



Federal Aviation Administration

MEMORANDUM

Date: October 20, 2014

To: Regional Airports Division Managers
610 Branch Managers
620 Branch Managers
Airports District Office Managers

From: *[Signature]* Director, Office of Airport Planning and Programming (APP-1)
[Signature] Director, Office of Airport Compliance (ACO-1)
[Signature] Director, Office of Airport Safety and Standards (AAS-1)

Subject: **Proposed commercial space facilities and operations at Federally-obligated or Part 139 airports**

The FAA is receiving an increasing number of inquiries from both private industry and airport operators to establish commercial space launch sites at or near Federally-obligated airports, including general aviation airports and airports certificated under 14 CFR part 139.

The Office of Airports (ARP) is working with the FAA's Office of Commercial Space Transportation (AST) and other parts of the FAA to establish processes to facilitate coordinated agency-wide reviews of such proposals.

This memorandum provides summary-level guidance for both FAA personnel and airport operators on requirements that airport operators (and the FAA's Office of Airports) must consider when evaluating such proposals in a manner consistent with existing statutes, regulations, and policy. We encourage personnel in the Regional offices to convey this memorandum to all Federally obligated airports and any that are certificated under Part 139. This memorandum will also be available on the FAA's public website.

Regional Offices and ADOs will notify AST, APP, AAS and ACO when they are contacted by any entity considering a proposed spaceport facility or any such proposed operations at Federally obligated or Part 139 airports.

Similarly, through AST's pre-application consultation process (required for all license applicants per 14 CFR part 413.5), AST will notify the three ARP directorates and the appropriate ARP Regional office and ADO when AST is contacted. AST is responsible for licensing the operation of launch and reentry sites, and has issued several launch site operator licenses, some of which are located on existing Federally obligated and

part 139 airports. AST is also responsible for the subsequent issuance of actual vehicle operator licenses.

The requirements for obtaining a launch site operator license are contained in 14 CFR part 420. Information about this process is available online at:
http://www.faa.gov/licenses_certificates/commercial_space_transportation/.

A launch site operator license does not confer any proprietary, property, or exclusive rights, and does not relieve an airport of its existing obligations to comply with its grant assurances and other Federal obligations.

Proposals to build and operate launch sites and conduct ongoing spaceport operations at Federally obligated airports trigger a host of requirements. These requirements include maintaining updated and FAA-approved airport layout plans to ensure safety, efficiency, and utility of airports. Some types of spaceport operations may affect existing airport facilities or airport operations. The extent of these potential effects depends on the location and/or proximity of the proposed launch site in relation to the airport, and the types and frequency of operations the spaceport operator and/or airport operator proposes to host. It will be incumbent on airport operators and FAA to recognize and address any potential impacts to airport facilities or operations.

The Role of the FAA Office of Airports (ARP)

The role of the Office of Airports (ARP) is to ensure that airports remain safe and accessible for all users. ARP has responsibility for six program areas, and all of them may be affected by proposed spaceport facilities and/or operation. As is the case when any new operation is introduced to an airport environment, airports interested in pursuing spaceport proposals must coordinate in advance with the designated FAA planners, engineers, environmental specialists, compliance officers and Airport Certification Safety Inspectors to ensure timely and appropriate evaluation of all six program areas. ARP will coordinate its review through existing processes to address the following areas:

- **Standards.** ARP is responsible for establishing and maintaining standards for a broad range of airport facility planning, engineering design, construction, operations and maintenance of airport facilities. Although many launch vehicles have characteristics similar to traditional aircraft (including horizontal takeoff), their potential impact to airport design standards (e.g., pavement, signage, marking, lighting, etc.) is not yet fully understood. As the industry evolves and more data becomes available, ARP will continue to evaluate whether these vehicles can be accommodated within existing design categories.
- **Safety and Operations.** ARP is responsible for administering 14 CFR part 139 for airports meeting certain criteria, and this includes ensuring safe operations. The FAA will have to evaluate the compatibility of specific proposed spaceport operations

with Part 139 operations, and there are specific issues that an airport operator would have to address in their Airport Certification Manual (ACM) and Airport Emergency Plan (AEP). Airport operators must coordinate with the designated Airport Certification Safety Inspector in the appropriate Regional Office.

- **Planning.** All Federally-obligated airports are required to maintain a current Airport Layout Plan (ALP) that is subject to approval by ARP. The approval is predicated on compliance with FAA design standards and the enduring safety, efficiency and utility of the airport. Airports must work with the appropriate Airports District Office (ADO) or Regional Office (RO) to review any proposed changes in facilities or operations.
- **Environmental Review.** All Federally obligated airports must comply with Federal, state and local environmental laws, regulations and ordinances. In addition, proposals to change the ALP are federal actions subject to environmental review in accordance with the National Environmental Policy Act (NEPA). AST will be the lead office, within FAA, for conducting the NEPA review for (1) licensing commercial space launch site operations, and (2) associated changes to the ALP arising from a proposed commercial space launch site at a Federally obligated airport. AST will coordinate with ARP to ensure the proper scope and timing of the environmental reviews relating to connected actions and cumulative impacts. Because spaceport operations at airports may have different types of noise sources (e.g. aircraft, RLVs, ELVs), the Office of Environment and Energy must be consulted on the acceptability of the proposed noise model and methodology.
- **Funding Questions.** A few questions have been received as to whether Airport Improvement Program (AIP) funds may be available to assist in developing spaceport facilities. The rules governing project eligibility and justification (which typically are defined in terms of minimum activity levels, particularly in terms of frequency of operations of a critical design aircraft) are set forth in FAA Order 5100.38 ("Airport Improvement Program Handbook").
- **Compliance Issues.** All Federally-obligated airports are reminded of their obligations to ensure the safety, efficiency, utility and access to airports. Airports are strongly advised to consult with the designated Compliance Officer in the appropriate Regional Office as they consider offering their sites to commercial space operators.

At this time, commercial space represents a rapidly evolving industry and the FAA has not yet made a determination as to what specific types or aspects of spaceport operations might eventually be considered "aeronautical activity." For the moment, therefore, the most important consideration is to identify the extent to which proposed spaceport operations could affect aeronautical uses and users, either at the specific airport in question, at nearby airports and/or in the airspace.

AST has separate statutory authorities, obligations and supporting regulations. In cases

where either a part 139 or Federally-obligated airport wants to pursue a launch site operator license, ARP and AST will work together to evaluate proposed spaceport operation for consistency with an airport's obligations under the grant assurances and/or part 139. AST will also work with the Office of Aviation Safety (AVS) and the Air Traffic Organization (ATO) to evaluate related issues affecting their respective areas of statutory and regulatory responsibility.

Attachment A outlines information that ARP anticipates requiring in order to conduct an assessment of the airport's compliance with existing statutory, regulatory, and policy requirements. Length of time for ARP review will depend on the scope of the proposed ALP changes and potential environmental impacts.

ATTACHMENT A.

The following is a preliminary outline of the types of information that ARP will typically need to initially assess the consistency of a proposed spaceport operation with an airport's existing statutory, regulatory, and policy requirements. Provision of this information is not a prerequisite to initiation of the spaceport licensing process with AST.

Much of the following information will be required as part of the spaceport licensing process. This list is provided here simply to alert airports of the types of information that ARP will ultimately review as well. Recognizing that not all information may be available during the initial exploratory phases, FAA encourages airports to collect and provide as much information as possible.

1. Draft Airport Layout Plan (ALP) update that depicts the proposed launch site layout and any proposed changes to the site (including either potential construction or changes in land use). For timing and coordination reasons, it will benefit the airport to submit the proposed updated ALP and/or supporting document(s), including the following information as soon as becomes available:
 - a. If known, the type of vehicle and frequency of anticipated operations.
 - b. As with any proposed change in operations, some analysis and discussion of how the airport will meet its projected 20-year aeronautical demand, including an explanation of how proposed spaceport operations might affect existing and forecast airport operations
 - c. If known, vehicle specifications such as size, speed, fuel, weight, etc.
 - d. If known, Runway Occupancy Time for pre-flight, launch, post flight, rehearsals, tests, etc.

Note that for initial environmental assessment and planning purposes, the proposed Launch Site Boundary (LSB)¹ will have to be shown on the draft ALP update. AST will be the lead office, within FAA, for conducting the NEPA review for licensing of commercial space launch site operations. Further, AST will coordinate with ARP to ensure the proper scope and timing of the environmental review as it relates to connected actions and cumulative impacts.

Spaceport operations at airports may have different types of noise sources (e.g. aircraft, RLVs, ELVs) that cannot be modeled through the Integrated Noise Model. Therefore, the Office of Environment and Energy must be consulted on the acceptability of the proposed noise model and methodology. If the environmental review consists of an environmental assessment (EA) and the EA supports a finding of no significant impact (FONSI), then AST and ARP will jointly issue the FONSI. ARP will then approve² the ALP to depict the LSB. This approval is for the limited purposes of the determination required under 49 USC section 47107, and does not constitute approval of the LSB that the applicant is required to obtain as part of the

¹ The Launch Site Boundary will normally include all facilities that are necessary for the functional operation of the launch site.

² Normally, the ALP approval would be unconditional at this point. However, there may occasionally be a unique situation in which one or more elements of the ALP approval will still be conditional.

licensing process. AST will then separately make a determination on the license, including the LSB. If the environmental review requires an EIS, then the same process for ALP and the license determination applies.

Similarly, a copy of the proposed Explosive Site Plan (describing facilities for the transport, storage, and loading of explosive materials) will have to be submitted for review as part of the draft ALP update if it is to be located on airport. For a part 139 airport, the Explosive Site Plan must be reflected in proposed changes to the Airport Certification Manual (ACM) and Airport Emergency Plan (AEP), which are subject to review and approval by the Airport Certification Safety Inspector (ACSI). AST will approve the Explosive Site Plan as part of the licensing process.

2. To the extent known, a Concept of Operations (ConOps) or other description of the nature of anticipated spaceport activity.
3. Identification of potential impacts to surrounding airports (if any)
4. Explanation of how the proposed spaceport operation will be coordinated with near-airport launch facilities, reentry sites, or spaceports, including airports where spaceport activities are proposed to be integrated with other types of civil aeronautical activity. Such coordination must reasonably ensure the safety, efficiency, utility and access to the airport and surrounding airports for aeronautical activities. Proposed facilities located near or adjacent to airports must be reviewed through the normal airspace process under 14 CFR part 77.
5. The proposed consultation/coordination process, whether public hearings or individual discussions, with air carriers and other aviation user groups that rely upon the airport or other nearby airports, as well as airport tenants and other users to discuss the potential impact of the airport's launch site and operational plans, and, if appropriate, afford opportunities for public comment and review and/or public meetings or workshops.
6. When available, a copy of the draft lease and use agreements with the launch site operator.
7. Part 139 airports will need to consider what changes will be required in the ACM and AEP (and subject to FAA approval) to support commercial space operations.

FAA recognizes that not all information will necessarily be available during the earliest phases of exploration. The list is intended solely to give airport operators an understanding of the types of information that ARP will eventually require in order to consider approving changes to the ALP (and, for Part 139 airports, the ACM and AEP).