DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration
Office of Commercial Space Transportation

Adoption of the Supplemental Environmental Assessment
and
Finding of No Significant Impact and Record of Decision
for
Proposed Modification of a Vehicle Operator License for SpaceX Falcon 9 Cadence Increase, Vandenberg Space Force Base, California and Offshore Landing Locations

Summary

The United States Space Force (USSF) acted as the lead agency, and the Federal Aviation Administration (FAA) was a cooperating agency, in the preparation of the June 2023 Falcon 9 Cadence Increase at Vandenberg Space Force Base Supplemental Environmental Assessment (SEA), which analyzed the potential environmental impacts of Space Exploration Technologies Corporation's (SpaceX) proposal to increase the annual cadence for Falcon 9 operations at Vandenberg Space Force Base (VSFB) and include additional downrange offshore landing locations in the Pacific Ocean. The SEA was prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA; 42 United States Code [U.S.C.] § 4321 et seq.); Council on Environmental Quality NEPA-implementing regulations (40 Code of Federal Regulations [CFR] parts 1500 to 1508); the Department of the Air Force's (DAF's) Environmental Impact Analysis Process (EIAP) 32 CFR Part 989; and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*.

SpaceX is currently authorized to launch the Falcon 9 from SLC-4E up to 12 times per year. SpaceX proposes to launch the Falcon 9 from SLC-4E up to 36 times per year. Following each launch, SpaceX also proposes to perform a boost-back and landing of the first stage up to 36 times, either downrange on a droneship or at SLC-4W at VSFB. SpaceX is not proposing to perform more than its currently-authorized 12 first stage landings at SLC-4W per year.

SpaceX must apply for a new or modified license from the FAA to increase the annual cadence for Falcon 9 operations at VSFB and include additional downrange offshore landing locations in the Pacific Ocean; SpaceX is also required to coordinate with the FAA in order for it to approve airspace closures for launch operations. Based on its independent review and consideration of the SEA, the FAA issues this Finding of No Significant Impact (FONSI) and Record of Decision (ROD) concurring with, and formally adopting, the analysis of impacts and findings in the SEA. The SEA supports the FAA's issuance of new licenses for Falcon 9 launches from VSFB, along with potential renewals and modifications to licenses within the scope of operations analyzed in the SEA. If, in a license application to the FAA, SpaceX makes changes to its proposed operations which fall outside the scope of the SEA, additional environmental review would be required prior to the FAA issuing a license associated with such an application.

After reviewing and analyzing this SEA, including all available data and information on existing conditions and potential impacts, the FAA has determined that the issuance of new, renewed, or modified licenses to SpaceX supporting up to 36 Falcon 9 operations per year at VSFB, including additional downrange offshore landing locations in the Pacific Ocean, and the approval of related airspace closures for launch operations of the Falcon 9, would not significantly impact the quality of the human environment within the meaning of NEPA. Therefore, the preparation of an Environmental Impact Statement (EIS) is not required, and the FAA is independently issuing this FONSI and ROD. The FAA has made this determination in accordance with applicable environmental laws and FAA regulations. The SEA is incorporated by reference into this FONSI/ROD.

For any questions or to request a copy of the SEA, contact:

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Purpose and Need

The purpose of SpaceX's Proposed Action is to provide greater mission capability to the Department of Defense (DOD), National Aeronautics and Space Administration (NASA), and commercial customers by increasing Falcon 9 launch cadence. The FAA forecasts that commercial launch operations will increase

in the United States from an all-time high in 2022 of 87 launches, to up to 186 launches by just 2026. The Proposed Action is needed so that SpaceX can continue to implement missions for the U.S. government while simultaneously meeting its ever-increasing commercial launch demands. Adding new northerly trajectories from VSFB is also needed to allow SpaceX to reach inclinations not currently available through existing trajectories.

The Proposed Action also fulfills Congress's grant of authority to the Secretary of Defense (SECDEF), pursuant to 10 U.S.C.USC § 2276(a), *Commercial Space Launch Cooperation*, that SECDEF is permitted to take action to:

"(1) maximize the use of the capacity of the space transportation infrastructure of the [DOD] by the private sector in the U.S.;

(2) maximize the effectiveness and efficiency of the space transportation infrastructure of the [DOD];

(3) reduce the cost of services provided by the [DOD] related to space transportation infrastructure at launch support facilities and space recovery support facilities;

(4) encourage commercial space activities by enabling investment by covered entities in the space transportation infrastructure of the [DOD]; and

(5) foster cooperation between the [DOD] and covered entities."

By increasing launch capacity at VSFB, the Proposed Action allows continued fulfillment of the National Space Policy guidance of promoting a "robust commercial space industry and strengthen [U.S.] leadership as the country of choice for conducting commercial space activities."

Proposed Action

Under the Proposed Action, SpaceX would launch the Falcon 9 from SLC-4E up to 36 times per year. Following each launch, SpaceX would perform a boost-back and landing of the first stage up to 36 times, either downrange on a droneship or at SLC-4W at VSFB. No more than 12 first stage landings would occur at SLC-4W per year, as currently authorized. There would be no change to the Falcon 9 specifications or launch/landing facilities as presented and analyzed in the 2011 *Final Environmental Assessment (EA) for Falcon 9 and Falcon 9 Heavy Launch Vehicle Programs from Space Launch Complex 4 East, Vandenberg Air Force Base, California* and subsequent NEPA documents outlined in the SEA. First

stage processing protocols associated with the Proposed Action would remain unchanged; however, they would increase in frequency to support 36 launches per year.

Federal Action

The FAA's Federal Action is to issue new licenses for Falcon 9 operations at VSFB, along with potential renewals and modifications to licenses within the scope of operations analyzed in the SEA. In addition, the FAA's Federal Action also includes issuance of temporary airspace closures. All launch operations would comply with the necessary notification requirements, including issuance of Notices to Air Missions (NOTAMs) and Notices to Mariners (NOTMARs), as defined in agreements required for a launch operator license issued by the FAA.

Alternatives

Alternatives analyzed in the SEA include (1) the Proposed Action, and (2) the No Action Alternative. Other alternatives considered but eliminated from further analysis in the SEA include Cape Canaveral Space Force Station Space Force Complex-40 and Kennedy Space Center Launch Complex-39A. The No Action alternative provides the basis for comparing the environmental consequences of the Proposed Action. Under the No Action Alternative, the FAA would not issue or modify licenses authorizing SpaceX to increase Falcon 9 operations at VSFB and would not issue temporary airspace closures to accommodate an increased launch cadence. SpaceX would continue to conduct up to 12 Falcon 9 launches and landings at VSFB and the currently approved downrange landing locations, as authorized by its current license.

Environmental Impacts

The following presents a brief summary of the potential environmental consequences considered in the SEA for the Proposed Action. This FONSI/ROD incorporates the SEA by reference and is based on the potential impacts discussed therein. The FAA has determined the analysis of impacts presented in the SEA represents the best available information regarding the potential impacts associated with the FAA's regulatory responsibilities as described in this FONSI/ROD. The potential environmental impacts from the Proposed Action and No Action Alternative were evaluated in the SEA for each environmental impact category identified in FAA Order 1050.1F. Chapter 3 of the SEA describes the affected environment and regulatory setting and identifies the USSF's environmental impact categories that are not analyzed in detail since there are no resources in the study area: Geology and Earth Resources, Land

Use and Aesthetics, Human Health and Safety, Hazardous Materials, Waste Management, and Pollution Prevention, Solid Waste Management, Environmental Justice, Children's Environmental Health and Safety Risks, Natural Resources and Energy Supply, Wild and Scenic Rivers and Visual Effects, Light Emissions, and Visual Resources/Visual Character.[1]

Chapter 4 of the SEA provides evaluations of the potential environmental consequences of the Proposed Action for each of the environmental impact categories in detail and documents the finding that no significant environmental impacts would result from the Proposed Action. A summary of the environmental analysis for each impact category is presented below.

Air Quality

Section 4.1.1 of the SEA states that under the Proposed Action long-term emissions would be generated by launch operations of the Falcon 9, static fire testing, a salvage ship, landing activities, booster roll-on-roll-off barge, daily operations, and use of a generator. The Proposed Action would not exceed *de minimis* thresholds for any of the criteria pollutants within 3 nautical miles (nm) of the shore and the Proposed Action would not exceed Prevention of Significant Deterioration major source thresholds for emissions produced between 0 nm and 12 nm from shore. Air pollutant emissions would not result in violations of any regional air quality standards or the National Ambient Air Quality Standards (NAAQS). Accordingly, rocket powered aircraft activities and associated operations would not have a significant environmental impact on regional air quality.

Airspace closures associated with commercial space operations would result in additional aircraft emissions mainly from aircraft being re-routed and expending more fuel. Minimal additional emissions would be generated from aircraft departure delays. The FAA has rarely, if ever, received reportable departure delays associated with commercial space transportation launches. Airspace closures as a result of the Proposed Action could increase up to a maximum of 36 times per year. Any delays in aircraft departures from affected airports would be short-term. Therefore, these emissions increases are not expected to result in an exceedance of a NAAQS for any criteria pollutant. Emissions from aircraft being re-routed would occur above 3,000 ft (the mixing layer) and thus would not affect ambient air quality. Therefore, airspace closures associated with commercial space operations are not expected to result in significant air quality impacts.

[1] These impact categories are representative of the categories identified in FAA Order 1050.1F.

Furthermore, the Proposed Action emissions would not exceed the NAAQS and not delay timely attainment of the NAAQS. Thus, the Proposed Action would not result in significant air quality impacts (SEA Section 4.1, page 4-1).

Biological Resources (including Fish, Wildlife, and Plants)

Section 4.3.1 of the SEA states that during launches, landing, and static firings, noise levels up to 150 decibels (dB) L_{max} with sonic booms up to 5.0 per square foot (psf) would be produced at SLC-4.[2] It is expected these noises could elicit a startle response in terrestrial wildlife species with developed hearing abilities. Potentially, wildlife hearing thresholds could shift either permanently or temporarily in wildlife if they are active on the surface close to SLC-4 during launch, landing, or static fire events. Exceptionally little sound is transmitted between the air-water interface, and in-air sound would not have a significant effect on submerged animals. Because the affected area is relatively small and the noise events are temporary, behavioral disruptions are not expected and potential hearing threshold shifts would not have population level impacts. Therefore, the Proposed Action would not have a significant effect on wildlife resources.

Section 4.3.1 of the SEA states potential impacts on biological resources as a result of the Proposed Action include the following: indirect impacts resulting from water use, which is currently extracted from the San Antonio Creek Basin; disruption of breeding, foraging, or roosting behaviors from project-related noise; and abandonment of habitat, including breeding or roosting sites, due to project-related noise. USSF consulted with the U.S. Fish and Wildlife Service (USFWS) on these potential impacts. The USSF determined that the Proposed Action may affect, but is not likely to adversely affect the following species: Marbled Murrelet (bird), Southern Sea Otter, California Condor (bird), Unarmored Threespine Stickleback (fish), and the Tidewater Goby (fish). All applicable minimization, monitoring, and avoidance measures listed in the Biological Opinion (BO) would be implemented. There would be no effect on critical habitat for these species. USFWS concurred with this determination.

The USSF determined that the Proposed Action may affect, and is likely to adversely affect the following species: California Red-Legged Frog, Western Snowy Plover, California Least Tern. All applicable

[2] The Biological Opinion in Appendix A of the EA estimated that sonic booms produced during landing at SLC-4W would reach up to 8.5 psf at the immediate landing location. This estimate was based on earlier modeled data. As stated in Section 2.2.3, modeling of the past nine Falcon 9 missions conducted with first stage landing at SLC-4W have predicted a maximum sonic boom of between 2.0 and 5.0 psf.

minimization, monitoring, and avoidance measures listed in the BO would be implemented, and potential effects to these species would therefore be less than significant. For the Western Snowy Plover and the California Least Tern, Space Launch Delta (SLD) 30 would perform geospatial analysis to monitor the impacts of noise from the Proposed Action to assess any potential adverse impacts on the species at VSFB as the launch frequency increases and reaches full tempo. If adverse effects are found, SLD 30 would offset those effects by increasing predator management efforts on VSFB. USFWS concurred with the determination with minimization, monitoring, and avoidance measures in the BO.

Section 4.4.1 of the SEA states that the Proposed Action potentially impacts ESA-listed fishes (Southern California DPS steelhead, lower Columbia River Chinook ESU, Southern Oregon and Northern California Coast Coho ESU, Central California Coast Coho ESU, green sturgeon, oceanic whitetip shark, and scalloped hammerhead shark); ESA-listed sea turtles (green, loggerhead, olive ridley, hawksbill, and leatherback); MMPA-protected and ESA-listed Cetaceans; Guadalupe Fur Seal, and the Southern Sea Otter occurring within the ROI. The USSF has determined that the Proposed Action may affect, but is not likely to adversely affect these species. The USSF completed Section 7 consultation with the National Marine Fisheries Service (NMFS) for potential impacts on the species listed above and would implement all applicable minimization, monitoring, and avoidance measures in the BO and the environmental protection measures (EPMs).

Section 4.4.1 of the SEA states that Marine Mammal Protection Act (MMPA)-protected marine mammals have the potential to be disturbed during “roll-on-roll-off” (RORO) operations. However, no adverse effects are anticipated because the EPMs, including entering the harbor to the extent possible at high tides when pinnipeds are not present, limiting and restricting nighttime activities and the use of artificial lighting, and slowly starting any activities that are noisy, would serve to minimize and avoid any behavior disruptions. Given the authorizations and EPMs in place, including the required monitoring, the Proposed Action would not result in significant impacts on MMPA protected pinnipeds.

Section 4.4.1 of the SEA states that northern trajectories under the Proposed Action would not result in any impacts to marine reserves. Section 3.5.9.1 of the Channel Islands National Marine Sanctuary (CINMS) Final EIS describes spacelift operations originating from VSFB and potential sonic booms from these activities as “pre-existing activities” (NMFS 2007). In addition, impacts to the CINMS would be temporary. Therefore, the Proposed Action would not result in significant impacts on CINMS. The coastline from Purisima Point to just south of Point Arguello has been designated as the Vandenberg

State Marine Reserve (VSMR), within which no take of living marine resources is permitted except take incidental to the mission critical activities of VSFB. Those activities include ones that are important for supporting and defending U.S. launch, range, expeditionary, exercise, test, training, and installation operations, including, but not limited to, space-launch vehicles. The California Department of Fish and Wildlife (CDFW) and the USSF established a mutual Memorandum of Understanding that allows all active-duty members and their immediate families to fish in the VSMR, except for Surf Beach, where no take of marine life is allowed. Impacts on marine resources within the VSMR would be temporary and limited to sonic boom and landing noise. Therefore, the Proposed Action would not result in significant impacts on VSMR.

Therefore, the Proposed Action would not result in significant biological resources impacts (SEA Section 4.3.1, page 4-15 and 4.4.1, page 4-32).

Climate

Section 4.1.1. of the SEA states that FAA Order 1050.1F has not identified significance thresholds for climate and greenhouse gas (GHG) emissions. FAA has not identified specific factors to consider in making a significance determination for GHG emissions, especially as it may be applied to a particular project. Table 4.1.9 of the SEA discloses the greenhouse gas (GHG) emissions that would be produced under the Proposed Action and compares them against total national GHG emissions. Emissions produced under the Proposed Action would be approximately 23,565 metric tons of carbon dioxide equivalent (CO_2e) per year which is comparable to approximately 5,100 passenger vehicles driving for a year, or one year's worth of electricity for just over 4,500 homes. These emissions would make up approximately 0.00394% of national GHG emissions, which is an increase of 0.000246% from the baseline condition (existing conditions from current SpaceX activities, which includes 12 launch events). Airspace closures associated with commercial space operations would result in additional aircraft emissions mainly from aircraft being re-routed and expending more fuel, including carbon dioxide (CO_2). These temporary increases in aircraft emissions could increase up to a maximum of 36 times per year. The amount of time that affected aircraft spend being re-routed would be short-term and the number of aircraft that would be impacted per launch would not be expected to produce additional emissions that would have a notable impact on climate.

Therefore, the Proposed Action emissions would not result in significant climate impacts (SEA Section 4.1.1.8.1, page 4-6).

Coastal Resources

Section 4.7.1 of the SEA states that the Proposed Action would not adversely affect coastal uses or resources because measures would be taken to prevent and minimize impacts. Coastal access would be restricted during each launch event for up to 5 to 8 hours per event for purposes of public safety. The DAF has received concurrence from the California Coastal Commission (CCC) to close Jalama Beach County Park a maximum of 12 times per year. Launches from SLC-4E due to the Proposed Action would not cause an exceedance of this limit. For missions that have the potential to close Jalama Beach County Park, SpaceX would coordinate with SLD 30 to reduce the potential for park closures over a scrubbed launch. The USSF would offset a reduction in beach access by providing additional coastal access opportunities and improvements for the public in coordination with the CCC.

Section 4.7.1 of the SEA addresses potential impacts on special status species resulting from water use, disruption of breeding, foraging, or roosting behaviors, and abandonment of habitat including breeding or roosting sites, due to project related noise. The USSF worked with the USFWS and NMFS to develop EPMs that are included as part of the Proposed Action to reduce impacts on biological resources. The impacts to special status marine species associated with launch activities is permitted under an independent NMFS Section 7 consultation.

Section 4.7.1 of the SEA states that the Proposed Action does not include construction activities that would result in wetlands or surface waters being filled. Wastewater discharges that may occur during project activities. Discharges would continue to be managed in accordance with the Regional Water Quality Control Board letter for Enrollment in the General Waiver of Waste Discharge Requirements for SLC-4E Process Water Discharges and EPMs would be implemented to further reduce and avoid impacts to water resources.

Section 4.7.1 of the SEA addresses potential impacts of debris on coastal environment. If under the rare occurrence the booster is unable to boost-back burn and landing and needs to be expended in the open ocean, boosters would not have the potential to affect coastal water resources because they are made of inert materials that would not impact water quality, and they would be expended well outside of the coastal zone. When a first stage booster is intentionally expended, the first stage is expected to break up upon atmospheric reentry, and any residual fuel is dispersed and evaporated such that there's none left when the vehicle debris hits the ocean. SpaceX attempts to recover potential debris where practicable and would offset impacts from marine debris through beach cleanups and make an annual

contribution to the California Lost Fishing Gear Recovery Project. Through complete and effective cleanup of recoverable debris and the offset of unrecoverable debris through removal of other marine debris, the Proposed Action would not result in significant impacts to coastal uses or resources.

Therefore, the Proposed Action would not result in significant Coastal Zone Management impacts (SEA Section 4.7, page 4-49)

Department of Transportation Act, Section 4(f)

Section 4.8.1 of the SEA states that the Proposed Action does not include any construction activities within, or actual physical taking of, a Section 4(f) property through the purchase of land or a permanent easement, physical occupation of a portion or all of Section 4(f) property, or alteration of structures or facilities on Section 4(f) property, nor would any new Section 4(f) properties be potentially impacted other than those analyzed in prior EAs and SEAs. Impacts to parks and beaches would result from their closure to the public during launch/landing events. For the safety of park visitors, the County Parks Department and the County Sheriff currently close the parks upon request from VSFB and under agreement between DAF and Santa Barbara County. All potential Section 4(f) properties in the ROI would experience sound levels less than 120 dB L_{max} during launch, SLC-4W landing, and static fire events. The 60 dBA Community Noise Equivalent Level (CNEL), used to define the area of potentially significant noise impacts to communities,[3] is entirely contained within VSFB and would therefore not affect any Section 4(f) properties. Given the history of beach and park closures for VSFB launches, the formal evacuation agreement in place, and the temporary nature of the closures, the FAA determined that the Proposed Action would not substantially diminish the protected activities, features, or

[3] Per Paragraph 11 of FAA Order 1050.1F, the Community Noise Equivalent Level (CNEL) may be used in lieu of DNL for FAA actions needing approval in California.

attributes of any of the potential Section 4(f) properties. Therefore, the Proposed Action would not result in a constructive use of any Section 4(f) property.

Furthermore, the Proposed Action would not result in significant impacts to Section 4(f) properties (SEA Section 4-8, page 4-50).

Historical, Architectural, Archeological, and Cultural Resources

Section 4.6.1 of the SEA states that since no ground-disturbing or landscape-altering actions are proposed, the area of direct impacts (ADI) or the Proposed Action is limited to auditory effects predicated on vibratory impacts. The ADI of the Proposed Action has been subjected to noise vibration levels that have exceeded 120 dB and sonic boom arcs that have exceeded 2 psf for many years with no reported and observed effect to the built environment and archeological resources.

Therefore, the Proposed Action would not result in significant impacts on historical, architectural, archeological, or cultural resources (SEA Section 4.6, page 4-47).

Noise and Noise-Compatible Land Use

Section 4.2.1 of the SEA addressed the four main noise components to Falcon 9 activities: 1) continuous engine noise created by the launch vehicle during static fire tests; 2) continuous engine noise created during ascent; 3) impulsive sonic boom created by the launch of the rocket as well as returning first stage; and 4) continuous engine noise as the first stage lands.

Noise (including engine noise and sonic booms) from individual launch (including landing) events and static fire engine tests is expected to be heard by people in the surrounding communities, including Lompoc Valley and City of Lompoc. Given the short duration (typically 2–3 minutes) of the launch noise and the relatively low received noise levels at sensitive receptors, the contribution of launch noise would be minimal and unlikely that CNEL levels would be elevated above 65 dBA as a result of a single launch or static fire event. Landing noise impacts would be less than the impacts from the launch of the vehicle, which have previously been analyzed as having less than significant impacts on the noise environment. Sonic booms are predicted to typically be between 0.5 and 1.5 psf in Lompoc. Since sonic booms up to 4.0 psf in the City of Lompoc are expected to rarely occur and as there have been no reports of damage to structures in the City of Lompoc during past sonic booms, there would be no significant impacts from the boost-back and landing at SLC-4. Given that noise from offshore landing

activities would occur far from sensitive receptors, there would be no significant impacts associated with implementation of the landings at the offshore locations. Temporary airspace closures resulting from Falcon 9 flights would not create noise impacts over sensitive land uses because aircraft would travel on existing en-routes and flight paths that are used on a daily basis to account for weather and other temporary restrictions. Any incremental increases in noise levels at individual airports would only last the duration of the airspace closure on a periodic basis and are not expected to meaningfully change existing DNL at the affected airports and surrounding areas.

Therefore, the Proposed Action would not result in significant noise impacts (SEA Section 4.2, page 4-7).

Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

The categories of environmental justice and children's environmental health and safety risks were not evaluated further because these resources would not be affected or there would be no change from what was analyzed in previous EAs.

Section 4.10.1 of the SEA addresses impacts to employment, housing and airlines. The Proposed Action would result in additional employment of 100 permanent staff at SpaceX to support the launch cadence increase at VSFB. This increase in permanent personnel is a small fraction of the civilian workforce of VSFB and Santa Barbara County and would not be expected to alter the existing levels of service for housing and social services on VSFB and the surrounding communities. The increase in personnel is expected to occur over time and SpaceX expects to hire a mix of local and non-local people. A variety of single-family homes and apartments are available in the greater Lompoc/Santa Maria area. The projected staff increase only represents approximately 1 percent of the planned housing units in this area. Additionally, depending on the proportion of local people hired, the need for housing new staff moving into the region from other areas would further decrease. While this increase in permanent personnel is not expected to alter existing levels of service for housing and social services on VSFB and the surrounding communities and is consistent with existing and planned land uses at VSFB, the addition of added economic activity would result in a small but positive impact to the local economy.

Potential socioeconomic impacts from re-routing aircraft due to commercial space operations would be similar to re-rerouting aircraft for other reasons (e.g., weather, runway closures, wildfires, military exercises, etc.). Operations would not result in the closure of any public airport nor so severely restrict the use of surrounding airspace as to prevent access to an airport for extended time. Given existing

airspace closures for SpaceX operations are temporary and the FAA's previous analyses related to the National Airspace System (NAS) have concluded minor or minimal impacts on the NAS from commercial space launches, the FAA does not expect airspace closures would result in significant socioeconomic impacts.

Therefore, the Proposed Action would not generate significant negative socioeconomic impacts on the region and would generate a small positive impact (SEA Section 4.10, page 4-56).

Water Resources (including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

Wild and Scenic Rivers were not evaluated further because these resources would not be affected or there would be no change from what was analyzed in previous EAs.

Section 4.5.1.1 of the SEA states activities during launch operations would include the use of hazardous materials and generation of wastewater that could result in an adverse impact to water resources if not properly controlled and managed. Surface water within the ROI include: Spring Canyon, San Antonio Creek and Broad Ocean Area Best Management Practices would continue to be implemented to properly manage materials, and to reduce or eliminate project-associated runoff, which reduces the potential for adverse effects. Wastewater discharges would continue to follow the conditions of the Regional Water Quality Control Board (RWQCB) letter for Enrollment in the General Waiver of Waste Discharge Requirements for SLC-4E Process Water Discharges to eliminate potential adverse effects to water quality.

Section 4.5.1.2 of the SEA addresses impacts to ground water at SLC-4, Spring Canyon and San Antonio Creek. Wastewater discharges that may occur during project activities, including accumulated stormwater and non-stormwater discharges, would continue to be managed in accordance with the RWQCB letter for Enrollment in the General Waiver of Waste Discharge Requirements for SLC-4E Process Water Discharges. With adherence to federal, State, and local laws and regulations, impacts on groundwater would be less than significant. The Proposed Action's water usage would therefore be

negligible and not contribute in any measurable way to the collective effects of water extraction requirements for all VSFB operations.

Section 4.5.1.3 of the SEA states that discharge of any water would be prevented from entering Spring Canyon and USSF would implement riparian restoration efforts at the base of Spring Canyon drainage near Coast Road beyond SLC-4.

Therefore, the Proposed Action would not result in significant water resources impacts (SEA Section 4.5, page 4-43).

Interagency and Intergovernmental Coordination and Consultation

Through the Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) process, 30 SLD notified and consulted with relevant Federal and State agencies on the Proposed Action and alternatives to identify potential environmental issues and regulatory requirements associated with project implementation. This coordination fulfills the Interagency Coordination Act and Executive Order (EO) 12372, Intergovernmental Review of Federal Programs (14 July 1982).

Public Involvement

On April 7, 2023, the USSF published the Draft EA and Draft FONSI on the USSF's website at https://www.vandenberg.spaceforce.mil/, beginning the public comment period. The USSF provided a public notice of the availability of the Draft SEA for public review and comment through local newspaper advertisements. The public comment period ended on May 7, 2023. The USSF received four comments and considered all public comments when preparing the Final SEA. Responses to the public comments are located in Appendix J of the SEA.

Cumulative Impacts

This FONSI/ROD incorporates by reference the SEA, which addresses the potential impacts of past, present, and reasonably foreseeable actions that would affect the resources impacted by the Proposed Action. These actions include current and future aircraft operations at the airports, rocket launches, rocket engine testing, development in the local area related to activities at VSFB, and any other development that may occur as a result of economic growth in the area. Given that the Proposed Action would not result in aircraft operational changes at VSFB, and would result in a negligible increase over

past, present, and reasonably foreseeable future operations, the Proposed Action would not result in significant cumulative impacts.

Agency Finding and Statement

The FAA has determined that no significant impacts would occur as a result of the Proposed Action. Therefore, the preparation of an EIS is not warranted and no mitigation measures beyond the ones identified by USSF discussed in the SEA are required as a condition of approval and a FONSI/ROD in accordance with 40 CFR §1501.6 is appropriate. As stated in the SEA, the USSF will ensure implementation of all applicable avoidance, minimization, and mitigation measures.

In accordance with CEQ regulation 40 CFR § 1506.3, paragraph 8-2 and FAA Order 1050.1F, the FAA has conducted an independent review and evaluation of the SEA proposed increase of the annual cadence for Falcon 9 operations at Vandenberg Space Force Base (VSFB) and include additional downrange offshore landing locations in the Pacific Ocean. The FAA has determined that the SEA and its supporting documentation, as incorporated by reference, adequately assess and disclose the environmental impacts of the FAA's Federal Action and that the adoption of the SEA by the FAA is authorized.

Accordingly, the FAA adopts the SEA, appendices, and all information identified therein, incorporated by reference, and made publicly available.

After careful and thorough consideration of the adopted SEA and the facts contained herein, the undersigned finds that the FAA's Federal Action is consistent with existing national environmental policies and objectives as set forth in Section 101 of NEPA and other applicable environmental requirements and will not significantly impact the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(C) of NEPA. Therefore, an EIS will not be prepared.

The undersigned has carefully considered the FAA's statutory mandate under 49 U.S.C. § 40103 to ensure the safe and efficient use of the National Airspace System as well as the other aeronautical goals and objectives discussed in this SEA. The undersigned finds that the FAA's Federal Action provides the best approach for meeting the purpose and need of that action.

Accordingly, under the authority delegated to the undersigned by the Administrator of the FAA, the undersigned approves and authorizes all necessary agency action to implement the FAA's Federal Action.

This decision signifies that applicable federal environmental requirements relating to the FAA's Federal Action have been met. The decision enables the FAA to implement that action.

APPROVED: _____ DATE: _____

STACEY MOLINICH ZEE

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Date: 2023.06.06 16:17:21 -04'00'

Stacey M. Zee
Manager, Operations Support Branch

Right of Appeal

This FONSI/ROD constitutes a final order of the FAA Administrator and is subject to exclusive judicial review under 49 U.S.C. § 46110 by the U.S. Circuit Court of Appeals for the District of Columbia or the U.S. Circuit Court of Appeals for the circuit in which the person contesting the decision resides or has its principal place of business. Any party having substantial interest in this order may apply for review of the decision by filing a petition for review in the appropriate U.S. Court of Appeals no later than 60 days after the order is issued in accordance with the provisions of 49 U.S.C. § 46110.