



RE: Blue Origin Scoping Commentary on FAA *Proposed Action to prepare an EIS to evaluate the potential environmental impacts of issuing a commercial launch Vehicle Operator License to SpaceX for the Starship-Super Heavy launch vehicle at Launch Complex 39A (LC-39A) at Kennedy Space Center (KSC), Florida*

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Blue Origin Florida, LLC (“Blue Origin”) is the current lessee of Space Launch Complex 36 (“LC-36”), and also leases from the United States Space Force (“USSF”) and occupies the properties known as Hangar S, Hangar O, Launch Complexes 1-4, and Launch Complex 12 all within the vicinity of the Proposed Action and located on Cape Canaveral Space Force Station (“CCSFS”). In addition, Blue Origin occupies a large manufacturing site at Kennedy Space Center (“KSC”) on Merritt Island, and a site located at Port Canaveral. Blue Origin employs over 2,700 full-time employees in Brevard County, including 449 employees at CCSFS that are directly impacted by local launch activities. Blue Origin has invested more than \$1 billion in capital expenditures to develop LC-36 as the first privately built heavy-lift launch complex in the world.

Blue Origin’s interests in the Proposed Action Environmental Impact Statement (“EIS”) include, but are not limited to: the safe and effective preservation and transportation of real and personal property (“Assets”) and personnel that will be impacted by the Proposed Action; the safety of personnel and Assets at KSC and nearby sites; the safety of personnel and Assets in the event of a launch or on-pad anomaly; the safety of personnel and Assets impacted by debris dispersion, blast overpressure, sonic boom overpressure, explosion, fire, air quality, noise, or other effects during launch, landing, or other operations, whether routine or anomalous; the safety of personnel and Assets due to an anomaly during ground transportation; the safety of personnel and Assets during a ground support equipment or facility anomaly; the safety of personnel from environmental contamination including but not limited to the dispersion of air toxins and/or use of hazardous materials; the preservation of historical and environmental resources at or around KSC under Blue Origin’s control, including those owned by USSF, NASA, or other U.S. Government entities; the safe and continuous access to the limited airspace and maritime resources necessary for Blue Origin to operate; and the safe and continuous access to common-use infrastructure and utilities.

### **EIS Overview**

This EIS assesses the FAA's proposed Federal Actions:

- 1) issuing a Vehicle Operator License to SpaceX, as well as potential future renewals or modifications to the Vehicle Operator License for operations that would be within the scope analyzed in the EIS; and
- 2) developing one or more formal agreements with SpaceX to outline notification procedures prior to, during, and after an operation including Notice to Air Missions (NOTAM), as well as issuing temporary airspace closures to ensure public safety in accordance with FAA Order 7400.2M, *Procedures for Handling Airspace Matters*.

### **SpaceX Operations**

SpaceX has already developed an operational launch site for Starship-SuperHeavy (“Ss-SH”) at a property known as Starbase in Boca Chica, Texas (“Starbase”). At Starbase, Starship and Super Heavy test missions have been subject to environmental scrutiny due to their impact on the local environment and community.<sup>1</sup> Blue Origin understands that SpaceX intends to launch 44 Ss-SH

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<sup>1</sup> See, e.g., *Center for Biological Diversity, et. al. v. Fed. Aviation Admin., et. al. and Space Exploration Tech. Corp.*,



missions per year under a lease with NASA at LC-39A.

Ss-SH operations are expected to have a greater environmental impact than any other launch system currently operating at KSC or CCSFS. Ss-SH can hold up to an unprecedented 5,200 metric tons of liquid methane for propulsion, resulting in Qualified Distances for safety margins that potentially overlap the operational sites of other companies, the Government, and the public. The data quantifying these Qualified Distances has not been published, but given the anticipated Ss-SH launch rate and vehicle impact, the impact of Ss-SH operations at KSC may be even greater than at Starbase.

Accordingly, the EIS should thoroughly evaluate the considerable risks, alternatives, mitigations, and resources listed below. The issues raised herein are reasonably foreseeable.

### **Mitigations**

Mitigation measures not currently included in the Proposed Action should be considered, including but not limited to:

- Capping the rate of Ss-SH launch, landing, and other operations, including but not limited to test firings, transport operations, and fueling, to a number that has a minimal impact on the local environment, locally operating personnel, and the local community, in consideration of all risks and impacts, including but not limited to anomaly risks, air toxin and hazardous materials dispersion, road closures, and heat and noise generation.
- Government investment in additional launch infrastructure that would make more launchpads available to other entities in a manner that deconflicts Ss-SH operations from other launch providers at KSC and CCSFS to preserve the health and safety of their personnel and Assets.
- Government investment in additional infrastructure for KSC and CCSFS that would reduce the risk to other launch providers at KSC and CCSFS in order to preserve the health and safety of their personnel and Assets by diverting traffic from the Proposed Action area, including but not limited to improving the Roy D. Bridges Bridge to accommodate transport of large Assets.
- Limiting Ss-SH operations to particular, limited times to minimize and make predictable their impact on the local community, and allotting other launch providers the right-of-first-refusal or schedule priority for certain conflicting launch or other operational opportunities.
- Mitigating the effects of Ss-SH that would require evacuation or other operational pauses at other launch providers' launch sites through infrastructure improvements or other operational changes.
- Require SpaceX and/or the Government to indemnify third parties for any losses caused by or related to Ss-SH operations, including commercial disruption incurred due to the operation of Ss-SH.
- Institute independent mandatory penalties for SpaceX for conducting operations not included in an active EIS or other environmental restriction, violating a launch license, or any other laws, regulations, or other rules for operating.

### **Resources**



The public EIS scoping materials set forth certain resources that will be analyzed in the EIS. The direct, indirect, and cumulative impacts of the Proposed Action on the following resources should also be specifically be analyzed and evaluated during the EIS process:

Health and Safety:

- The health and safety of the population in the surrounding area, including Blue Origin personnel, U.S. Government personnel, other launch providers' personnel, as well as other local populations and residents, including those in Port Canaveral and at sea.
- The quality and safety of air, water, and ground resources as it relates to the release of toxic or hazardous materials in connection the Proposed Action or a following event.
- The standard of working conditions and quality of life for personnel operating on and others living, working, or recreating in the vicinity of the Proposed Action area, including Port Canaveral and at sea, as impacted by operational interruption, noise, pollution, or operating hazards.
- Impacts on the water supply or water resource depletion based upon the Proposed Action.

Transportation, Infrastructure, and Utilities:

- The safety and operability of Blue Origin Assets, U.S. Government Assets, other launch providers' Assets, common-use infrastructure supporting Blue Origin and other users of KSC and CCSFS, and the Assets of local populations and residents in the community surrounding the Cape, including Port Canaveral and those at sea.
- The capacity of the roadways leading to, around, or in the vicinity of the Proposed Action area, given the impacts of the Proposed Action on traffic disruptions and the operational need for other launch providers to traverse the Proposed Action area.
- The capacity, safety, and operability of utilities expected to be used by SpaceX for the Proposed Action or later operations, or potentially impacted by the Proposed Action.
- The maintenance and long-term sustainability of common-use infrastructure used for or impacted by the Proposed Action or later operations.
- Impacts on evacuation routes due to hurricane or other unforeseen events, including but not limited to the use of roads to transport Ss-SH away from the Proposed Action area.

Airspace and Maritime Resources:

- The usable airspace necessary for other launch providers and commercial, general, civil, and military aviation as affected by the impact, duration, and frequency of airspace interruption, disruption, or closure due to Ss-SH launch and landing operations.
- The usable and/or protected/closed maritime traffic area necessary for operation by other launch providers and commercial, recreational, civil, and military maritime users, including Port Canaveral and its users, as affected by the impact, duration, and frequency of maritime traffic interruption, disruption, or closure due to Ss-SH launch and landing operations, including NOTMARS and other hazard avoidance.
- The operational capacity of Port Canaveral, in consideration of traffic interruption, disruption, or closure, including navigation, stevedoring and other loading/unloading activities, onshore transportation and processing of people or goods, and onshore traffic to and from Port Canaveral.

Thank you for your consideration of these important risks, alternatives, mitigations, and resources.