CHANGE

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

JO 7400.2G CHG 2

SUBJ: PROCEDURES FOR HANDLING AIRSPACE MATTERS

1. PURPOSE. This change transmits revised pages to Federal Aviation Administration Order (FAAO) JO 7400.2G, Procedures for Handling Airspace Matters.

2. DISTRIBUTION. This change is distributed to select offices in Washington headquarters, service area offices, the William J. Hughes Technical Center, and the Mike Monroney Aeronautical Center; to all air traffic field facilities and international aviation field offices; and to interested aviation public.

3. EFFECTIVE DATE. August 27, 2009.

4. EXPLANATION OF CHANGES. See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures.

5. DISPOSITION OF TRANSMITTAL. Retain this transmittal until superseded by a new basic order.

6. PAGE CONTROL CHART. See the Page Control Chart attachment.

for Nancy B. Kalinowski
Vice President, System Operations Services
Air Traffic Organization

Date: 4-24-09

Distribution: ZAT–740 (ALL)

Initiated By: AJR–0
Vice President, System Operations Services

FAA Order JO 7400.2G
Procedures for Handling Airspace Matters
Explanation of Changes

Direct questions through appropriate facility/service center office staff to the Office of Primary Interest (OPI).

a. 31–1–2. AUTHORITY;
31–1–3. POLICY
31–1–4. RESPONSIBILITY;
31–1–6. DEFINITIONS;
31–2–1. REGIONAL/SERVICE AREA OFFICE REVIEW;
31–2–2. AERONAUTICAL REVIEW;
31–2–3. HEADQUARTERS REVIEW;
31–2–5. SUITABLE AIRSPACE FOR LAUNCH OPERATIONS;
SECTION 3. DETERMINATIONS;
31–3–1. REGIONAL/SERVICE AREA OFFICE DETERMINATIONS; and
31–3–2. NOTAM

Changes have been made to the order to correct some previously identified inaccuracies; and add the definitions for the new rocket classes and information requirements. In addition, the order has been updated to clarify responsibilities of air traffic and the Office of Commercial Space Transportation.

b. Editorial/format changes were made where necessary throughout the order. Revision bars were not used in all cases because of the insignificant nature of the changes.

FAAO JO 7400.23G
Change 2
Page Control Chart
August 27, 2009

REMOVE PAGES	DATED	INSERT PAGES	DATED
Table of Contents xv	4/10/08	Table of Contents xv	4/10/08
Table of Contents xvi and xvii	4/10/08	Table of Contents xvi and xvii	8/27/09
31−1−1 and 31−1−2	4/10/08	31−1−1 and 31−1−2	8/27/09
31−2−1 through 31−2−3	4/10/08	31−2−1 through 31−2−3	8/27/09
31−3−1	4/10/08	31−3−1	8/27/09

Section 3. Aeronautical Determinations

Section 4. Notices to Airmen

Chapter 30. High Intensity Light Operations

Section 1. General

Section 2. Aeronautical Review/Determinations

Chapter 31. Rocket and launch−Vehicle Operations

Section 1. General

Section 2. Processing of Proposals

Section 3. Certificates of Waiver or Authorization

Chapter 32. Environmental Matters

Section 1. General Information

Section 2. Environmental Processing

Section 3. Environmental Impact Categories and Other Topics

Appendices

Chapter 31. Rocket and Launch–Vehicle Operations

Section 1. General

31–1–1. PURPOSE

This chapter provides guidance, policies, and procedures for processing requests for rocket and launch vehicle operations in the NAS.

31–1–2. AUTHORITY

a. Public Law (PL) 98–575. Congress enacted PL98–575, Commercial Space Launch Act of 1984, codified at 49 USC subtitle IX, Chapter 701, with its purpose to:

1. Promote economic growth and entrepreneurial activity through utilization of the space environment for peaceful purposes.

2. Encourage the U.S. private sector to provide launch vehicles and associated launch services by simplifying and expediting the issuance or transfer of launch licenses and by facilitating and encouraging the utilization of Government–developed space technology.

3. Designate an executive department to oversee and coordinate the conduct of launch operations, to issue and transfer launch licenses authorizing such activities, and to ensure that public health and safety, foreign policy, and national security interests of the United States are satisfied.

b. Part 101 prescribes rules governing the operation in the United States of moored balloons, kites, amateur rockets, and unmanned free balloons.

c. Part 400 establishes procedures and requirements regarding the authorization and supervision of all launches of vehicles constructed for the purpose of operating in, or placing a payload in outer space, and certain suborbital rockets conducted from within U.S. territory or by U.S. citizens. The part 400 regulations, however, do not apply to amateur rocket activities or to space launch activities carried out by the U.S. Government on behalf of the U.S. Government.

31–1–3. POLICY

It is air traffic policy that all amateur rocket proposals that seek a waiver to part 101 requirements, and that are expected to reach an altitude higher than 25,000 feet above ground level, as well as those rockets/launch–vehicles that are licenseable under part 400 shall be forwarded to the Airspace and Rules Group, (AJR–33). AJR–33 will coordinate the proposals with the Office of Commercial Space Transportation, (AST), then forward the AST recommendation to the service area office.

31–1–4. RESPONSIBILITY

a. Air traffic has the authority to grant waivers to part 101 for amateur rocket activities, and is responsible for integrating all rocket and launch–vehicle operations into the NAS. AJR–33 is air traffic's point of contact for such activities and is directly responsible for coordinating certain proposals regarding airspace operations and procedures with AST.

b. The Licensing and Safety Division, AST–200, within the Office of Commercial Space Transportation is responsible for the licensing of launch sites and those launch vehicle operations that fall under part 400. Additionally, any required waivers and/or exemptions to part 400 will also be issued by AST–200.

c. Communication and coordination between AST and air traffic is paramount. Since AST personnel are not located at the regional offices, the required AST coordination occurs at the FAA Headquarters level.

31–1–5. ENVIRONMENTAL IMPACT ANALYSIS

a. Launch site and reentry actions are subject to NEPA Order 1050.1, Policies and Procedures for Considering Environmental Impacts, and other applicable regulations, public laws, and statutes.

b. All NEPA requirements associated with licensed commercial space transportation activities

will be addressed by AST as part of the site licensing process.

31–1–6. DEFINITIONS

a. Amateur rocket – an unmanned rocket that is propelled by a motor or motors having a combined total impulse of 889,600 Newton–seconds (200,000 pound–seconds) or less; and cannot reach an altitude greater that 150 kilometers (93.2 statute miles above the Earth's surface.

b. Amateur Rocket classes:

1. Class 1 – a model rocket that uses no more than 125 grams (4.4 ounces) of propellant; uses a slow–burning propellant; is made of paper, wood, or breakable plastic; contains no substantial metal parts; and weighs no more than 1,500 grams (53 ounces) including the propellant.

2. Class 2 – a high power rocket, other than a model rocket, that is propelled by a motor or motors having a combined total impulse of 40,960 Newton–seconds (9,208 pound–seconds) or less.

3. Class 3 – an advanced high power rocket, other than a model rocket or high–power rocket.

c. Launch Vehicles. Vehicles built to operate in, or place a payload in, outer space or, a suborbital rocket. Part 400 requires that launch vehicle operations be licensed by AST.

Section 2. Processing of Proposals

31–2–1. SERVICE AREA OFFICE REVIEW

a. The service center office responsible for the launch's geographical area shall process waiver requests for amateur rocket activities. When a proposal overlaps service area geographical jurisdictions, the affected service area office shall coordinate to determine which office will serve as the lead service area office for processing the proposal. Coordination between service area offices is also required when the affected geographical area and the ATC controlling agency are under the jurisdiction of different service area offices.

b. Service area offices shall coordinate with the responsible military representative and ensure that all affected ATC facilities review the proposal and provide input to the aeronautical review, as required.

c. If the proposal requires FAA Headquarters review, submit to AJR–33 the documentation of service area office coordination, affected ATC facility comments, and any other information pertinent to the case.

d. As part of the rocket operation review process performed by the service area office, or those facilities delegated waiver authority, coordination shall be effected with the Central Altitude Reservation Function (CARF), an element of the David J. Hurley Air Traffic Control System Command Center (ATCSCC). This coordination is to ensure that any system impact(s) that may result from the requested operation are identified and resolved before a waiver is issued.

31–2–2. AERONAUTICAL REVIEW

The following information should be used as a guide for the conduct of an aeronautical review of amateur rocket operations.

a. An aeronautical review of any amateur rocket operation shall be conducted to determine if there are aeronautical impacts to be considered or resolved.

b. Amateur rocket operations shall be categorized based on their operational characteristics and purpose of flight. These characteristics include, but are not limited to, size, total weight, propulsion, rocket motor design, and hardware design materials. The class of the rocket will determine which parts of 14 CFR part 101 provisions will apply. It is the responsibility of the sponsor of the rocket activity to determine the appropriate rocket class.

NOTE–
Part 101 rocket launch proposals that are a part of a competition for prize money will be reviewed by AST. Those proposals shall be sent to AJR–33 for processing.

31–2–3. HEADQUARTERS REVIEW OF WAIVER REQUESTS TO 14 CFR PART 101

a. Proposals for amateur rockets that are expected to reach altitudes higher than 25,000 feet above ground level, (conducted outside of restricted airspace) must be forwarded to AJR–33 for coordination with AST.

b. The submission to AJR–33 should include the following (as applicable):

1. A brief overview of the proposal. The service area office should only forward those requests for which they intend to grant waivers.

2. A summary of any amendments made to the original proposal in response to negotiations to mitigate impacts, etc.

3. A sectional aeronautical chart depicting the final boundaries of the proposed airspace area.

4. A copy of the proponent's launch request correspondence and proposal package.

5. A copy of the aeronautical review and the service area office recommendation.

6. Copies of pertinent correspondence from other FAA offices (e.g., Flight Standards, Airports, adjacent service area office, affected ATC facilities).

7. Any other information that is relevant to the proposed operation, such as rocket/launch–vehicle propulsion, physical dimensions and weight, total impulse and burn time of the motor(s), launch site location, planned flight path/trajectory, including staging and impact locations.

NOTE–
Part 101 contains a list of required information for those operations that require a waiver.

c. AJR–33 will coordinate the proposal with AST–200 for review.

d. Upon completion of the AST–200 review, AJR–33 will forward the results to the service area office. For the proposals that have received favorable recommendations the service area office may issue the waiver to part 101 to the sponsor of the rocket activity and provide a copy to AJR–33.

31–2–4. CONTROLLING AGENCY

The FAA ATC facility having control jurisdiction over the airspace where the rocket/launch–vehicle is projected to enter shall be designated as the controlling agency. The controlling agency will be responsible for ensuring that any temporary airspace (e.g., TFRs, ALTRVs) is activated when the launch operations are imminent, including any applicable downrange and terminal airspace.

31–2–5. AIRSPACE CONSIDERATION FOR LAUNCH OPERATIONS

Proponents conducting Class 2 or Class 3 amateur rocket launches must provide advance notice to the FAA in accordance with 14 CFR section 101.27. Those proponents must ensure the safety of persons and property on the ground and of aircraft flying nearby. Conversely, rockets that will enter controlled airspace must be integrated with other users of the NAS and be segregated from nonparticipating aircraft to ensure safety.

a. Amateur rockets may not require sterile airspace. In these cases, the proponent and/or the service area office must:

1. Ensure that the activity is confined within the launch site area.

2. Ensure that adequate safety precautions are in place for each launch site. Specific precautionary measures established to protect nonparticipating aircraft, persons, and property will depend on various factors such as the type of activity, terrain, launch site dimensions, etc.

3. Cease activity immediately upon observation or notification that a nonparticipating aircraft is approaching the area. Surveillance by ground observers shall be continuously maintained immediately prior to and during the time that the activity is in progress to ensure adequate coverage of the required area. If required by the service area office, observers shall have real–time communication capability (radio, cellular phones, etc.) with the FAA facility to ensure a cease–fire can occur immediately. The activity may resume only after the nonparticipating aircraft are clear of the area and will not interfere with launch operations.

b. Existing restricted area airspace may be used only if permission has been granted by the using agency or controlling agency, as appropriate. The responsibility is on the proponent to obtain the required permission.

c. Temporary flight restrictions (TFR) for space flight operations (SFO) as described in Section 91.143 may be used to segregate nonparticipating aircraft from rocket/space launch operations.

d. An altitude reservation (ALTRV) may be used but only to sterilize Class A airspace within which it operates. ALTRVs do not sterilize airspace below Class A airspace.

e. When sterile airspace is used to support rocket/launch–vehicle operations, the dimensions and times of use of that airspace shall be the minimum required to contain the proposed activities, including required safety zones. When it is determined that the airspace is no longer required, the service area office, using agency, or the appropriate military authority providing the airspace shall initiate action to release that airspace to the NAS.

f. Launch sites should be located in areas that will minimize the impact on nonparticipating aircraft and ATC operations. To the extent practical, plan launch sites, and rocket/launch–vehicle trajectories to avoid airways/jet routes, major terminal areas, and known high–volume VFR routes.

Section 3. CERTIFICATES OF WAIVER OR AUTHORIZATION

31–3–1. ISSUING WAIVERS

a. The service area office (or designated representative) has the authority, in accordance with FAAO 1100.5, FAA Organization – Field, to grant, or deny, individual waivers to part 101. FAA Form 7711–1, Certificate of Waiver, shall contain, as a minimum:

1. The section of part 101 that is being waived.

2. The name, address, telephone number of the applicant.

3. Activities (e.g., types of rockets) approved for launch.

4. The location of the approved launch site in coordinates.

5. Approved dates and times of launch operations.

6. Advance notification requirements to the appropriate FAA facilities and, if desired, cancellation and termination notification.

7. Approved projected altitudes of the rocket(s).

8. Other provisions in part 101 may be included at the discretion of the service area office.

9. Any other requirements deemed necessary for local operations.

b. The service area office may suspend or revoke a waiver whenever a question arises about the safety of the operation, compliance with safety precautions or conditions of approval, or if unforeseen impact on aeronautical operations occurs.

31–3–2. NOTAM

a. NOTAMs issued for space launch and reentry operations, 14 CFR Section 91.143, Flight limitations in the proximity of space flight operations, will be processed as usual.

b. The NOTAM shall include the launch site description, effective dates and times, and a chart depicting the area boundaries. It should also include a brief narrative describing the launch scenario, activities, numbers and types of rockets/launch–vehicles involved, and the availability of in–flight activity status information for nonparticipating pilots. Information regarding ALTRVs used in conjunction with TFRs may also be addressed.

c. If a launch site will be used on a routine basis, the service area office may consider charting the launch site and/or the TFR on the applicable sectional aeronautical chart.