impact Limit Line

**ISP**—Intended Support Plan

**LDZ**—Launch Danger Zone

**LOA**—Letter of Agreement

**LWO**—Launch Weather Officer

**MARSA**—Military Assumes Responsibility for Separation of Aircraft

**MFCO**—Mission Flight Control Officer

**MRU**—Military Radar Unit (CAPE CONTROL)

**MSP**—Mission Support Position

**NOTAM**—Notice to Airmen

**NOTMAR**—Notice to Mariners

**OD**—Operations Directive

**OPLAN**—Operational Plan

**OR**—Operations Requirement  
**PAFB**—Patrick Air Force Base  
**PRD**—Program Requirements Document  
**PSM**—Program Support Manager  
**RCO**—Range Control Officer  
**RPV**—Remotely Piloted Vehicle  
**RTB**—Return to Base  
**SCO**—Surveillance Officer  
**SSO**—Sea Surveillance Officer (VARIETY ONE)  
**SUA**—Special Use Airspace  
**UAS**—Unmanned Aerial System  
**UAV**—Unmanned Aircraft  
**UDS**—Universal Documentation System  
**VFR**—Visual Flight Rules  
**WX**—Weather  
**XMR**—CCAFS Airfield

### *Terms*

**Aerospace Control Officer (ACO):** An Air Force member who supervises mission—related aircraft operations conducted on the range during launch operations and coordinates to ensure designated airspace is clear of unauthorized encroachments.

**Aircrew Mission Support Briefing:**—Briefing provided to representatives of all aircrews participating in a scheduled launch operation. This briefing is accomplished prior to a scheduled launch.

**Bingo:**—Term used to state an aircraft’s fuel capacity in reference to time (i.e., time aircraft would have to RTB for refueling).

**Breakaway:** Term used to direct an aircraft to break away from current position to a new position away from danger. Breakaway instructions are pre—briefed to specify the conditions under which to make breakaway calls, the heading the aircraft follows and the landing location.

**Eastern Range (ER):**—An area extending into the Atlantic Ocean within the boundaries of 037 and 114 degrees designated for the launch of space vehicles. It includes all stations, sites, ocean areas, launch hazard areas and airspace necessary to conduct missile and space launch operations. The management and operational control of ER airspace and aircraft are placed under the jurisdiction of the 1 ROPS/CC by the 45 SW/CC.

**Emergency:**—A distress or an urgency condition (FAA definition for aircraft).

**Flight Hazard Area (FHA):** A hazardous launch area, the controlled surface area and airspace surrounding the launch pad and flight azimuth where individual risk from a malfunction during the early phase of flight exceeds  $1 \times 10^{-5}$ . Because the risk of serious injury or death from blast overpressure or debris is so significant, only launch-essential personnel in approved blast—hardened structures with adequate breathing protection are permitted in this area during launch.

**Handoff:**—Action taken to transfer the radar identification of an aircraft from one controller to another if that aircraft will enter the receiving controller's airspace and radio communication with the aircraft will be transferred.

**In—Flight Emergency:** A distress or an urgency condition affecting an aircraft while in flight.

**Impact Areas:**—Defined area where jettisoned parts, stages or payload will impact ocean or earth surface.

**Impact Limit Line (ILL):** A hazardous launch area; the boundary within trajectory constraints and flight termination systems are used to contain an errant launch vehicle and/or vehicle debris. Launch—essential and neighboring operations personnel are permitted within the impact limit lines. With 45th Space Wing Commander approval, non-essential personnel may be permitted within this area. However, the collective risk will not exceed acceptable standards for the general public.

**Instrument Flight Rules (IFR):**—Rules governing the conduct of aircraft operating under instrument flight conditions.

**Intended Support Plan (ISP):**— A detailed description of a support aircraft's flight profile to and from its MSP. The aircraft ISP includes aircraft designation and type, number of aircraft, staging location, all planned checkpoints, holding patterns, altitudes, speeds and headings during ingress, egress and assigned mission support positions. For downrange support, the ISP will depict all activities within 200 nautical miles of the MSP. All MSPs are identified in latitude and longitude. All times are relative to the time of the first scheduled launch (see EWR 127-1, para 2.4.2 or AFSPCMAN 97-710, Vol 4, *Airborne Flight Safety System Design, Test, and Documentation Requirements*, para 2.3 for all ISP requirements).

**Intruder Aircraft:**—An unauthorized aircraft that has penetrated active Restricted/Special Use Airspace during a manned or unmanned missile launch operation.

**Launch Danger Zone (LDZ):**—A combination of the sea surface area and air space measured from the launch point and extending downrange along the intended flight azimuth. The size of the launch danger zone is based on the potential hazard to ships and aircraft.

**Military Radar Unit (MRU):**—A facility which provides military command and control functions to include traffic advisories to participating and nonparticipating aircraft operating within Eastern Range airspace which has been released to the unit by an appropriate ATC facility. MRU Controllers coordinate with the ACO and SCO on all aircraft activity in assigned special use airspace.

**Mission Flight Control Officer (MFCO):**—The individual responsible for maintaining positive control of launched vehicles and initiating range —*command destruct*” functions for an errant vehicle (liquid rocket booster, solid rocket motor/solid rocket booster and/or upper stage vehicle).

**Mission Support Position (MSP):**—A designated location and time that a mission support aircraft must be in position to support an expendable or manned launch operation.

**Mode III Code:**—An aircraft's transponder generates a numbered code used for air traffic control purposes received by a ground station and displayed on a surveillance control display system.

**Non—participating Aircraft:** An aircraft operating within Eastern Range airspace but not supporting Eastern Range launch operations and not receiving separation services from either airspace boundaries or participating aircraft.

**Operation:**—A scheduled activity where range assets are necessary to support Range User requirements for a specified time period.

**Operations Directive (OD):**—The ER response to the OR. It is the detailed plan for implementation of support functions for a program, mission, specific operation or a series of operations.

**Operations Requirements (OR):** User—prepared document that describes, in detail, the requirements for each program, mission, specific operation or series of operations.

**Participating Aircraft:**—Includes aircraft scheduled to support Eastern Range operations and authorized to operate at the Cape Canaveral Skid Strip (XMR).

**Program Requirements Document (PRD):**—A detailed statement of needs submitted by a range user to provide a full overview of the program. It describes specific flight vehicle characteristics, objectives, technical data, proposed flight and operational configurations, logistical support and any other requirements for support of the program.

**Program Support Plan (PSP):** Range—prepared document in response to requirements stated in the PRD; the PSP is the official answer from the ER to the user for support of the program. It is a plan of action to be followed by the ER and its supporting elements in their respective areas of responsibility.

**Program Support Manager (PSM):**—The Range Squadron individual who has primary responsibility for Eastern Range support to the range user. The PSM is the primary point of contact for all range users for requirements definition, documentation and resolution during the planning and execution phase for any operation.

**Radar Hand Off:**—Action taken to transfer radar identification of an aircraft from one controller to another if that aircraft will enter the receiving controller's airspace and radio communication with the aircraft will be transferred.

**Radar Point Out:**— An action taken by a controller to transfer the radar identification of an aircraft to another controller if the aircraft will or may enter the airspace or protected airspace of another controller and radio communications will not be transferred.

**Range User/Customer:**—Any Department of Defense organization, other US Government agency, state or local Government, civic, private or commercial organization or foreign government with authority to use range resources.

**Sea Surveillance Mission:** Combined efforts of various controlling agencies, surface vessels and airborne aircraft to ensure non—participating surface vessels and aircraft remain well clear of the established LDZ and FHA during Eastern Range launch operations.

**Sea Surveillance Officer (SSO):** An AF member who coordinates the movement of vessels through surveillance control aircraft, supporting radars and the United States Coast Guard (USCG). The SSO predicts the location of vessels at T—0 and diverts targets to a safe location prior to launch.

**Special Use Airspace (SUA):**—Airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities. Types of SUA that make up Eastern Range airspace are:

**Air Traffic Control Assigned Airspace (ATCAA):**—Airspace of defined vertical/lateral limits assigned by ATC for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other IFR air traffic.

**Restricted Area:**—Airspace designated under 14 CFR Part 73 within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated -joint use and IFR/VFR operations in the area may be authorized by the controlling ATC facility when it is not being utilized by the using agency.

**Temporary Flight Restriction—(TFR):** An airspace prohibition implemented for a specified airspace area on a temporary basis to provide protections for persons or property in the air or on the ground.

**Warning Area:**— A warning area is airspace of defined dimensions extending 3 nautical miles outward from the coast of the United States that contains activities that may be hazardous to non-participating aircraft. The purpose of a Warning Area is to warn non- participating pilots of the potential danger. A warning area may be located over domestic or international waters or both.

**Surveillance Control Officer (SCO):**—An Air Force member who performs launch area surveillance which encompasses air and sea areas designated as the FHA and the LDZ. The SCO directs activities in the Surveillance Control room and coordinates actions between the ACO and the SSO. The SCO ensures hazard areas are clear of unauthorized aircraft, ships, boats and people prior to giving a final "Go" call for launch.

**Surveillance Risk Analyst (SRA):**—A 45 SW/SELR analyst who assists the SCO in ensuring surface vessels and aircraft are not violating acceptable risk levels.

**Visual Flight Rules (VFR):**—Rules governing the conduct of aircraft operating under visual flight conditions.

## Attachment 2

## EASTERN RANGE AIRSPACE ACTIVATION/DEACTIVATION SUMMARY

Table A2.1. Eastern Range Airspace Activation/Deactivation Summary

OFFICE	NOTIFICATION	GIVEN TO	TIME GIVEN	HOW GIVEN
1 ROPS/DOUS	NOTAM APREQ ALTRV	FAA MIAMI FAA CARF	10 DAYS PRIOR TO LAUNCH	EMAIL & FAX
45 SW/MRU	L-90 count	Miami ARTCC	L-90 minutes	Landline
	L-60 count	Miami ARTCC	L-60 minutes	Landline
	L-30 count	Miami ARTCC	L-30 minutes	Landline
	Unscheduled Hold	Miami ARTCC	At time of unscheduled hold	Landline
	NOTAM Cancellation	Miami ARTCC	At time of cancellation	Landline
	Airspace no longer required	Miami ARTCC	When airspace is released by SCO	Landline
	Any hold of 15 minutes or more between L-90 & L-30	Miami ARTCC	As required	Landline
	When Op complete	Miami ARTCC	When Op complete	Landline
ACO	Verify that above tasks have been completed		As Required	Verbal

## Attachment 3

## LAUNCH AIRCRAFT MODE – 3 CODES (REFERENCE MIAMI LOA)

Table A3.1. Launch Aircraft Mode-3 codes (Reference Miami LOA)

* 5030	Search-1	UH-1
* 5031	Search-2	UH-1
* 5032	Search-3	UH-1
* 5033		
* 5034		
5035	NASA	T-38
5036		
5037		
5040		
* 5041	Jolly-1	H-60
* 5042	Jolly-2	H-60
* 5043	Jolly-3	H-60
* 5044	Jolly-4	H-60
* 5045	Jolly-5	H-60
5046		
5047		
5050	King-1	C-130
5051	King-2	C-130
5053	King-3	C-130
5052	Hawkeye	WX-01
5054	Bloodhound-1	VVBH01
5055	Bloodhound-2	VVBH02
5056	Relay-1	
5057	Press/VIP	



## Attachment 4

## EASTERN RANGE SPECIAL USE AIRSPACE

**Table A4.1. Restricted Area (Reference Figure A4.1)**

R-2932	Surface – 4999 MSL	Active continuously
R-2933	5000 MSL – Unlimited	Active by NOTAM
R-2934	Surface – Unlimited	Active by NOTAM
R-2935	11000 MSL – Unlimited	Active by NOTAM

**Table A4.2. Warning Area (Reference Figure A4.2)**

W-497A	Surface – Unlimited	Active by NOTAM
W-497B	Surface – Unlimited	Active by NOTAM

**Table A4.3. Air Traffic Control Assigned Airspace (ATCAA) (Reference Figure A4.3)**

CAPE ATCAA	Surface – FL 180	Active by NOTAM
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**Table A4.4. Space Launch Area Temporary Flight Restriction (TFR) (Reference Figure A4.4).**

CFR 91.143	Surface – Unlimited	Active by NOTAM
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Figure A4.1. Restricted Area

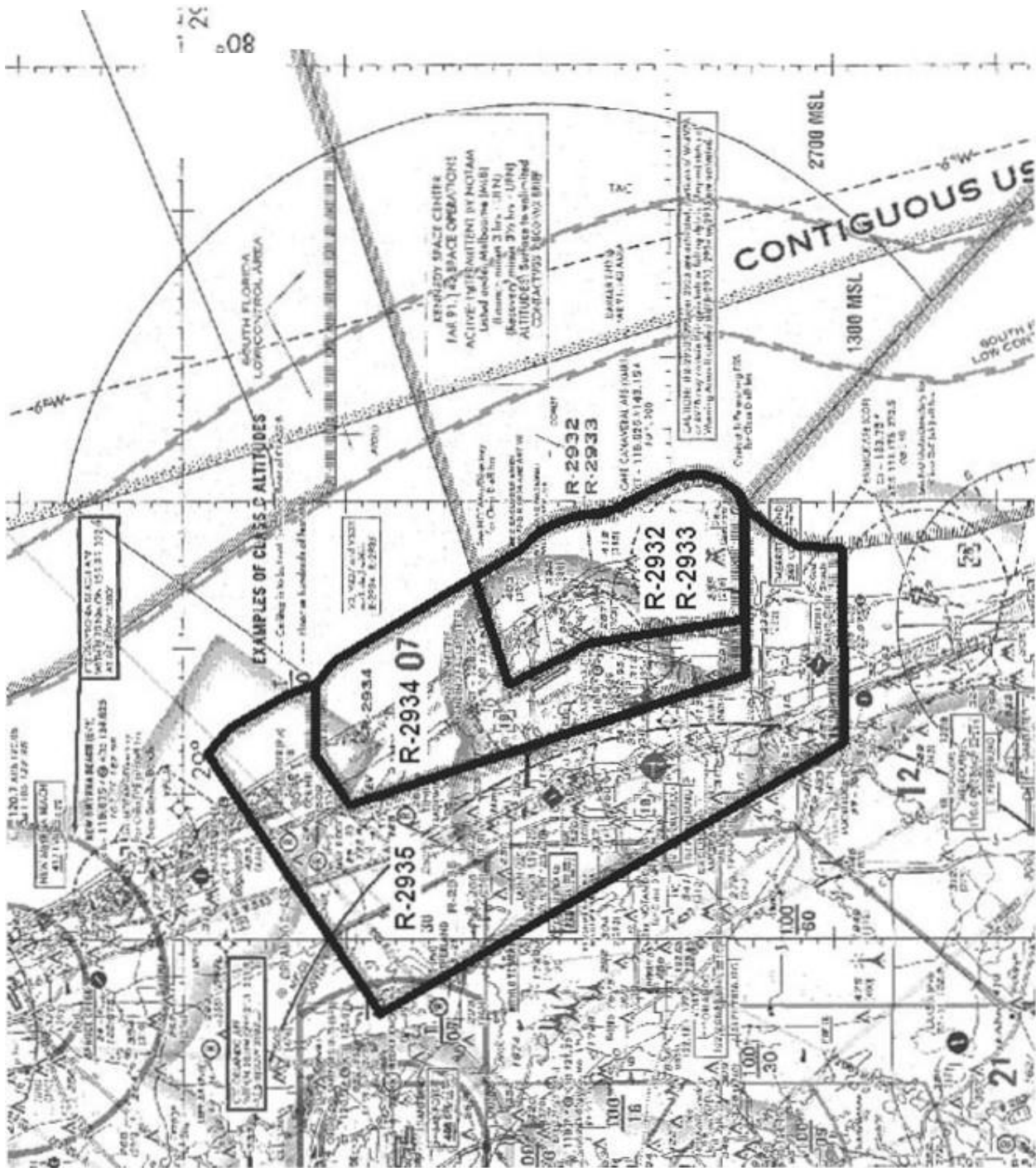


Figure A4.2. Warning Area

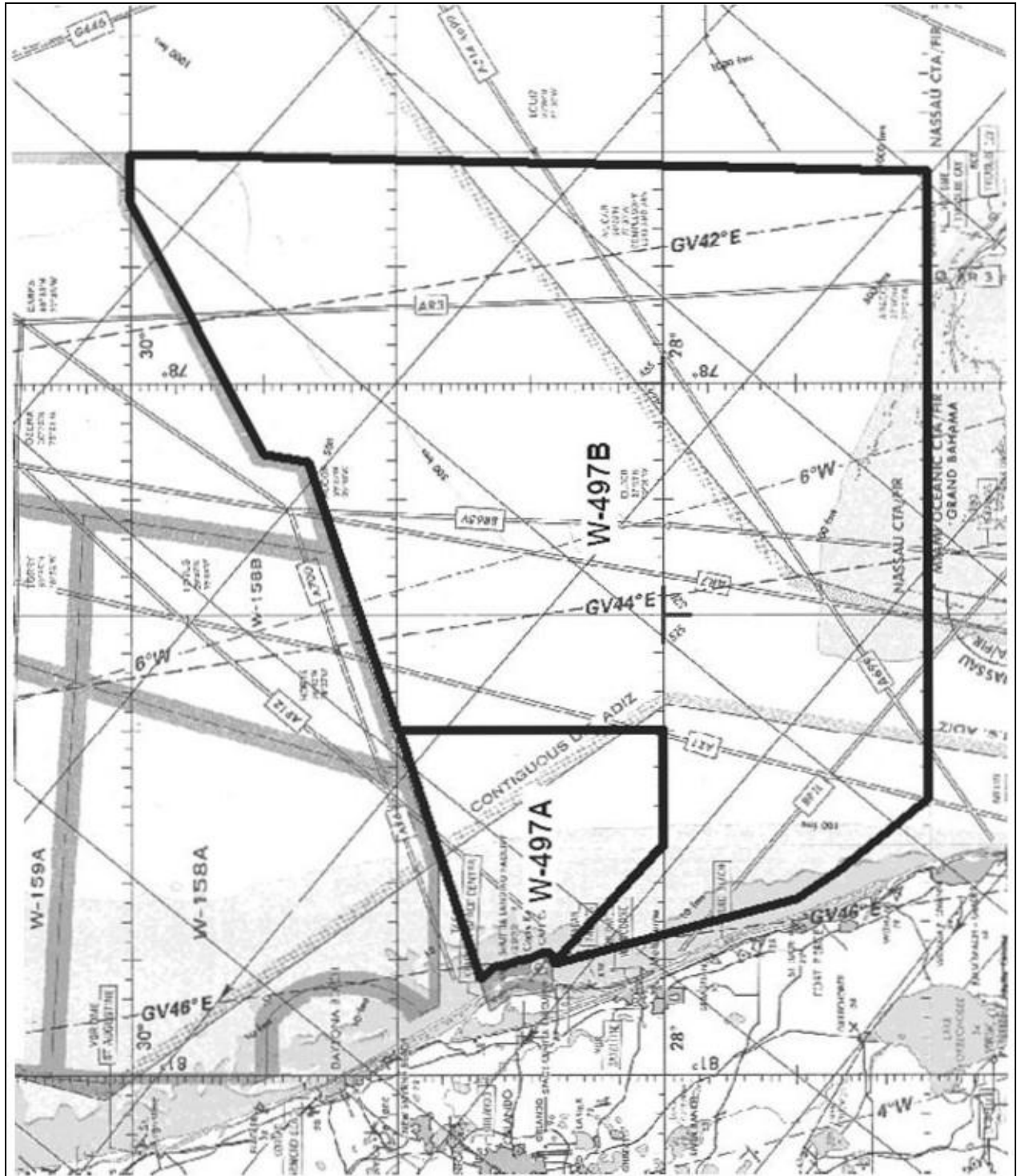




Figure A4.4. Cape Air Traffic Controlled Airspace (CAPE ATCAA)

