DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration
Office of Commercial Space Transportation

Adoption of the Environmental Assessment
and
Finding of No Significant Impact
for
Multi-Use of Launch Complexes 39A and 39B, John F. Kennedy Space Center, FL

Summary

The National Aeronautics and Space Administration (NASA) acted as the lead agency, and the FAA was a cooperating agency, in the preparation of the June 2013 *Environmental Assessment for Multi-Use of Launch Complexes 39A and 39B, John F. Kennedy Space Center, FL* (EA). The EA analyzes the potential environmental impacts of enhancing Kennedy Space Center (KSC) spaceport capabilities by modifying Launch Complexes (LC) 39A and LC 39B to facilitate the processing and launch of a variety of vertical launch vehicles from either complex by both commercial and governmental entities. The EA considers constructing a horizontal integration facility (HIF), installing rocket propellant 1 (RP-1) storage tanks, and allowing multiple users to launch vehicles from LC 39A and LC 39B. Launch vehicles analyzed in the EA include the Atlas V, Delta IV, Delta IV Heavy, Liberty, Falcon 9 v1.0, Falcon 9 v1.1,[1] Falcon Heavy, Antares, RSLV-S, Athena IIc, Xaero, and the Space Launch System (SLS). The EA was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended (42 United States Code [U.S.C.] §§ 4231–4347); the Council on Environmental Quality NEPA implementing regulations (40 Code of Federal Regulations [CFR] §§ 1500–1508); NASA Procedural Requirements 8580.1 (NASA NEPA management requirements); and FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*.[2]

[1] Subsequent to NASA publishing the EA, SpaceX developed the Falcon 9 v1.2, a newer version of the Falcon 9 launch vehicle. The Falcon 9 v1.2 has 0.21 million pounds force more thrust and 5 and 18 percent more propellant in the first and second stages, respectively, than the Falcon 9 v1.1. The FAA has determined that this increase in thrust and propellant would not result in significant impacts on the human environment.

[2] Subsequent to NASA publishing the EA, the FAA issued its revised NEPA-implementing order: FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures.* Until recently, the FAA had yet to receive a license application for

As the activities considered in the EA would require Federal actions (as defined in 40 CFR § 1508.18) involving NASA and the FAA, the EA was prepared to satisfy the NEPA obligations of both agencies. The FAA's Federal action in this matter pertains to its role in issuing licenses for the operation of commercial launch and reentry vehicles at launch sites. NASA issued a FONSI on February 20, 2014, which stated the potential environmental impacts associated with the Proposed Action would not individually or cumulatively result in a significant impact on the quality of the human environment, and therefore, preparation of an Environmental Impact Statement (EIS) was not required. Subsequent to issuing its FONSI, NASA signed a property agreement with Space Exploration Technologies Corp. (SpaceX) for use and operation of LC 39A for the next 20 years.[3]

The FAA recently received a launch license application from SpaceX to launch the Falcon 9 v1.2 at LC 39A. The FAA expects to receive launch license applications from SpaceX for the Falcon Heavy at LC 39A as well. Based upon its independent review and consideration of the EA, the FAA issues this FONSI concurring with the analysis of impacts and findings in the EA and formally adopts the EA to support the issuance of launch licenses to SpaceX for Falcon 9 and Falcon Heavy launches at LC 39A. The FAA also may rely on the EA as its environmental review to support future issuances of launch licenses for operation of any of the other vehicles that are bound by the analysis in the EA for launches at LC 39B. Upon receiving a launch license application for operations at LC 39A or LC 39B, the FAA will review the applicant's proposed operations to determine if the scope of activities falls within the scope of the EA. If proposed operations fall outside the scope of the EA, additional environmental analysis will be required prior to the FAA issuing or modifying a license.

After reviewing and analyzing available data and information on existing conditions and potential impacts, the FAA has determined that issuing launch licenses to SpaceX for Falcon 9 v1.2 and Falcon Heavy launches at LC 39A would not significantly impact the quality of the human environment within the meaning of NEPA. The FAA made this determination in accordance with all applicable environmental laws. The EA is incorporated by reference in this FONSI.

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launch operations at LC 39. Now that the FAA is evaluating a license application for Falcon launches at LC-39A, the FAA is adopting the EA and issuing this FONSI. The EA and this FONSI comply with FAA Order 1050.1F.

[3] See: http://www.nasa.gov/content/nasa-spacex-sign-property-agreement-for-historic-launch-pad.

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Purpose and Need

As detailed in the NASA Authorization Act of 2010 and the Space Act of 1958, as amended, NASA is directed to expand commercial uses of space and the space industry. Accordingly, the purpose of NASA's action is to expand its spaceport capabilities to include the processing, launch, and recovery of various classes of vertically launched rocket-powered vehicles. This will enable improved access to KSC's space launch and test operation capabilities by NASA, as well as commercial and other non-NASA users; advance NASA's mission by fostering a commercial space launch and services industry; and improve the return on taxpayer investment of KSC spaceport facilities through expanded use and improved utilization. NASA will be able to meet the specific objectives of U.S. space exploration by allowing for multiple users, both governmental and commercial, to process and launch space vehicles from LC 39A and LC 39B.

The purpose of FAA's action is to fulfill the FAA's responsibilities as authorized by Executive Order 12465, *Commercial Expendable Launch Vehicle Activities* (49 *FR* 7099, 3 CFR, 1984 Comp., p. 163), and the Commercial Space Launch Act, 51 U.S.C. Subtitle V, ch. 509, §§ 50901-50923) for oversight of commercial space launch activities, including licensing launch activities. The need for FAA's Proposed Action results from the statutory direction from Congress under the Commercial Space Launch Act, 51 U.S.C 50901(b) to, in part, "protect the public health and safety, safety of property, and national security and foreign policy interests of the United States" while "strengthening and [expanding] the United States space transportation infrastructure, including the enhancement of United States launch sites and launch-site support facilities, and development of reentry sites, with Government, State, and private sector involvement, to support the full range of United States space-related activities."

Proposed Action

The FAA's Proposed Action is to issue launch licenses to SpaceX to conduct Falcon 9 v1.2 and Falcon Heavy launches at KSC LC 39A. The EA analyzed the construction of a HIF at one or more of five possible locations, installing RP-1 storage tanks at either individual locations or a common area, and allowing multiple users to conduct launches (up to 24 annual launches total, no more than two launches per

month) from LC 39A and LC 39B. The FAA has no Federal action associated with the construction activities discussed in the EA. Therefore, this FONSI addresses only those aspects of the activities considered in the EA for which the FAA has regulatory authority, namely the issuance of launch licenses for the operation of the Falcon 9 v1.2 and Falcon Heavy.

Alternatives

Alternatives considered in this FONSI include (1) the Proposed Action and (2) the No Action Alternative. Under the No Action Alternative, the FAA would not issue launch licenses to SpaceX to conduct commercial Falcon launches at LC 39A. The No Action Alternative would not meet the purpose and need for the action.

Environmental Impacts

The following presents a brief summary of the potential environmental impacts considered in the EA as they relate to launches. This FONSI incorporates the EA by reference and is based on the potential impacts discussed in the EA. The FAA has determined the analysis of impacts presented in the EA represents the best available information regarding the potential impacts associated with the FAA's regulatory responsibilities described in this FONSI. Although not required by FAA Order 1050.1E this FONSI includes the following additional resources (or impact categories) because they are addressed in the EA by the lead agency, NASA: geology and soils; human health and safety; and orbital and reentry debris.

Air Quality

Brevard County, including KSC, is located in an area classified as in attainment with respect to the National Ambient Air Quality Standards (NAAQS). Air emissions from Falcon launch operations include carbon dioxide (CO_2), carbon monoxide (CO), water vapor, nitrogen oxide (NOX), and carbon particulates. Most CO emitted is oxidized to CO_2 during after-burning in the exhaust plume. Only a small proportion of Falcon launch emissions would have the potential to affect ambient air quality (i.e., the area below the mixing height, defined as 3,000 feet above ground level), because the launch vehicle reaches the mixing height quickly after liftoff. The Proposed Action would not be expected to cause exceedances of the NAAQS. Therefore, the Proposed Action is not expected to result in significant air quality impacts [EA 4.3.3 at 112].

Biological Resources (including Fish, Wildlife, and Plants)

Operational impacts on habitat in the vicinity of launch pads on KSC are well documented. These impacts include destruction of plants in the path of exhaust plumes followed by regrowth during the same growing season. Occasionally, brush fires occur immediately after a launch, but these are quickly contained and confined, and vegetation recovers rapidly.

Wildlife species in the vicinity of LC 39A could be affected by launch operations, mainly by launch noise. Animal species differ greatly in their response to noise. Wildlife exposed to launch noise would likely have a startle response that could interfere with normal behaviors, including breeding, feeding, and sheltering. However, temporary noise impacts on wildlife are not expected to affect local or regional populations of wildlife, especially since this area is accustomed to launch operations. Because the noise associated with rocket launches is infrequent and of short duration, wildlife species are expected to return to normal behavior within a few minutes to hours following the disturbance. Falcon launches could result in sonic booms downrange, which would impact the ocean's surface. Due to the infrequency of the sonic booms and the low density of marine species in the surface waters of the ocean, sonic booms would not be expected to adversely affect marine species.

Potential effects on sea turtles and marine mammals also include direct strike by a descending item and potential degradation of water quality due to dispersion of onboard materials. These potential stressors are highly unlikely to expose any individual sea turtle or marine mammal such that a "take" would occur. Additionally, facility lighting and night launches have the potential to disorient nesting and hatching sea turtles. All facilities at LC 39A will have to comply with the KSC Light Management Plan. No significant impacts on marine species are expected.

NASA is responsible for ensuring that KSC activities do not adversely affect species listed under the Federal Endangered Species Act and marine mammals protected by the Marine Mammal Protection Act. The use and management of KSC are described in Kennedy Contract Agreement KCA-1649 Rev B., the Interagency Agreement between NASA and the U.S. Fish and Wildlife Service (USFWS). Under this agreement, the primary purpose of the land is NASA's utilization of it in partial fulfillment of its mission, with the secondary purpose being management by the USFWS as a national wildlife refuge. NASA works with the USFWS and the National Marine Fisheries Service to initiate consultation, as needed, when new species are listed or new activities are proposed that have not already been assessed for potential impacts. Accordingly, the Proposed Action would not result in significant impacts on biological resources [EA 4.5 at 120 and 123].

Climate

Falcon launches would result in the emission of greenhouse gases (GHGs). Though emissions from Falcon launches would increase the yearly levels of GHGs at KSC, the emissions would still be well below the Environmental Protection Agency (EPA) mandatory reporting threshold for stationary sources of 25,000 metric tons of carbon dioxide equivalent, and would represent a negligible fraction of GHG emission from KSC, the United States, or the world. Accordingly, the Proposed Action would not result in significant impacts related to climate or climate change [EA 4.3 at 135].

Coastal Resources

Florida's coastal zone includes the entire state and its territorial seas. KSC is explicitly excluded from the Florida Coastal Management Plan (FCMP), but still voluntarily complies with it. NASA determined its action is consistent with the FCMP. As part of the Coastal Zone Management Act (CZMA) determination process, NASA sent the draft EA to the Florida Department of Environmental Protection and Florida State Clearing House during the public review period. No comments were received. No adverse effects to the coastal zone are anticipated [EA 4.1 at 105].

Department of Transportation Act, Section 4(f)

LC 39A, LC 39B, the Crawlerway, and a portion of the KSC railroad track are listed on or eligible for listing on the National Register of Historic Places (NRHP), making them Section 4(f) properties. Section 4(f) properties located at KSC but further from LC 39 include the Vehicle Assembly Building, Launch Control Center, Press Site–Clock and Flag Pole, Central Instrumentation Facility, Headquarters Building, and Operations and Checkout Building—all of which are listed on the NRHP. Launch operations would not result in a physical use (direct taking) of these Section 4(f) properties.

In addition to assessing the potential for physical use, the FAA must consider the potential for constructive use of 4(f) properties that would not be temporarily or permanently taken. If there is the potential for constructive use, the FAA must determine if the impacts would substantially impair[4] the 4(f) property. Due to proximity of Section 4(f) properties to LC 39A, many of these properties would experience noise from proposed Falcon launches. Noise levels at these 4(f) properties would increase temporarily during launches. The increased noise level would only last a few minutes and would occur at

[4] Substantial impairment occurs when the protected activities, features, or attributes of the Section 4(f) property are substantially diminished.

most twice a month at each launch complex under the Proposed Action. For decades, these 4(f) properties have been experiencing increased noise levels during launches taking place at KSC and adjacent Cape Canaveral Air Force Station (CCAFS). Some of the launch vehicles (e.g., Space Shuttle and Titan IV) that have launched from CCAFS and KSC produced more thrust and louder noise than would occur under the Proposed Action. Due to the long history of these 4(f) properties experiencing noise from launches at CCAFS and KSC, and because there would only be a maximum of two launches per month at each launch complex, the FAA has determined the Proposed Action would not substantially diminish the protected activities, features, or attributes of any of the 4(f) properties identified, and thus would not result in substantial impairment of the properties. Therefore, the Proposed Action would not be considered a constructive use of these Section 4(f) properties and would not invoke Section 4(f) of the Department of Transportation Act [EA 4.1 at 105].

Farmlands

There are no prime or unique farmlands as defined by the Farmland Protection Policy Act located at KSC. Therefore, the Proposed Action would not affect farmlands [EA 2.4 at 22].

Geology and Soils

No unique geologic features of exceptional interest or mineral resources occur in the project area. The majority of the area surrounding LC 39 is considered disturbed and launch operations would have minimal impact to soils. The Proposed Action would not result in significant impacts on geology or soils [EA 4.3.6 at 126].

Hazardous Materials, Solid Waste, and Pollution Prevention

Hazardous materials and solid and hazardous wastes are managed and controlled in accordance with Federal and state regulations. KSC has established plans and procedures to implement these regulations. The use, management, and disposal of hazardous materials for operations are described in KNPR 8500.1, KSC Environmental Requirements. An active pollution prevention program is in place to reduce the use of hazardous materials and generation of hazardous waste.

All wastes generated by commercial entities must be properly containerized, stored, labeled, manifested, shipped, and disposed of in full regulatory compliance. Hazardous wastes generated by commercial entities and their contractors must be manifested, shipped, and disposed of under the

company's EPA identification number. Commercial entities are required to maintain copies of waste management records and manifests onsite and provide them for NASA review upon request.

Since all applicable Federal, state, county, and NASA rules and regulations would continue to be followed for the proper storage, handling, use, and disposal of hazardous materials and solid waste, no significant impacts related to hazardous materials, solid waste, or pollution prevention are expected under the Proposed Action [EA 4.3.8 at 130].

Historical, Architectural, Archeological, and Cultural Resources

KSC has a stewardship responsibility for managing the cultural resources on NASA-owned lands. To this end, KSC has developed an Integrated Cultural Resources Management Plan (ICRMP) that reflects NASA's commitments to the protection of its significant cultural resources. The ICRMP provides an inventory of significant cultural resources and a plan of action to identify, assess, manage, preserve, and protect these resources. It also includes a guide for impact analysis review and a set of standard operating procedures for ongoing cultural resource management activities. NASA continually follows stipulations identified in the ICRMP, existing memoranda of agreements, and the 2009 *Programmatic Agreement Among the National Aeronautics and Space Administration, John F. Kennedy Space Center, Advisory Council on Historic Preservation, and the Florida State Historic Preservation Officer Regarding Management of Historic Properties at the Kennedy Space Center, Florida* (2009 PA).

During preparation of the EA, NASA determined its action would constitute an adverse effect on LC 39A in accordance with the 2009 PA and consulted the State Historic Preservation Officer (SHPO). The SHPO concurred with NASA's finding and noted that KSC has previously completed and will be following the appropriate mitigation stipulations of the 2009 PA. The SHPO did not recommend any additional mitigation. Therefore, the FAA's Proposed Action would not result in significant impacts on historical, architectural, archeological, and cultural resources [EA 4.3.7 at 127; EA Appendix A].

Human Health and Safety

Launch operations would comply with Occupational Safety and Health Administration regulations and all other applicable health and safety regulations. As part of reviewing a launch license application, the FAA conducts a safety review (per 14 CFR part 400). FAA regulations require the licensee to postpone commercial space launches if predicted risk of injury/casualty exceeds acceptable limits. Accordingly,

the Proposed Action is not expected to result in significant impacts related to health and safety [EA 4.3.1 at 107].

Land Use

The Proposed Action would not change land use or affect land use planning at KSC. The Proposed Action would occur at LC 39A, which is designated for space launch activities. The Proposed Action would not conflict with existing uses or values of the project area or other KSC properties. Thus, the Proposed Action would not result in significant impacts related to land use [EA 4.1 at 103–104].

Natural Resources and Energy Supply

Ground support activities are anticipated to have minimal impacts on the current wastewater treatment (domestic and industrial), potable water resources, electricity and natural gas, and communications on KSC. All of these utilities are currently available in the general vicinity of LC 39A, and tie-ins could be established without significantly affecting the local area. In some cases, utilities ducts would need to be laid, but these would be routed along roadways and other easements, areas that are already maintained for those purposes. All of the utilities and services are expected to be able to absorb the additional demands. Existing substations and wastewater treatment plants would have sufficient capacities for anticipated needs. Launch activities at LC 39A would require industrial wastewater permits for launch deluge water. Accordingly, the Proposed Action would not result in significant impacts on natural resources and energy supply [EA 4.2 at 105–106].

Noise and Noise-Compatible Land Use

The EA reported estimated launch noise levels for the SLS, because of all the launch vehicles evaluated in the EA, the SLS would produce the loudest noise.[5] Noise levels of the SLS are expected to be in the range of 130 A-weighted decibels (dBA) at the launch site, diminishing to 99–102 dBA at a distance of 3 miles. At the City of Titusville, noise levels are estimated to be 78–82 dBA. Launch noise would last approximately 20–30 seconds. Noise levels during a Falcon 9 v1.2 or Falcon Heavy launch are expected to be less than those produced by the SLS. With a maximum of two launches per month at LC 39A, launch-generated noise would not result in a significant impact, i.e., the Proposed Action would not increase noise by day-night average sound level (DNL) 1.5 decibels (dB) or more for a noise sensitive

[5] The SLS has more thrust than, and therefore would be louder than, the Falcon 9 v1.2 and Falcon Heavy.

area[6] that is exposed to noise at or above the DNL 65 dB noise exposure level, or that would be exposed at or above this level due to an increase, when compared to the no action alternative for the same timeframe.

Because the approved models identified in FAA's NEPA-implementing order for modeling noise levels of proposed actions are not suitable for predicting rocket launch noise, NASA implemented a non-standard noise methodology to predict noise levels of SLS launches. On June 28, 2016, the FAA Office of Environment and Energy determined the EA's noise analysis was appropriate and provided its approval.

Overall sound-pressure levels (OASPLs) in excess of 110 dB (the level at which structural damage claims could occur at a rate of 1 per 1,000 households) would be limited to a 2.8 mile radius from the launch site. No residential communities would be exposed to OASPLs in excess of 110 dB.

A sonic boom would be generated by the Falcon launch vehicle during ascent. The boom would reach Earth's surface at a distance downrange of KSC over the Atlantic Ocean and not affect coastal land areas.

In conclusion, the Proposed Action is not expected to result in significant impacts related to noise and noise-compatible land use [EA 4.3.4 at 114–115].

Orbital and Reentry Debris

Impacts from orbital and reentry debris are considered to be minimal due to the low reentry risk and the standards and processes in place. The risk that an individual will be hit and injured from re-entering debris is extremely low. Reentry risk estimates are supported by the fact that, over the last 40 years, more than 5,400 metric tons of materials are believed to have survived reentry with no reported casualties. The majority of debris that survives reentry lands in the ocean and sinks. Those objects that have come to rest on land have done so largely in unpopulated areas. Therefore, the Proposed Action is not expected to result in significant impacts related to orbital and reentry debris [EA 4.3.11 at 136–137].

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

Because operations would occur within KSC boundaries, and because most of the potential environmental impacts would occur at and within the vicinity of LC 39A, the Proposed Action would not adversely affect low-income or minority populations within the region. Launch operations have

[6] A noise sensitive area is an area where noise interferes with normal activities associated with its use. Normally, noise sensitive areas include residential, educational, health, and religious structures and sites, and parks, recreational areas, areas with wilderness characteristics, wildlife and waterfowl refuges, and cultural and historical sites.

moderate economic benefits, including increased demand in the workforce, higher revenues, and increased per capita income. While the population under the poverty threshold may not directly benefit through employment and income, it may indirectly benefit as regional economic health is improved through the proposed increase in commercial space exploration activity. The Proposed Action would have no high and disproportionate effects on children. The only location where children are concentrated in the vicinity of the project area is at the KSC Child Development Center, which is approximately 4 miles from LC 39A, and noise levels are expected to be greatly diminished at that distance from the launch pads. Thus, the Proposed Action is not expected to result in significant impacts related to socioeconomics, environmental justice, or children's environmental health and safety [EA 4.3.10 at 135–136; EA 5.0 at 145].

Visual Effects (including Light Emissions)

Short-term visual impacts could occur during Falcon launches. However, Falcon launch operations would not substantially degrade the existing visual character or quality of the site and its surroundings. Because KSC is located in industrialized areas, the visual sensitivity is low. Therefore, the Proposed Action is not expected to have significant impacts related to visual effects [EA 4.3.12 at 138].

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

Air emissions from Falcon launch operations include CO_2, CO, water vapor, NOX, and carbon particulates. Most CO emitted is oxidized to CO_2 during after-burning in the exhaust plume. Therefore, launches are not expected to adversely affect wetlands or floodplains [EA 4.3.2 at 108].

Launch activities at LC 39A would require industrial wastewater permits for launch deluge water. The individual launch pads' deluge water systems may directly connect to the sanitary sewer system to maintain the existing operational concept. Another option is to reuse launch deluge water.

The Proposed Action is expected to have minimal impact on groundwater quality. Surface water management systems at the site prevent transfer of any pollutants into the groundwater. Groundwater studies at LC 39A showed no clear evidence of metals accumulation in the surficial aquifer, nor did they show a cause-and-effect relationship between Space Shuttle launches and detectable concentrations of metals in the groundwater [EA 4.3.2 at 109].

There are no wild and scenic rivers (as designated by the Wild and Scenic Rivers Act) located within or near LC 39. The nearest wild and scenic river, the Wekiva River, is approximately 53 miles west of KSC. Therefore, the Proposed Action would not affect wild and scenic rivers [EA 2.4 at 22].

In summary, the Proposed Action is not expected to have a significant impact on water resources [EA 4.3.2 at 107–110].

Cumulative Impacts

This FONSI incorporates by reference the EA, which addresses the potential impacts of past, present, and reasonably foreseeable future activities at and within the vicinity of KSC that would affect the resources impacted by the Proposed Action. Due to the nature of the FAA's Proposed Action and the location of LC 39A (along the coast), only launch-related actions occurring at KSC would meaningfully interact in time and space with the Proposed Action such that potential cumulative impacts could result. Past, present, and reasonably foreseeable actions near LC 39A include vehicle launches and landings at KSC (including the Shuttle Landing Facility and LC 39B) and CCAFS. This section presents a brief summary of the potential cumulative environmental impacts considered in the EA, focusing on those FAA impact categories with the greatest potential of experiencing cumulative impacts: air quality, biological resources, and noise and compatible land use.

Air Quality

The Proposed Action, in addition to the past, present, and reasonably foreseeable actions in the project area, would result in a minor, temporary increase in air emissions. The cumulative emissions would not exceed any thresholds established under the Clean Air Act or jeopardize the attainment status of the region. All government and commercial launches at KSC and CCAFS occur individually, i.e., no launch overlaps in time or space with another launch. This avoids the potential for simultaneously combining impacts associated with exhaust plumes from multiple launch vehicles. Therefore, no significant cumulative impacts on air quality are expected to occur [EA 4.4.4 at 141].

Biological Resources (including Fish, Wildlife, and Plants)

Potential cumulative impacts on biological resources from the Proposed Action and other past, present, and reasonably foreseeable future actions at KSC and CCAFS include those types of direct and indirect impacts discussed above (e.g., temporary loss of vegetation from scorching or fires, wildlife exposure to launch noise). Compliance with the KSC exterior lighting requirements would minimize the potential for

disorientation impacts on nesting and hatching marine turtles from nighttime launches. Potential cumulative impacts on biological resources, including protected species, would be minimized through implementation of measures identified during NASA's consultation with the USFWS (as applicable), measures identified in environmental documents completed for other projects, measures to be incorporated in environmental documents currently under development for future actions, and compliance with the Interagency Agreement between NASA and the USFWS. Therefore, no significant cumulative impacts on biological resources are expected to occur [EA 4.4.6 at 142–143].

Noise and Noise-Compatible Land Use

When combined with other past, present, and reasonably foreseeable future actions at KSC and CCAFS, short-term increases in noise levels in the area surrounding KSC resulting from the Proposed Action are not anticipated to be significant. Long-term cumulative noise levels would not be expected to exceed the FAA's noise significance threshold. Each launch would occur separately, avoiding combined noise impacts from more than one launch at a time. Significant cumulative impacts related to noise and noise-compatible land use are not expected to occur [EA 4.4.5 at 142].

Agency Finding and Statement

The FAA has determined that no significant impacts would occur as a result of the Proposed Action and, therefore, that preparation of an Environmental Impact Statement is not warranted and a FONSI in accordance with 40 CFR Section 1501.4(e) is appropriate.

After careful and thorough consideration of the facts contained herein, the undersigned finds that the proposed 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 affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to Section 102(2)(c) of NEPA.

APPROVED: _____ DATE: 11/7/16

Dr. George C. Nield
Associate Administrator for
Commercial Space Transportation