

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Office of Commercial Space Transportation

AGENCY: Federal Aviation Administration (FAA)

ACTIONS: Finding of No Significant Impact (FONSI) and Record of Decision (ROD)

SUMMARY: The FAA participated as a cooperating agency with the National Aeronautics and Space Administration (NASA) in the preparation of the August 2009 *Environmental Assessment for the Expansion of the Wallops Flight Facility Launch Range* (the EA) in accordance with the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321-4347 (as amended) and Council on Environmental Quality NEPA implementing regulations (40 Code of Federal Regulations (CFR) Parts 1500 to 1508) to evaluate the potential environmental impacts of the proposed expansion of the Mid-Atlantic Regional Spaceport (MARS) at the NASA Goddard Space Flight Center Wallops Flight Facility (WFF). As the MARS expansion would require Federal actions (as defined in 40 CFR Section 1508.18) involving both NASA and the FAA, the EA was prepared to satisfy the NEPA obligations of both agencies. NASA, as the WFF property owner and lead agency, is responsible for ensuring overall compliance with applicable environmental statutes, including NEPA. The FAA (Office of Commercial Space Transportation) served as a cooperating agency in the preparation of the EA because of its role in (1) licensing the Virginia Commercial Space Flight Authority (VCSFA) which operates MARS as a commercial launch site and (2) issuing licenses or permits to operate commercial launch and reentry vehicles at MARS. The FAA is using the EA in this FONSI/ROD to support the modification or renewal of VCSFA's Launch Site Operator License and issuance of licenses or experimental permits for commercial launch and reentry vehicles at MARS.

Under the Proposed Action in the EA, NASA and MARS facilities would be upgraded to support up to and including medium large class suborbital and orbital expendable launch vehicle (ELV) launch activities from WFF. NASA's Preferred Alternative includes site improvements required

to support launch operations (such as facility construction and infrastructure improvements); testing, fueling, and processing operations; up to two static fire tests per year; launching up to six orbital-class vehicles per year from Pad 0-A; and the reentry of associated crew or cargo capsules. Implementation of NASA's Preferred Alternative would result in a maximum of 18 orbital-class vehicle launches from MARS Launch Complex 0 (twelve existing launches from Pad 0-B and six additional launches from Pad 0-A). As several different launch and reentry vehicles could launch from MARS Pad 0-A, the largest launch vehicle and payload (which could include a reentry vehicle), in terms of size, weight, and dimension, was chosen as the demonstration, or "envelope," vehicle and payload to provide a benchmark for assessing impacts on resources at WFF and the surrounding environment. Orbital Sciences Corporation's Taurus II would be the largest ELV expected to be launched from MARS Pad 0-A under the Proposed Action. Therefore, the Taurus II was selected as the envelope launch vehicle for purposes of the EA. Orbital Science Corporation's Cygnus Capsule and Space Exploration Technologies Corporation's Dragon Capsule were evaluated as potential reentry vehicles, because they may be carried by the Taurus II and Falcon 9, respectively.

NASA issued a FONSI on August 29, 2009, which stated that the environmental impacts associated with the Proposed Action would not individually or cumulatively have a significant impact on the quality of the human environment, and therefore the preparation of an Environmental Impact Statement (EIS) was not required.

Based on its independent review and consideration, the FAA issues this FONSI/ROD concurring with the analysis of impacts and findings in the EA and formally adopts the EA to support the modification or renewal of VCSFA's Launch Site Operator License and issuance of launch and reentry licenses or experimental permits to operate commercial vehicles at MARS. In addition, the FAA is using a May 2010 U.S. Fish and Wildlife (USFWS) Biological Opinion (as required by Section 7 of the Endangered Species Act) and a December 2009 USFWS consultation letter (as required by Section 4(f) of the Department of Transportation Act) to further support its environmental determination in this FONSI/ROD for modifying or renewing VCSFA's Launch Site Operator License and for issuing licenses or permits to operate commercial launch and reentry vehicles at MARS.

After reviewing and analyzing available data and information on existing conditions, potential impacts, and measures to mitigate those impacts, the FAA has determined that neither modification or renewal of VCSFA's Launch Site Operator License nor issuance of launch and reentry licenses or experimental permits to operate commercial vehicles at MARS are Federal actions that would significantly affect the quality of the human environment within the meaning of NEPA. Therefore, the preparation of an EIS is not required, and the FAA is issuing this FONSI/ROD. The FAA made this determination in accordance with all applicable environmental laws and FAA regulations. NASA's EA is incorporated by reference in this FONSI/ROD.

FOR A COPY OF THE ENVIRONMENTAL ASSESSMENT: Visit the following internet address: http://sites.wff.nasa.gov/code250/expansion_ea.html or contact Mr. Daniel Czelusniak, Environmental Specialist, Federal Aviation Administration, 800 Independence Avenue, SW, Washington, DC 20591, by e-mail at Daniel.Czelusniak@faa.gov, or by phone at (202) 267-5924.

PURPOSE AND NEED: The purpose of the action is to fulfill the FAA Office of Commercial Space Transportation's responsibilities, under the Commercial Space Launch Amendments Act (CSLA) and Executive Order 12465, for oversight of commercial space launch activities, including licensing of launch sites and launch and reentry activities. The FAA's proposed modification or renewal of the license to operate MARS as a commercial launch site, and issuing licenses or permits to operate commercial launch and reentry vehicles, would be consistent with the agency's responsibilities under the CSLA.

The need for action results from the statutory direction from Congress, FAA's regulations, and a Presidential Executive Order, which encourage, facilitate, and promote commercial space launches and reentries by the private sector and facilitate the strengthening and expansion of the U.S. space transportation infrastructure, in accordance with the applicable requirements.¹

¹ The Commercial Space Launch Amendments Act of 2004 (Public Law 108-492), the Commercial Space Transportation Competitiveness Act of 2000 (Public Law 106-405); Executive Order 12465, Commercial Expendable Launch Vehicle Activities (February 24, 1984); CFR Title 14, Aeronautics and Space, Parts 400-450, Commercial Space Transportation, Federal Aviation Administration, Department of Transportation; the Commercial Space Act of 1998 (Public Law 105-303); the U.S. Space Transportation Policy of 2004; and the National Space Policy of 1996 and 2006.

PROPOSED ACTION: Under the Proposed Action, the FAA would modify or renew VCSFA's Launch Site Operator License to operate MARS as a commercial launch site. The FAA could modify VCSFA's Launch Site Operator License in accordance with changes proposed in the EA, which include the following proposed changes:

- Modifications to the boat dock on the north end of Wallops Island to accommodate unloading of ELVs and spacecraft;
- Construction of a Payload Processing Facility, Payload Fueling Facility, Horizontal Integration Facility, and Liquid Fueling Facility;
- Construction of new roads and minor upgrades to existing roads to transport cargo;
- Construction of a new MARS launch complex including a pad access ramp, launch pad, and deluge system; and
- Minor interior modifications to existing facilities to support launches, including modifications to the launch control buildings, communication support systems, radar system, and antennas.

Additionally, the FAA could issue launch and reentry licenses or experimental permits to operate commercial vehicles at MARS Pad 0-A. The EA analyzed the potential environmental impacts of a maximum of six additional orbital-class vehicle launches per year that would occur at Pad 0-A, resulting in a maximum of 18 orbital-class vehicle launches from MARS (12 existing launches from Pad 0-B, and six additional launches from Pad 0-A). In addition to launches, static test firing of rocket engines (up to two per year) would occur at Pad 0-A. All commercial launch or reentry vehicles that would operate under a launch or reentry license or experimental permit would be expected to fall within the parameters analyzed in the EA (e.g., number of launches, type of vehicles, payload). Applicants proposing vehicle types and launch rates that are not substantially the same as addressed in the EA in terms of potential impacts could be subject to an additional or supplemental environmental review.

ALTERNATIVES CONSIDERED: Alternatives analyzed as part of this FONSI/ROD included (1) the Proposed Action and (2) the No Action Alternative. Under the No Action Alternative, the FAA would not modify or renew VCSFA's Launch Site Operator License and

would not issue commercial launch or reentry licenses or experimental permits to future applicants. Commercial launch vehicle operators would not be authorized to conduct commercial launch vehicle operations at MARS Pad 0-A, and VCSFA could only operate the commercial launch facility under the current terms and conditions of the existing Launch Site Operator License.

ENVIRONMENTAL IMPACTS

The following presents a brief summary of the potential environmental impacts considered in the EA. This FONSI/ROD 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/ROD.

Air Quality

Construction activities would generate fugitive dust and combustion emissions from equipment and vehicles. Operational emissions would occur from generators, boilers, vehicles, marine vessels, and equipment associated with preparations for launches. These operations would result in minor emissions of pollutants. NASA and MARS would obtain any necessary air emission permits from the Virginia Department of Environmental Quality (VDEQ) and would mitigate potentially adverse impacts to air quality, for both construction and operations, by implementing site-specific best management practices such as fugitive dust control and regular engine/system maintenance. Emissions from launches would consist primarily of rocket exhaust. In the area immediately surrounding the launch pad, short-term potentially adverse impacts resulting from rocket exhaust could include high temperature exhaust gases and elevated carbon monoxide concentrations. No violation of the National Ambient Air Quality Standards (NAAQS) is anticipated due to the EA's Proposed Action. Furthermore, no adverse impact from rocket exhaust beyond the immediate launch area is anticipated.

Biological Resources

Long-term adverse impacts to vegetation would occur due to the removal of trees and wetland vegetation due to the construction of the Payload Processing Facility, Payload Fueling Facility,

and road improvements. However, impacts would be localized and would not present a substantial adverse effect. Approximately 0.0156 acre of wetlands would be affected. As required by Section 404 of the Clean Water Act, NASA and MARS have obtained a Nationwide Permit from the U.S. Army Corps of Engineers for expansion of the WFF. Minor adverse effects on vegetation from launches would also occur but would be limited to a localized area around Pad 0-A. Short-term adverse impacts to wildlife and migratory birds may occur during construction activities, launches, and static fire activities. Long-term impacts may occur due to the loss of wetland and forest habitat. To mitigate impacts to wetlands, NASA and MARS would provide compensatory wetland restoration, enhancement, and preservation to ensure no net loss of wetlands and to improve habitat conditions on WFF property.

Spent ELV stages would fall and sink into the ocean many miles offshore and no adverse effects on marine species are anticipated as a result. Similarly, during a controlled, destructive reentry of the Cygnus Capsule, any surviving components that do not burn up in the atmosphere would be expected to land and sink in the ocean. The Dragon Capsule would land in the ocean during a controlled reentry and would be recovered by a recovery vessel. There is a remote possibility that surviving pieces of debris could initially present minor impacts to marine life or vessels on or near the ocean surface. However, once the pieces travel a few feet below the ocean surface, their velocity would be slowed to the point that the potential for direct impact on sea life would be low. Additionally, although highly unlikely, toxic materials from launch failures have a small potential to adversely affect marine mammals or managed fish species and their habitats in the vicinity of the project area. Implementation of emergency cleanup procedures would mitigate any impacts.

NASA consulted with the National Marine Fisheries Service (NMFS) regarding potential impacts to Essential Fish Habitat (EFH) from the proposed boat dock improvements. NMFS responded that the proposed boat dock improvements would not result in substantial adverse effects to EFH, managed species, or their prey species.

Initially, NASA consulted informally with the USFWS regarding effects of the EA's Proposed Action on listed sea turtles, piping plover, seabeach amaranth, and the candidate red knot.

During this consultation, NASA found that proposed construction would not adversely affect listed species. However, the exterior lighting on proposed facilities and the noise and vibration associated with larger ELV operations (i.e., static fire testing and launches) may adversely affect nesting sea turtles and piping plovers. To mitigate impacts, NASA would implement lighting management procedures, as appropriate, during sea turtle nesting season, and would continue to monitor impacts on the piping plover and establish “off limits” areas during nesting season. Due to the historically low density of nesting sea turtles within the action area, and with the implementation of the above described mitigation measures, no substantial effect to listed species would be expected.

NASA prepared a Biological Assessment for the EA in accordance with the Endangered Species Act and initiated formal consultation with the USFWS. Prior to the USFWS issuing a Biological Opinion, NASA published the EA. The USFWS issued a Biological Opinion on May 10, 2010, stating:

After reviewing the status of the piping plover, green sea turtle, leatherback sea turtle, loggerhead sea turtle, and seabeach amaranth, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service’s biological opinion that the ongoing and expanded orbital rocket program at WFF and other ongoing operations and use of the facility, as proposed, is not likely to jeopardize the continued existence of the piping plover, green sea turtle, leatherback sea turtle, loggerhead sea turtle, or seabeach amaranth, and is not likely to destroy or adversely modify designated critical habitat. Critical habitat for the piping plover and sea turtles has been designated, however, this action does not affect that area and no destruction or adverse modification of the critical habitat is anticipated.

The USFWS included terms and conditions that NASA must follow to be exempt from the prohibitions of Section 9 (“take”) of the Endangered Species Act. These terms and conditions set out in the USFWS’ Biological Opinion include the following:

1. NASA must continue to implement the Wallops Island Protected Species Monitoring Plan for the duration of the Proposed Action, and provide an annual report summarizing the survey and monitoring efforts, the location and status of all occurrences of the protected species that are recorded, and any additional relevant information. Reports should be provided to the USFWS’s Virginia Field Office in digital format by December 31 of each year.

2. NASA must report any evidence of potential nesting activity of green sea turtles or leatherback sea turtles on Wallops Island to the USFWS's Virginia Field Office within one business day of observing activity.

3. NASA must implement video monitoring of plover nests most likely to be affected by launch activities (those located close to launch pads) during launches to measure and record bird responses. This monitoring shall be conducted for at least each of the first 10 large rocket launches (those launches for which noise levels are expected to exceed 100 dB within potential plover nesting habitat) that occur after issuance of this Biological Opinion. If no plover nests are active within areas expected to be subjected to sound levels greater than 100 dB, other similar shorebird species nesting in similar habitat should be monitored as surrogates to provide information on species responses. Monitoring shall include measurement of actual sound intensity at the monitoring site during launch, weather conditions, and other factors which may contribute to responses. Monitoring shall take place two hours prior to, during, and at least two hours after the launch. Within five business days of each launch, a DVD of the monitoring and a report in digital format containing the additional measurements will be provided to the USFWS's Virginia Field Office. Following documentation of avian responses from the first launches, NASA may request USFWS concurrence to discontinue this monitoring. If this is not requested, or if concurrence is not provided, NASA must continue this monitoring.

4. NASA must develop a training and familiarization program for all security personnel conducting patrols in areas where listed species may occur. This training programming shall include basic biological information about all listed species and be sufficient to allow personnel to at least tentatively identify the species and provide basic information to recreational users about appropriate avoidance and minimization measures. This training should be offered to interested recreational beach users.

5. NASA must develop a reporting system so that any personnel who observe listed species or potential occurrences of listed species on WFF can provide the information to personnel who can investigate the report. The intent of this is to use every opportunity possible to implement avoidance and minimization measures. Within 60 days of the date of the Biological Opinion, NASA must provide the USFWS with an electronic draft of the reporting system for review and approval.

6. NASA must take care in handling any dead specimens of proposed or listed species that are found to preserve biological material in the best possible state. In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead specimens does not imply enforcement proceedings pursuant to the Endangered Species Act. The reporting of dead specimens is required to enable the USFWS to determine if take is reached or exceeded and to ensure that the terms and conditions are appropriate and effective. Upon locating a dead specimen, NASA must notify the USFWS's Virginia Law Enforcement Office and the USFWS's Virginia Field Office at the numbers and addresses provided in the Biological Opinion.

NASA has committed to implementing all the terms and conditions listed in the USFWS's Biological Opinion.

Cultural Resources

Ground disturbance would be located outside of areas designated as having moderate or high potential for archeological resources. No adverse effects on aboveground historic properties are anticipated. NASA consulted with the Virginia Department of Historic Resources (VDHR). VDHR concurred with NASA's determination that NASA's Proposed Action would not adversely affect any historic properties.

Geology and Soils

No adverse impacts to geologic resources are anticipated from the EA's Proposed Action. Construction activities would result in disturbance of the ground surface and would have the

potential to cause soil erosion. Additionally, spills or leaks that may occur during storage or transportation of materials would have the potential to affect soils. NASA and MARS would minimize adverse impacts to soils by acquiring Virginia Stormwater Management Program permits, as necessary, and developing and implementing site-specific Stormwater Pollution Prevention Plans and Erosion and Sediment Control Plans prior to ground-disturbing activities.

Land Use and Section 4(f) Resources

All construction activities and rocket launches would occur within Virginia’s Coastal Management Area. VDEQ concurred with NASA’s determination that NASA’s Proposed Action is consistent with the enforceable policies of the Virginia Coastal Resources Management Program.

NASA concluded the EA’s Proposed Action would not be considered a constructive or physical use of any Section 4(f) properties, and therefore, would not result in substantial impairment of Section 4(f) properties. On December 2, 2009, the FAA sent a letter to the USFWS summarizing NASA’s Section 4(f) determination and requesting written concurrence with the determination. On December 22, 2009, the USFWS signed the letter, concurring with NASA and the FAA.

Noise

Construction and transportation activities would have the potential to generate temporary increases in noise levels from heavy equipment operations. To mitigate impacts, NASA and MARS would require that workers wear hearing protection in accordance with Occupational Safety and Health Administration standards. Therefore, impacts to the occupational health of construction workers as a result of construction noise are not expected.

Launches and static test firing would create loud instantaneous noise that may be heard for several miles from WFF. The marshland and water surrounding Wallops Island act as a buffer zone for noise generated during rocket launches. The EA’s Proposed Action is not expected to have noise impacts on any non-compatible land use in the surrounding areas in excess of applicable thresholds of significance. To minimize public disturbance, NASA and MARS would

continue to notify the public in advance of planned operations via widely available media outlets, including the internet, local radio stations, and newspapers.

Physical Resources (Water Resources [Surface Water, Ground Water, Floodplains], Hazardous Materials, Pollution Prevention, and Solid Waste)

Surface Water

No direct discharges to surface waters, including wetlands, are anticipated. Construction activities, spills, or leaks during storage or transportation of materials, launch emissions, and launch failures would all have the potential to affect surface waters including wetlands. Any accidental release of contaminants or liquid fuels would be addressed in accordance with the existing WFF Integrated Contingency Plan (ICP).

Launch of a Taurus II would result in the emission of carbon monoxide (CO) and carbon dioxide (CO₂) at Pad 0-A. When CO and CO₂ combine with water vapor in the air, carbonic acid may form, which could result in the deposition of carbonic acid on the ground surface in the area surrounding the launch pad. The effects of carbonic acid deposition on the adjacent tidal wetland area would be minimal as carbonic acid is a weak acid normally found in rainwater. The natural buffering capacity of the nearby surface waters and wetlands would resist substantial changes in pH. Additionally, stormwater within the Pad 0-A complex would be retained in basins designed to facilitate infiltration and evaporation.

In the unlikely occurrence of a launch failure, spilled rocket propellant 1 (RP-1) could enter the tidal wetlands close to the launch pad. Because some propellant would likely be burned prior to failure, it is unlikely that the maximum amount of RP-1 held in the tanks would be spilled. NASA and MARS would follow the emergency response and cleanup procedures outlined in the WFF ICP.

Temporary adverse impacts on marine waters in the area immediately surrounding the north Wallops Island boat basin would occur during improvements to the dock. Additionally, spent ELV stages falling into the ocean would impact the marine environment. Similarly, during a controlled, destructive reentry of the Cygnus Capsule, any surviving components that do not

burn up in the atmosphere would be expected to land and sink in the ocean. The Dragon Capsule would land in the ocean during a controlled reentry and would be recovered by a recovery vessel. Based on past analyses, it is expected that the environmental impact of reentry from orbital debris would be negligible. Marine waters would be affected if a barge or vessel were to accidentally spill its fuels or lubricants into the ocean or estuary environment. Toxic concentrations are not anticipated in the open ocean due to the mixing and dilution rates associated with the wave movement and the vastness of the ocean environment. Therefore, adverse impacts on marine waters would be short-term and localized.

Ground Water

NASA would provide potable water to the Payload Processing Facility, Payload Fueling Facility, and Horizontal Integration Facility for drinking water supply, fire suppression, and industrial water use. In addition, static fire testing and launches would require the use of deluge water. Although WFF's water use would increase, maximum withdrawal amounts would be within the limit allowed by NASA's existing groundwater withdrawal permit.

Floodplains

All facility construction and infrastructure improvements would take place within the 100-year and 500-year floodplains. Because Wallops Island is the location for WFF's core launch range functions, and is entirely within the floodplain, no practicable alternatives exist. The functionality of the floodplain on Wallops Island would not be substantially reduced due to the presence of proposed facilities because the footprint of the facilities would not cover a substantial area of the island. Flood control measures for handling and storage of hazardous wastes and materials includes location of the substances above the flood level, and moving hazardous wastes and materials outside of the floodplain when substantial storms are imminent. NASA would ensure that its actions comply with Executive Order (EO) 11988, Floodplain Management, and 14 CFR 1216.2 (NASA Regulations on Floodplain and Wetland Management) to the maximum extent possible. The EA served as NASA's means for facilitating public review as required by EO 11988. No significant impacts to the floodplain on Wallops Island are anticipated due to launch activities.

Hazardous Materials, Pollution Prevention, and Solid Waste

The principal hazardous materials used would be liquid propellants, hypergolic propellants, pressurized gases, and various solvents and compounds used to process the ELV and spacecraft. To mitigate potential environmental impacts from an accident (e.g., leak, fire, or explosion), NASA and MARS would manage all hazardous materials and waste in accordance with applicable Federal, state, and local regulations, and the WFF ICP.

Ground disturbances during construction may have the potential to uncover munitions and explosives of concern (MEC) on Wallops Island. To mitigate potential impacts, a qualified MEC specialist would evaluate the area proposed for ground disturbance and conduct a survey of the area if necessary prior to construction activities.

ELV upper stages and spacecraft placed into orbit would generate orbital debris that could re-enter the Earth's atmosphere. All orbital missions originating from WFF would comply with NASA's processes, as well as any applicable licensing agency's processes (as appropriate), for limiting generation of orbital debris, assessing the risk of reentry, and ensuring public safety.

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

Construction activities would temporarily increase local employment opportunities and benefit local stores and businesses. Launch support activities would create up to 125 new jobs to the area. Tax revenue would increase as a result, and the local economy would benefit from launches (e.g., tourism, services and commodities support, lodging).

NASA has prepared an Environmental Justice Implementation Plan (EJIP) to comply with EO 12898, *Federal Action to Address Environmental Justice in Minority Populations and Low Income Populations*. The EJIP concluded that Federal actions conducted at or by WFF do not disproportionately or adversely affect low-income or minority populations.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, encourages Federal agencies to consider the potential effects of Federal policies, programs, and activities on children. The closest day care centers, schools, camps, nursing homes, and

hospitals are addressed within the EJIP. None of these facilities are in the planned flight path of the ELV, and all are beyond the safety zone around Pad 0-A.

Construction activities at the WFF site could result in short-term impacts to human health and safety and the increased usage of local fire, police, and medical services. Operation of fueling and processing facilities and ELV launches would not present substantial impacts to public safety as all operations would be conducted in accordance with mission-specific ground and flight safety plans.

Cumulative Impacts

This section presents a brief summary of the potential cumulative environmental impacts considered in the EA. This FONSI/ROD incorporates the EA by reference and is based on the potential impacts discussed in the EA that consider the past, present, and reasonably foreseeable future activities at WFF and in the surrounding areas that would affect the resources impacted by the EA's Proposed Action. Cumulative impacts were evaluated for potentially affected resources including air quality, biological resources, and water resources. Other than those described in the EA, no additional substantial cumulative impacts are anticipated when added to other known past, present, and reasonably foreseeable future actions within the WFF area. None of the potential effects described in the EA considered cumulatively, however, rise to the level of significance.

Air Quality

Construction-related activities under the EA's Proposed Action and other projects planned at WFF would occur at different locations and at different times over a period of several years. Such activities would result in fugitive particulate emissions from site preparation and wind erosion. Best management practices would be implemented on each project to minimize those emissions. Exhaust emissions from the vehicles and equipment associated with these construction projects occurring at WFF would be short-term, negligible, and localized.

Minimal and short-term cumulative impacts from construction-related activities are anticipated. Cumulative emissions from these construction projects are unlikely to lead to adverse air quality

impacts because these projects' contribution to regional emissions would be minor and any effect on regional concentrations of air pollutants would be insignificant. Regional concentrations are in attainment, with no indication that a redesignation for any criteria pollutant is imminent, and consequently any increases due to cumulative emissions would not cause concentrations to approach the NAAQS. There would not be a substantial effect on local or regional air quality, or violation of NAAQS.

Launch activity would have only a localized impact on air quality. Long-term effects are not expected because the launches would be small in number and would occur as independent events separated in time. No substantial cumulative impacts to air quality and no violation of the NAAQS are expected due to launch activities.

The EA's Proposed Action would emit small amounts of greenhouse gases (GHGs) compared to global emissions. To help reduce GHG emissions from its facilities and activities, WFF would comply with the federally mandated EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. EO 13423 instructs Federal agencies to conduct their environmental, transportation, and energy-related activities in an environmentally, economically, and fiscally sound efficient and sustainable manner. It also directs Federal agencies to implement sustainable practices for energy efficiency, reductions in GHG emissions, and use of renewable energy. Substantial cumulative impacts to the global climate from the EA's Proposed Action, when added to other known and foreseeable regional actions, are not anticipated.

Biological Resources

Potential cumulative impacts to terrestrial wildlife and migratory birds could result from habitat alteration and disturbance under the EA's Proposed Action and other projects planned at WFF. However, vast areas of habitat will remain on Wallops Island and the surrounding area, and no substantial cumulative impacts on wildlife or migratory birds are anticipated.

Three of the four current and reasonably foreseeable projects identified in the EA do not involve activity in marine waters. However, two potential projects at WFF could affect tidal wetlands and therefore impact Essential Fish Habitat (EFH). EFH assessments will be included in the

NEPA documents for these projects as necessary, and NASA will consult with NMFS Habitat Conservation Division to develop appropriate mitigation measures, if needed. One of the potential projects (the WFF Shoreline Restoration and Infrastructure Protection Program) would involve activity in marine waters. In February 2010, NASA issued a Draft Programmatic EIS for the Shoreline Restoration and Infrastructure Protection Program. The environmental analysis contained in the Draft Programmatic EIS indicates potential temporary, localized adverse impacts to marine mammals. NASA initiated formal consultation with the USFWS and NMFS, and a Biological Assessment is currently being prepared by NASA as a component of the formal consultation process. Once the USFWS and NMFS issue a Biological Opinion, NASA will finalize the consultation process by obtaining any required incidental take permits from the USFWS and NMFS and implementing any identified mitigation measures. As such, no substantial cumulative effects to marine mammals or EFH from current and proposed projects described in the EA are anticipated.

The EA determined that although the proposed and current launch activities may adversely affect both federally protected piping plover and sea turtles, the effect on either is not likely to be substantial. As mentioned above, NASA prepared a Biological Assessment for potential effects to listed species, and the USFWS issued a Biological Opinion, stating that NASA's Proposed Action is not likely to jeopardize the continued existence of the listed species, and is not likely to destroy or adversely modify designated critical habitat. NASA must comply with the terms and conditions listed in the Biological Opinion.

As all future projects at WFF would be subject to Section 7 review and consultation, NASA would adhere to all avoidance and mitigation measures issued by USFWS. The current range of operations on Wallops Island, when combined with NASA's Proposed Action and other WFF projects, is not anticipated to result in substantial adverse cumulative effects to federally listed species.

Physical Resources (Water Resources [Surface Water, Groundwater, Floodplains], Hazardous Materials, Pollution Prevention, and Solid Waste)

The EA's Proposed Action would have a minor and temporary impact on the water resources of the affected region. The incremental contribution to cumulative water resource impacts from the EA's Proposed Action would not be substantial.

Historically, many rocket launches have occurred at MARS Launch Complex 0, and local water resources have been exposed to launch impacts by many past actions. Impacts on water resources from other launches at WFF may result from incidental spills and release of propellants from on-pad accidents or emergencies, launch anomalies, or rocket stages falling in the ocean. Such spills or releases may affect surface water, including wetlands. Emergency response and cleanup procedures would be employed to address on-pad accidents and emergency releases, and solid waste recovery and treatment would reduce the severity of launch anomalies.

The current and proposed projects on Wallops Island would impact 3.7 hectares (9.1 acres) of wetlands. Previous compensation resulted in 1.5 hectares (3.7 acres) of wetlands gained. Therefore, the cumulative impact of past, current, and proposed projects on Wallops Island would result in a net loss of 2.2 hectares (5.4 acres) of wetlands, which would require compensatory mitigation. NASA would obtain necessary permits including Section 404 and Section 10 permits for all proposed projects that could affect wetlands. Additionally, NASA is currently preparing a Wetlands Inventory and Management Plan for WFF. The goal of this effort is to provide strategic regulatory, environmental, and land use analysis of all wetlands on the Main Base, Wallops Mainland, and Wallops Island in order to develop a comprehensive long-term wetland management plan for the facility. Because NASA would implement compensatory wetland mitigation measures to offset any impacts and ensure no net loss of wetlands, no substantial cumulative adverse impacts to wetlands are anticipated.

Current and reasonably foreseeable projects are not expected to increase potable water demand at WFF. WFF would monitor groundwater withdrawal rates to ensure continued compliance with WFF's VDEQ groundwater withdrawal permit.

AGENCY FINDINGS: In accordance with applicable law, the FAA makes the following findings/determinations based on the appropriate information and data contained in the EA:

- Certification under 49 U.S.C. 44502(b) (formerly Section 308 of the Federal Aviation Act of 1958, as amended). I certify that the proposed improvement project is reasonably necessary for use in air commerce or for national defense.
- Based on the EA, no significant environmental impacts would be incurred as a result of the Federal action.

DECISION AND ORDER: As a cooperating agency, the FAA participated in the preparation of the EA. The FAA decision in this ROD is based on a comparative examination of environmental impacts for each of the alternatives studied during the environmental review process. The EA discloses the potential environmental impacts for each of the alternatives and provides a full and fair discussion of those impacts. There would be no significant impacts, including no cumulative impacts, to the natural environment or surrounding population as a result of the EA's Proposed Action.

The FAA believes the selected alternative best fulfills the purpose and need identified in the EA. In contrast, the No-Action Alternative fails to meet the purpose and need identified in the EA. For reasons summarized earlier in this FONSI/ROD, and supported by disclosures and analysis detailed in the EA, the FAA has determined that the EA's Proposed Action is a reasonable, feasible, practicable, and prudent alternative for a Federal decision in light of the established goals and objectives. An FAA decision to take the required actions and approvals is consistent with its statutory mission and policies supported by the findings and conclusions reflected in the environmental documentation and this FONSI/ROD.

The FAA has determined that environmental and other relevant concerns presented by interested agencies and private citizens have been sufficiently addressed in the EA, hereby acknowledged and fully and properly considered in the decision-making resulting in the FONSI/ROD. The FAA concludes there are no outstanding environmental issues to be resolved by it with respect to the EA's Proposed Action.

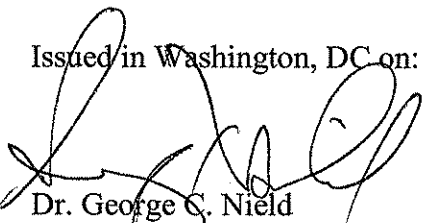
After reviewing the EA and all its related materials, I have carefully considered the FAA's goals and objectives in relation to various aeronautical aspects of the proposed development actions

described in the EA, including the purpose and need to be met, the alternative means of achieving them, the environmental impacts of these alternatives, the mitigation necessary to preserve and enhance the environment, and the costs and benefits of achieving the stated purpose and need. While this decision does not constitute approval or commitment of Federal funding, it does provide the environmental findings and approval necessary as conditions precedent to funding actions in accordance with established procedures and applicable requirements.

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.

This FONSI/ROD represents the FAA's final decision and approvals for the actions identified, including those taken under the provisions of Title 49 of the United States Code, Subtitle VII, Parts A and B. These actions constitute a final order of the Administrator subject to review by the Court of Appeals of the United States in accordance with the provisions of 49 U.S.C. § 46110.

Issued in Washington, DC on: August 3, 2010


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

