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Mr. Daniel Czelusniak
Environmental Protection Specialist
Federal Aviation Administration
800 Independence Avenue SW
Suite 325
Washington, DC 20591

Re: *Request for Comment on the Draft Environmental Assessment for SpaceX Launch Licenses at Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAFS), Florida.*

Dear Mr. Czelusniak,

The Aircraft Owners and Pilots Association (AOPA), the world's largest aviation membership association, submits the following comment in response to the request for comments on the Draft Environmental Assessment (EA) for the SpaceX launch licenses at Kennedy Space Center (KSC) and Cape Canaveral Air Force Station (CCAFS), Florida. While AOPA supports the advancement of the commercial space industry, full consideration must be given to the impact commercial space operations will have on general aviation operations within the National Airspace System (NAS). It is important the FAA integrate commercial space operations into the NAS and take care to not give one commercial operator priority access to the airspace over all other NAS users.

AOPA contends that the establishment of commercial space ports and subsequent commercial space launches should not lead to additional temporary or permanent airspace restrictions. We are concerned about the potential airspace impacts of SpaceX's proposed launch and reentry rates, and the new southern launch trajectory. The Draft EA's assessment of the airspace impacts of these two proposed actions is totally insufficient. The FAA fails to clarify what the public can expect as far as airspace restrictions and what, if any, mitigations the FAA has planned. The FAA must clarify the foreseeable airspace impacts so that the public can be fully informed and offer substantive comments.

Commercial space launches in the National Airspace System

Safety is paramount and must be the primary consideration regarding integration of commercial space operations into the NAS. AOPA recognizes the FAA has a congressional mandate to ensure that commercial space launches provide a sufficient level of safety for all users of the NAS. However, the FAA must ensure that Temporary Flight Restrictions (TFR) are justified and minimized to what is necessary for the safety of the NAS. AOPA has regularly gone on record since the early 2000s noting our serious concerns with any long-term strategy that would rely on TFRs for air traffic separation to accommodate commercial space operations given the negative impact they have on routine operations.

AOPA encourages the FAA to leverage the industry recommendations submitted by the Airspace Access Priorities Aviation Rulemaking Committee (ARC) and Spaceport Categorization ARC to ensure commercial space transportation occurs seamlessly within the NAS. There are many opportunities for existing practices to be optimized to limit airspace closures. Depending on the risk contour of the launch,

manned aircraft may be able to safely transit a TFR by maintaining a minimum speed or by flying a set route, which would minimize any exposure to the hazard while mitigating the adverse effects of the TFR. It is important the FAA leverage the consensus recommendations made in the ARCs to find effective solutions for all airspace users.

Letter of Agreements are opaque and not publicly available

The Draft EA states the proponent would enter into a Letter of Agreement (LOA) with the FAA in advance of launch operations:

“SpaceX would negotiate and enter into Letters of Agreement (LOA) with relevant Air Traffic Control facilities...to accommodate the flight parameters of the integrated launch system. These LOAs would call for and define procedures for Air Traffic Control to issue a NOTAM defining the affected airspace...prior to launch. A NOTAM provides notice of unanticipated or temporary changes to components of, or hazards in, the National Airspace System (FAA Order JO 7930.2M, Air Traffic Policy).”

It is not clear why this LOA cannot be included or discussed within the Draft EA when its contents would directly pertain to the environmental (airspace) impact of these operations on the public. The LOA process itself is opaque to other airspace users in that this document is negotiated directly between the FAA and the proponent with no external review or comment. The LOA is also not publicly available for review after it is signed except through a Freedom of Information Act (FOIA) request.

The contents of the LOA affect other airspace users and would provide valuable information on the launch process, airspace restrictions, and mitigations put in place. The FAA’s decision to not include this information in the Draft EA for public review is part of a troubling trend of blindfolding the public during opportunities to weigh in on foreseeable airspace restrictions that will affect the environment and have economic impact on the public. We contend environmental studies conducted under NEPA for establishing large recurring airspace restrictions must include a discussion regarding the full impact to general aviation. The FAA must provide this information to the public in a transparent fashion.

The FAA further states in the Draft EA:

“...temporary closures of existing airspace...would be necessary to ensure public safety during launch operations. Advance notice via NOTAMS...would assist general aviation pilots...in scheduling around any temporary disruption of flight...activities in the area of operation. Launches would be of short duration and scheduled in advance to minimize interruption to airspace and waterways. For these reasons, significant environmental impacts of the temporary closures of airspace and waterways, and the issuance of NOTAMS...under the Proposed Action, are not anticipated. Moreover, in accordance with FAA Order 1050.1F, Paragraph 5-6.1 (Categorical Exclusions for Administrative/General Actions), issuance of NOTAMS are categorically excluded from NEPA review, absent extraordinary circumstances.”

We disagree that these temporary airspace closures “of short duration” should be administratively dismissed via a categorical exclusion and not discussed in the Draft EA. The proposal discusses a significant ramp up of launch and reentry operations such that airspace closures will be more frequent. The FAA’s text fails to mention how large vertically and laterally the airspace restrictions are for space launches and how a significant number of civil flights can be affected by any one launch. Airspace closures of limited duration on the Florida coast, which is one of the busiest general and commercial

aviation corridors in the country, have a significant impact. These airspace closures are usually from the surface to unlimited and can be tens of nautical miles in radius.

AOPA is concerned that the Draft EA does not adequately assess the airport and airspace impacts that commercial space launches will have on general aviation flight operations. With airspace and airport closures likely for some launch operations, this Draft EA is woefully inadequate at articulating what general aviation operators and local communities can expect. The publication of a NOTAM is mentioned but there are no details on what the NOTAM might consist of, or how far in advance these notices will be published. The FAA must address these gaps in information to ensure other airspace users are fully informed as to what the launch operations mean in terms of airport and airspace access and efficiency.

There would be an excessive economic hardship for those who need to detour, delay, or divert due to airspace or airport restrictions that could be as frequent as what is proposed in the Draft EA. Implementing TFRs that restrict general aviation operations has significant environmental consequences on the communities, businesses, and airports that this airspace overlies and on the aircraft operators themselves. Adverse impacts include economic disruption, increasing costs, shifting of aircraft routes, and limitations on the public's freedom to fly. These impacts must be identified and calculated in the draft EA. The communication of airport and airspace restrictions may also not be transmitted clearly to pilots, which would exacerbate the impact, as there is minimal information in the Draft EA that discusses this aspect. Bottom line, we do not believe integration of commercial space operations should happen at the expense of other airspace users.

Southern launch route concerning

The FAA's Draft EA outlines a proposed southern launch trajectory that would bring the rocket parallel to the east coast of Florida in order to support polar orbits. The FAA documentation is silent on what this route means as far as airspace impacts and simply states:

“...until SpaceX completes the LOA with Air Traffic Control for a southern launch trajectory that identifies any temporary airspace closures prior to launch, the FAA will not have the information necessary to determine the existence of any extraordinary circumstances deriving from such an LOA. The FAA would analyze any extraordinary circumstances and associated impacts before finalizing the operator LOA to the extent necessary under NEPA.”

This limited information is totally insufficient for the public to understand the significant airspace closures that may be required to accommodate such an operation from KSC and CCAFS. For example, AOPA anticipates this trajectory may require certain airports to be unavailable, all traffic between the Caribbean and Florida to cease, and all domestic north- and southbound traffic to be moved inland, which would cause flight delays and increased costs for civil aviation. Each event will be highly public and result in considerable workload for air traffic control. As the Draft EA does not contain enough information to understand the extent and magnitude of the airspace closures, we must go off what existing airspace closures look like, which makes this trajectory highly concerning.

We are concerned about the possibility of routine launches along this southern trajectory taking place from KSC and CCAFS. The Florida coast is the home of many large flight training operations and general aviation airports. The impact of shutting down these operations, even if for just several days a year, would be an economic impact that the FAA must assess as part of the NEPA process.

Conclusion

AOPA recognizes the importance of commercial space operations and is supporting their integration by participating in the FAA ARCs and other FAA sponsored working groups. We believe the various ARC recommendations could help inform a seamless integration and further support the case not to implement airspace and airport restrictions.

As provided, this Draft EA is too ambiguous for us to fully detail the potential impact any airport or airspace restrictions will have on general aviation in this area of the country. Due to the lack of details, the FAA must fully examine the potential impacts of the proposed increase in launch operations and establishment of a southern route on general aviation operations before entering into a final agreement, and, should there be an adverse effect expected, allow the public an opportunity to comment.

Thank you for reviewing our comment on this important issue. Please feel free to contact me at 202-509-9515 if you have any questions.

Sincerely,



Rune Duke
Senior Director, Airspace, Air Traffic, and Aviation Security

The Aircraft Owners and Pilots Association (AOPA) is a not-for-profit individual membership organization of General Aviation Pilots and Aircraft Owners. AOPA's mission is to effectively serve the interests of its members and establish, maintain and articulate positions of leadership to promote the economy, safety, utility, and popularity of flight in General Aviation aircraft. Representing two-thirds of all pilots in the United States, AOPA is the largest civil aviation organization in the world.