

DEPARTMENT OF DEFENSE, DEPARTMENT OF THE NAVY
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

FINDING OF NO SIGNIFICANT IMPACT FOR THE REDESIGNATION AND
EXPANSION OF RESTRICTED AIRSPACE R-4403 TO SUPPORT MILITARY AIR-
TO-GROUND MUNITIONS TRAINING AND NATIONAL AERONAUTICS AND SPACE
ADMINISTRATION ROCKET ENGINE TESTING AT STENNIS SPACE CENTER,
MISSISSIPPI

Pursuant to the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] parts 1500 to 1508) implementing the National Environmental Policy Act (NEPA) and Department of the Navy (DON) and National Aeronautics and Space Administration (NASA) policies and procedures (32 CFR 775 and 14 CFR 1216.3, respectively), the DON and NASA give notice that an Environmental Assessment (EA) has been prepared and an Environmental Impact Statement (EIS) is not required for the redesignation and expansion of restricted airspace R-4403 to support NASA testing of the next generation of rocket engines and proposed Department of Defense (DOD) air-to-ground live-fire and sensor training at Stennis Space Center (SSC) and within the DON Western Maneuver Area (WMA) in Mississippi. The Federal Aviation Administration (FAA) is a cooperating agency for the proposed action.

Proposed Action: The proposed action is comprised of three elements:

1. Removal of existing Restricted Area R-4403 at SSC and replacement with an expanded area to be redesignated as R-4403A, B, C, E, and F;
2. Establishment of two munitions target areas and a sensor training area for DOD air-to-ground training underlying R-4403C, E, and F; and
3. Use of the new R-4403A, B, C, E, and F airspace to accommodate ongoing and evolving DOD and NASA testing and training requirements.

Proposed R-4403A, B, C, E, and F will overlie 72,548 acres of federal, state, and privately-owned land, including the SSC Fee Area, the SSC Acoustic Buffer Zone, and the DON WMA. These land areas lie within Hancock and Pearl River counties in Mississippi and St. Tammany Parish in Louisiana. The configuration and altitudes of the proposed R-4403A, B, C, E, and F airspace will

support ongoing and evolving DOD training and NASA testing requirements.

The proposed re-designated and expanded restricted airspace will be managed by NASA and activated up to approximately 156 days per year:

1. DOD operations will require activation of R-4403C, E, and F between 8 p.m. and 5 a.m. (2000 to 0500) local time up to 120 days per year. Between November 1 and March 1, this airspace will be activated from 6 p.m. to 8 p.m. (1800 to 2000) local time not to exceed 20 days per year to accommodate the Emerald Warrior training exercise.
2. NASA rocket engine testing will occur at least 20, but up to 40 times per year. Each test will require activation of R-4403A for 7 to 12 hours. Similarly, untethered autonomous flight vehicle test operations will occur 3 times per year and require activation of R-4403B for 7 to 12 hours.

During periods when R-4403A, B, C, E, and F airspace is not required by DOD or NASA for its designated purpose, it will be returned to the controlling agency (Houston Air Route Traffic Control Center) for use by civil air traffic.

Purpose and Need: The purpose of the proposed action is to protect the public from potentially hazardous activities while meeting the need to support DOD training and NASA testing at SSC. Specifically, the removal of existing R-4403 at SSC and its replacement with an expanded area re-designated as R-4403A, B, C, E, and F will safely segregate non-participating commercial and general aviation aircraft from potentially hazardous activities associated with conducting current and evolving DOD and NASA mission requirements at SSC.

Alternatives Analyzed: The following alternatives were analyzed in the EA:

Alternative 1: Under this alternative, existing R-4403 will be removed and replaced with an expanded area redesignated as R-4403A, B, C, E, and F. Two munitions target areas will be established to accommodate air-to-ground training. The northern target area (IMP-A) and a southern target area (FW1) will each accommodate the delivery of high explosive (HE) and target practice (TP) munitions. The sensor training area (FW2) will accommodate simulated (no drop) air-to-ground training. NASA

rocket engine testing will proceed at existing test stands and untethered autonomous flight vehicle testing will be established at locations at SSC already designated for NASA mission support.

Alternative 2: Alternative 2 is the same as Alternative 1, except delivery of HE munitions would be limited to the southern target area (FW1). The northern target area (IMP-A) would accommodate delivery of TP-only munitions.

No Action Alternative: Under no action, the existing R-4403 would be maintained; NASA use of R-4403 for rocket engine testing would continue but at an increased tempo; sites for DOD air-to-ground training would not be established; and the use of Class G airspace for DOD training within the WMA would continue as currently conducted.

Environmental Effects: As summarized below, the EA examined potential effects of the proposed action on 13 resource areas.

Public Health and Safety: Implementation of the proposed action will improve public health and safety at SSC because the removal of R-4403 with the proposed redesignated and expanded R-4403A, B, C, E, and F will reduce the risk of mishaps involving participants and non-participants during operations and training events. The configuration of proposed airspace will account for the required airport exclusion zones to accommodate Picayune Municipal Airport and Stennis International Airport airfield operations. These exclusion zones will provide separation between commercial and civil aviation and military training aircraft, thereby eliminating the potential for civilian aviation to transit the R-4403A, B, C, E, and F while on approach to airport runways. In addition, current NASA and DOD operational regulations and procedures will continue to ensure flight and on-ground safety.

The delivery of HE ammunition to the proposed WMA munitions target areas will introduce a new ground hazard in the form of unexploded ordnance (UXO). To minimize associated risks, DOD personnel and public safety protocols for managing UXO will be implemented and clearance will be conducted prior to any range or infrastructure maintenance to the area. The use of lasers during DOD training activities will be in accordance with all applicable safety regulations and procedures such that all non-eyesafe laser energy will be contained within proposed R-4403C, E, and F. This restriction will ensure that there is no laser energy hazard to non-participating aircraft and ground personnel.

Airspace and Air Operations: Proposed R-4403A, B, C, E, and F will provide for safe separation of non-participating aircraft from static rocket engine and untethered autonomous flight vehicle testing activities; fixed- and rotary-wing flight operations; and unmanned aerial system operations proposed by NASA, DOD, and other tenant agencies at SSC. As previously identified, the proposed airspace will maintain required airport exclusion zones.

Noise: Noise generated during air operations, HE delivery, or small arms activities associated with use of R-4403C, E, and F will occur mainly within the established boundaries of the SSC Buffer Zone. While the modeled impacts of combined airborne weapons and HE delivery noise during the Emerald Warrior training exercise were shown to extend beyond the western boundary of the SSC Buffer Zone, there are no noise-sensitive receptors within this area. The noise impacts associated with NASA's proposed rocket engine test events will be fully contained within the SSC buffer zone.

Land Use: There will be no significant impacts to existing land use. The 5,018-acre area underlying the proposed R-4403F airspace extending north of the SSC Buffer Zone is currently compatible with the DON's intended use of R-4403F. DON will work with local counties through the DON Range Air Installations Compatible Use Zones (RAICUZ) Program to encourage the adoption of compatible land use zoning measures for this area, such as retaining existing low-density land use and avoiding certain future land uses such as high-density residential or schools, to maintain compatibility with DOD training activities.

The development of the proposed HE munitions target areas will represent a long-term dedication of land to military use. These munitions target areas will be managed under DOD range safety protocols and the DON Range Sustainability Environmental Program Assessments (RSEPA) process. This long-term land use commitment is consistent with the land use limitations dictated by the existing Buffer Zone restricted easement.

The DoN and NASA have determined that the proposed action is consistent to the maximum extent practicable with the enforceable policies of the Federally-approved Mississippi and Louisiana Coastal Management Programs. The Mississippi Department of Marine Resources concurred with the determination on March 10, 2015. A response to the submitted Coastal Consistency Determination was not received by the Louisiana

Department of Natural Resources within 60 days; therefore, in accordance with 15 CFR Section 930.41, concurrence by the Louisiana Department of Natural Resources is presumed.

Socioeconomics/Environmental Justice: Implementation of the proposed action will not result in significant socioeconomic impacts. There will be no disproportionately high or adverse human health or environmental effects on minority populations and low-income populations nor disproportionate environmental health and safety risks to children.

Recreation: Impacts to recreation will not be significant. The removal of R-4403 and the proposed re-designation and expansion of R-4403A, B, C, E, and F will potentially deter general aviation enthusiasts from flying in the area for recreational purposes. The level of effect to recreational aviation will fluctuate with the frequency of airspace activation, and the projected nighttime activation of the airspace will lessen potential effects. Impacts to the recreation experience within the Pearl River Wildlife Management Area will be similar to existing conditions. There will be no change to current areas and practices that exclude public recreation activities for safety during military operations.

Cultural Resources: The proposed action will have no known effect on architectural resources, archaeological resources, Native American traditional cultural artifacts or properties, or resources listed in or eligible for listing in the National Register of Historic Places located within the proposed action's area of potential effect. The DON and NASA will ensure compliance with the National Historic Preservation Act prior to commencing any ground-disturbing activities, and should an inadvertent discovery occur during training or testing activities, all activities will stop and the discovery will be immediately reported to NASA's Historic Preservation Officer for further consultation and guidance. The Mississippi State Historic Preservation Officer concurred with this no effect determination on December 26, 2014.

Hazardous Materials and Waste, Toxic Substances, and Contaminated Sites: Implementation of the proposed action will not result in significant impacts to hazardous materials and waste, toxic substances, and/or contaminated sites. Munitions impact delivery will potentially result in the release of small amounts of toxic substances as they explode or decompose; the unlikely potential for migration of munitions constituents will be monitored and managed under the DON's RSEPA program. There

is negligible risk to existing Installation Restoration Program known contaminated sites and ongoing remediation efforts located in proximity to existing helicopter landing zones and the proposed NASA untethered autonomous flight vehicle alternative testing field.

Air Quality: Although small increases in air emissions will be anticipated for all criteria pollutants (ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter and lead), these emissions will not result in significant impacts to area air quality, which will remain in attainment for all criteria pollutants.

Biological Resources: There will be no significant impact to biological resources; although, the establishment, use, and long-term maintenance of the munitions target areas will result in minor, primarily localized, effects to about 13 acres of vegetation and habitat. Wildlife will experience a slight, but not significant, increase in disturbance from noise, vibration and human activity associated with DOD training and NASA rocket engine and untethered autonomous flight vehicle testing. Although such habitats will be avoided to the greatest extent possible, minor impacts to aquatic/wetlands habitats are expected in riverine training zones and from development and use of munitions target areas and associated access roads at FW1. Based on best available test and planning information regarding establishment of the untethered autonomous flight vehicle launch and alternative location sites; minor localized impacts to vegetation, wildlife, and wildlife habitat will occur to prepare the previously disturbed sites for this use.

The DON consulted informally with the U.S. Fish and Wildlife Service (USFWS) under Section 7 Endangered Species Act after concluding that the proposed action may affect, but is not likely to adversely affect the Louisiana black bear, ringed map turtle, gopher tortoise, dusky gopher frog, red-cockaded woodpecker, wood stork, Bachman's warbler, and gulf sturgeon; and no destruction or adverse modification of designated critical habitat for the Gulf sturgeon will occur. The USFWS, Mississippi Field Office concurred with these conclusions on April 10, 2015.

Geology and Soils: Overall, implementation of the proposed action will not result in significant impacts in terms of soil erosion or loss of topsoil that will damage waterways, cause ground instability, or impact animal or human habitats.

Implementation of best management practices will minimize both short and long-term impacts to soils.

Water Resources: There will be no significant impacts to surface water or groundwater resources with the implementation of best management practices as required by the SSC Stormwater Pollution Prevention Plan and the SSC Environmental Integrated Contingency Plan and Spill Prevention Control and Countermeasures Plan. Impacts to wetlands will occur at munitions target areas and within associated WDZs from munitions delivery, munitions constituents, and the creation of access roads to the Southern Target Area (FW1). Once the final design for the target areas and wetland delineations are complete, a Clean Water Act Section 404 permit will be obtained, if required. Measures to avoid, minimize, and mitigate impacts to wetlands will be identified in the permit.

The only aspect of the proposed action that will potentially affect floodplains is associated with the establishment of the munitions target areas. This impact is unavoidable given the configuration of redesignated and expanded R-4403A, B, C, E, and F. The potential floodplain impacts will be minimal as the overall floodplain is largely unfragmented and has adequate capacity to accommodate the development of the proposed munitions target areas. Consequently, implementation of the proposed action will not result in increased downstream flood hazards.

Cumulative Impacts: Negligible and not significant cumulative impacts could occur to airspace and air operations, land use, socioeconomics, air quality, biological resources, soils, and wetlands when compared with other activities past, present, and reasonably foreseeable future actions identified for the area.

Mitigation Measures: Depending on the final design of the proposed munitions target areas, some filling of wetlands may occur and appropriate permits will be obtained. If wetlands mitigation is required, the DON will purchase credits from an appropriate wetland mitigation bank.

Public Outreach: The DON and NASA coordinated with various federal and state agencies during the NEPA process. A Draft EA was released for a 35-day public review period on December 1, 2014. Notices of the availability of the Draft EA were published in four local newspapers (Picayune Item, Sun Herald, Sea Coast Echo, and Times Picayune), which included daily and weekend editions, and copies of the Draft EA were placed in

public libraries in Bay St. Louis, Kiln, and Picayune, Mississippi and Slidell, Louisiana. In addition, a digital copy of the Draft EA was made available on the NASA SSC NEPA webpage (<http://www.ssc.nasa.gov/environmental/docforms/eas/eas.html>).

The DON and NASA received the following comments on the Draft EA:

- The Mississippi Department of Archives and History, Mississippi Department of Marine Resources, the U.S. Environmental Protection Agency, Region 4, and the USFWS responded to release of the Draft EA in the form of a concurrence.
- The USFWS, in addition to its concurrence, advised that the ringed map turtle and the Red Knot (*Calidris canutus rufa*) are both listed for Hancock County. No effects are anticipated on either species. The EA was corrected to include the facts on both species.
- The Jena Band of Choctaw Indians and Choctaw Nation of Oklahoma reminded the DON and NASA that in the event any Native American artifacts, remains or archaeological features are encountered during the scope of project activities, work must cease and their respective offices be contacted immediately.

Special Use Airspace and FAA Rulemaking: The FAA published a Notice of Proposed Rulemaking (NPRM) in the Federal Register on July 10, 2014 (79 FR 39344). Public comments were solicited by the FAA pursuant to the rulemaking requirements of 14 CFR 73 for Special Use Airspace, which includes restricted areas. The public comment period for the NPRM was 45 days, concluding on August 25, 2014.

Subsequent to the publication of the NPRM, the Special Use Airspace Proposal was modified by NASA and the DON to: (1) allow for greater clearance for VFR traffic along Interstate I-10; (2) allow for DOD unmanned aerial systems access to R-4403C from Stennis International Airport (KHSA) Class D airspace; (3) simplify R-4403C and D by combining the two airspaces into a single airspace identified as R-4403C (the formerly proposed designation of R-4403D would not be used); and (4) eliminate the use of the area within R-4403E and R-4403F for delivery of air-to-ground munitions but maintain its use for sensors.

As a result of the changes in the Special Use Airspace Proposal and consistent with FAA's obligations per the rulemaking process, a Supplemental Notice of Proposed Rulemaking (SNPRM) was published in the Federal Register on August 17, 2015 (80 FR 49181) to request public comments on the changes in the airspace parameters listed above. The public comment period for the SNPRM was 45 days, concluding on October 1, 2015. The FAA received three comments that had already been addressed in the Draft EA.

Finding: The EA has been modified to correspond with the final Special Use Airspace Proposal and comments by the USFWS. These modifications do not change the findings and conclusions represented to the public in the Draft EA. Therefore, based on the analysis presented in the EA, which has been prepared in accordance with the requirements of NEPA and DON and NASA policies and procedures, the DON and NASA find that implementation of the proposed action as set out in Alternative 1 will not significantly impact the quality of the human or natural environment. Therefore, an EIS will not be prepared.

Copies of the EA, including this FONSI, will be available on the NASA SSC NEPA webpage and placed in the same libraries as the Draft EA. Additional copies may be obtained from: Naval Facilities Engineering Command Southeast, Building 903, Cube 108-4, NAS Jacksonville, Florida 32212-0030 (Attn: Greg Timoney, Project Manager) or the NASA Environmental Office, John C. Stennis Space Center, Building 1100, Room 3021H, Stennis Space Center, Mississippi 39529-6000 (Attn: David Lorance, Environmental Officer).

20 NOV 2015

Date



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