Introduction

Pursuant to the provisions of the National Environmental Policy Act (NEPA), the Department of the Air Force's Environmental Impact Analysis Process (EIAP) (32 CFR Part 989), the US Space Force (USSF) has prepared a Supplemental Environmental Assessment (SEA) to identify and evaluate the potential impacts to the natural and human environment associated with the proposed launches and launch pad improvements associated with Space Florida's proposed construction of a third launch pad (referred to as SLC-20C) for small launch vehicles at Space Launch Complex 20 (SLC-20) on Cape Canaveral Space Force Station (CCSFS), Florida. The *Supplemental Environmental Assessment for the Reconstitution and Enhancement of Space Launch Complex 20 Multi-User Launch Operations, Cape Canaveral Space Force Station, Florida* is attached and incorporated by reference.

Purpose of and Need for Proposed Action

The purpose of the Proposed Action is to deploy a small-class space transportation system to meet United States (US) policy regarding space. It is US policy to ensure that the US has the capabilities necessary to launch and insert necessary national security payloads into space (10 USC Section 2273, *Policy regarding assured access to space: national security payloads*). The Proposed Action is needed to fulfill the US Congress' grant of authority to the Secretary of Defense, pursuant to 10 USC Section 2276(a), *Commercial space launch cooperation*, that the Secretary of Defense is permitted to act to:

- Maximize the use of the capacity of the space transportation infrastructure of the US Department of Defense (DoD) by the private sector in the US.
- Maximize the effectiveness and efficiency of the space transportation infrastructure of the DoD.
- Reduce the cost of services provided by the DoD related to space transportation infrastructure at launch support facilities and space recovery support facilities.
- Encourage commercial space activities by enabling investment by covered entities in the space transportation infrastructure of the DoD.
- Foster cooperation between the DoD and covered entities.

The Proposed Action is also needed for Space Florida to match that growth within their current SLC-20 leased boundary to provide an additional launch pad, available to multiple users, whose use is strictly dedicated to small, vertical-lift launch vehicles.

Description of the Proposed Action and Alternatives

The 2020 EA focused on the Real Property Agreement (RPA) to license 220 acres (89 ha) of land to include SLC-20 from USSF to Space Florida to develop a multi-user launch capability. The 2020 EA included refurbishing and enhancing existing launch pads, SLC-20A and SLC-20B, operating small-to-medium-lift vehicles from by commercial users such as Firefly under an agreement with Space Florida, and transporting vehicle stages from Exploration Park to SLC-20. Since the 2020 EA was finalized, Space Florida has developed a business case for another commercial launch operator to launch small-lift vehicles from SLC-20. The Proposed Action includes the construction of an additional multi-user launch pad, SLC-20C, to support launch operations, transporting vehicle stages from Exploration Park and off-site payload processing facilities (e.g., Astrotech), and operating small- lift launch vehicles only at SLC-20C. In addition to constructing SLC-20C, an approximate 5-acre development area within the Proposed Action area would be used for non-launch/engineering testing-related processing, storage, or operational-related program needs. The expected infrastructure at SLC-20C includes:

- Launch pad area and access road.
- Concrete pads for propellant storage tanks (oxidizers/fuels).
- Lightning protection system.
- Pad lighting.
- Power, data, communications, and basic pad water systems.
- Pad deluge collection/containment basin.

Vehicle-specific dedicated mobile infrastructure, to include temporary propellant storage and loading systems, flame deflectors, sound suppression systems, temporary umbilical towers, and mobile service structures, would be supplied in the future by a vehicle operator to Space Launch Delta 45 (SLD 45) for approval and to the Federal Aviation Administration (FAA) as part of their licensing review process.

The Proposed Action includes changes to the SLC-20A and SLC-20B areal footprints to accommodate future expansion, if needed. No additional vertical structures are being proposed at SLC-20A or SLC-20B as part of these footprint changes.

Alternatives Eliminated from Further Consideration

Sites in states other than Florida were not considered because Space Florida has a statutory constraint to provide service within Florida and the unique requirements to access orbital launch range assets. Other launch sites within Florida, in accordance with

the statutory constraints of Space Florida's charter, were considered in the 2020 EA, but none of the sites met the screening criteria. Cecil Field and the Titusville-Cocoa Airport Authority could support commercial aerospace activities; however, these locations do not have the capability to support vertical-launch vehicles without overflight of inhabited areas. Therefore, these two locations did not meet the selection criteria for safety, operational flexibility, availability, ability to handle small-lift class vertical-launch vehicles, or compatibility with the Cape Canaveral Space Force Station Master Plan.

Space Florida has a RPA and a Launch Site Operator License (LSOL) for SLC-46, a multi-use vertical-launch facility on the easternmost end of CCSFS east-southeast of the Skid Strip. Although Space Florida operates this launch complex for commercial purposes, it is a shared-use facility with the US Navy; therefore, DoD missions have priority for its use, which impacts use by commercial customers. In addition, since it is close to the CCSFS Skid Strip, the lightning protection towers limit the size of vehicles that can be launched from that site. Therefore, SLC-46 does not meet the selection criteria for multi-user capability, operational flexibility, and availability.

Different site configurations or locations within SLC-20 were not considered due to known environmentally sensitive areas and safety hazard zones that would restrict operational flexibility and result in increased long-term operational costs.

Other alternative launch sites within CCSFS would require that Space Florida obtain an additional RPA for those locations, which does not meet the selection criteria of constructing a third launch pad within Space Florida's current licensed boundary.

Description of the No Action Alternative

Under the No Action Alternative, Space Florida would not construct an additional launch pad at the north end of SLC-20 and transport vehicles stages from Exploration Park and off-site payload processing facilities (e.g., Astrotech) or operate small-lift launch vehicles at SLC-20C. However, under the No Action Alternative, the Proposed Action as documented in the October 28, 2020, FONSI would be implemented. To date, the RPA is completed and construction at SLC-20A and SLC-20B is expected to begin in calendar year 2026 with launch operations beginning in 2027 or 2028.

Summary of Environmental Findings

Environmental analyses focused on the following areas: noise, biological resources, cultural resources, air quality and climate change, water resources, health and safety, Section 4(f) Properties, hazardous material, solid waste, and hazardous waste, geology and soils, utilities, land use and coastal resources, visual resources and effects, socioeconomics, environmental justice and children's environmental health and safety

risks, natural resources and energy supply, wild and scenic rivers, farmlands, airspace and marine transportation management, and cumulative impacts. USSF has concluded that no significant impacts would result to these resources.

Mitigations

SLD 45 shall take steps as appropriate to the action and shall monitor these as necessary to ensure that Space Florida implements avoidance, minimization, and/or mitigation measures as set forth in the Final SEA under the various impact categories. These avoidance, minimization, and mitigation measures include:

- Avoidance and minimization measures, as well as reporting requirements, identified in Endangered Species Act consultations with the National Marine Fisheries Service and the US Fish and Wildlife Service.
- Mitigation for the 0.95 acre of wetland impact through the purchase of private wetland mitigation bank credits or other approved regulatory means.

Finding of No Significant Impact

Based on my review of the facts and analyses in the attached SEA, which is hereby incorporated by reference, conducted under the provisions of NEPA, 42 U.S. Code 4321 et seq., and EIAP, 32 CFR 989, I conclude that the Proposed Action would have no significant environmental impact, either by itself or cumulatively with other known projects. Accordingly, an Environmental Impact Statement is not required. This analysis fulfills the requirements of NEPA, and the EIAP. The signing of this FONSI completes the EIAP.

Finding of No Practicable Alternative (FONPA)

Pursuant to Executive Orders 11988, 11990, and 13690 and considering all supporting information, I find no practicable alternative to the Proposed Action, which will impact floodplains and wetlands. As noted in the attached EA, no practicable alternatives would avoid all impacts or further minimize impacts to wetlands based on conceptual sizing requirements and existing environmental constraints. Wetland impacts would be avoided and minimized to the greatest extent practicable during project design and permitting. The proposed improvements would be located within the floodplain because the majority of SLC-20A, B, and C are within the 100-year floodplain. The location of existing facilities and utilities, limited developable area outside the floodplain, and requirement to avoid listed species habitat to the greatest extent possible preclude placing these improvements outside the floodplain. This finding fulfills both the requirements of the referenced Executive Orders and the EIAP regulation, 32 CFR 989.14(g) for a FONPA.

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Marcia L. Quiqley, Col, USAF
Director, Space Force Mission Sustainment
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Date