

National Aeronautics and  
Space Administration  
**Goddard Space Flight Center**  
**Wallops Flight Facility**  
**Wallops Island, VA 23337**



Reply to Attn of: 250.W

June 26, 2015

Ms. Bettina Sullivan  
Office of Environmental Impact Review  
Virginia Department of Environmental Quality  
629 East Main Street, Sixth Floor  
Richmond, Virginia 23219

Dear Ms. Sullivan:

In accordance with Section 307 (c) (1) of the Coastal Zone Management Act of 1972 (CZMA), the National Aeronautics and Space Administration (NASA) has prepared a Federal Consistency Determination (FCD) for the proposed processing, static fire testing, and launch of the Antares 200 Configuration Expendable Launch Vehicle at Wallops Flight Facility, Accomack County, Virginia. In consideration of the FCD prepared concurrently with the *Final Environmental Assessment Expansion of the Wallops Flight Facility Launch Range (Final EA)* in 2009, the purpose of this new FCD is to provide both updated information and a focused analysis of an upgraded configuration of the Antares rocket.

As was the case with the 2009 *Final EA* and accompanying FCD, the Proposed Action could require authorization from the Federal Aviation Administration's (FAA) Office of Commercial Space Transportation. To this end, NASA has assumed the role of Lead Federal Agency for CZMA compliance, ensuring that the effects of FAA's action are also considered in all project-related environmental documentation, including the enclosed FCD and Draft Supplemental EA.

NASA has found that its Proposed Action would be consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program (VCP). Accordingly, NASA respectfully requests that you review the subject FCD and provide a response within 60 days of receiving this letter. Per recent VCP guidance, in lieu of providing hard copies, two compact disc copies are enclosed. Additionally, the FCD is available online at:

[http://sites.wff.nasa.gov/code250/Antares\\_DSEA.html](http://sites.wff.nasa.gov/code250/Antares_DSEA.html)

We look forward to hearing from you. If you have any questions in the meantime, please contact me at (757) 824-2319 or [Joshua.A.Bundick@nasa.gov](mailto:Joshua.A.Bundick@nasa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Joshua A. Bundick", with a long horizontal flourish extending to the right.

Joshua A. Bundick  
Lead, Environmental Planning

2 Enclosures (both on compact disc)

- 1) FCD
- 2) Draft Supplemental EA

cc:

250/Mr. T. Meyer (w/o encl.)

840/Mr. J. Reddish (w/o encl.)

FAA/Mr. D. Czelusniak

**FEDERAL CONSISTENCY DETERMINATION  
ANTARES 200 CONFIGURATION  
EXPENDABLE LAUNCH VEHICLE AT WALLOPS FLIGHT FACILITY**

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
GODDARD SPACE FLIGHT CENTER  
WALLOPS FLIGHT FACILITY  
WALLOPS ISLAND, VA 23337**

This document provides the Commonwealth of Virginia with the National Aeronautics and Space Administration's (NASA) Consistency Determination under Coastal Zone Management Act (CZMA) Section 307(c)(1) and Title 15 Code of Federal Regulations (CFR) Part 930, Subpart C, for the processing, static fire testing, and launch of the Antares 200 Configuration Expendable Launch Vehicle (ELV) from NASA's Goddard Space Flight Center Wallops Flight Facility (WFF), located in northern Accomack County, Virginia. The information in this Consistency Determination is provided pursuant to 15 CFR § 930.39.

Furthermore, this Consistency Determination also considers the connected action(s) of the Federal Aviation Administration's Office of Commercial Space Transportation (FAA-AST). The FAA licenses and regulates U.S. commercial space launch and reentry activity, as well as the operation of non-Federal launch and reentry sites, as authorized by Executive Order (EO) 12465, *Commercial Expendable Launch Vehicle Activities*, and the Commercial Space Launch Act of 2011 (51 U.S.C. Subtitle V, ch. 509, §§ 50901-50923). Commercial launch providers proposing to operate at NASA's WFF would be required to apply for an FAA-issued launch operator license. Similarly, existing launch providers and/or the existing commercial launch site operator at WFF may be required to modify their FAA-issued licenses in the future. To this end, because there are multiple Federal agencies involved in the activity considered herein, NASA has assumed the role of lead agency (15 CFR § 930.40) and prepared this consistency review to not only fulfill its own CZMA obligations but also those of FAA-AST.

Background

On August 29, 2009, NASA issued a Finding of No Significant Impact (FONSI)<sup>1</sup> for its *Final Environmental Assessment Expansion of the Wallops Flight Facility Launch Range (Final EA)*.<sup>2</sup> In its FONSI, NASA identified no significant effects on the human environment associated with Alternative 1, which entailed NASA and Commonwealth of Virginia-funded construction of facilities; testing, fueling, and processing of liquid-fueled ELVs and associated spacecraft; conducting up to two ELV static test fires per year; and launching up to six liquid-fueled ELVs from the Virginia Commercial Space Flight

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<sup>1</sup> The FONSI is available online at [http://sites.wff.nasa.gov/code250/docs/expansion\\_ea/MARS\\_FINAL\\_FONSI\\_signed.pdf](http://sites.wff.nasa.gov/code250/docs/expansion_ea/MARS_FINAL_FONSI_signed.pdf).

<sup>2</sup> The *Final EA* is available online at [http://sites.wff.nasa.gov/code250/docs/expansion\\_ea/EWLR\\_FEA.pdf](http://sites.wff.nasa.gov/code250/docs/expansion_ea/EWLR_FEA.pdf).

Authority's (VCSFA) Mid Atlantic Regional Spaceport (MARS) Pad 0-A. The *Final EA* identified Orbital Sciences Corporation's (since renamed Orbital ATK) Taurus II (since renamed Antares) as the largest liquid-fueled ELV to be processed at WFF and launched from MARS Pad 0-A.

Since issuing its FONSI, between 2009 and 2013, NASA and the VCSFA collectively implemented the *Final EA's* Alternative 1 by constructing a Horizontal Integration Facility (Building X-079) on mid-Wallops Island, modifying Building V-055 on north Wallops Island to repurpose it as a spacecraft fueling facility, constructing a liquid fueling facility adjacent to Pad 0-A, and upgrading the Pad 0-A launch structure to support medium-class liquid-fueled ELVs. The sole occupant of these facilities thus far has been Orbital ATK, which was initially awarded NASA's Commercial Crew and Cargo Program Office (C3PO) Commercial Orbital Transportation Services contract in 2008 and then subsequently awarded the C3PO Commercial Resupply Services (CRS) contract to provide cargo and disposal services to the International Space Station (ISS) through at least 2017.

Upon final certification of the new launch pad and support facilities by NASA's safety organization, Orbital ATK conducted one approximately thirty-second Antares static fire test in February 2013. Subsequently, between April 2013 and July 2014, Orbital ATK performed four successful launches of the Antares ELV, three of which transported the Cygnus spacecraft to orbit from Pad 0-A. However, on October 29, 2014, Orbital ATK's fifth Antares flight, named ORB-3, suffered a catastrophic failure shortly after liftoff. In response to the ORB-3 mishap, Orbital ATK has proposed an accelerated introduction of an enhanced version of Antares (i.e., the "200" configuration) that was not originally considered in the *Final EA*. Accordingly, NASA is currently conducting an environmental review to evaluate the potential environmental effects of Orbital ATK's proposal.

#### Previous Review under CZMA

In parallel with the 2009 *Final EA*, NASA also prepared a Federal Consistency Determination (FCD), finding that its proposed action would be consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program (VCP). The Virginia Department of Environmental Quality (VDEQ) concurred with NASA's determination in a June 18, 2009 letter.

However, in consideration of the fact that the enhanced version of the Antares rocket was not considered in the 2009 FCD, additional range surveillance assets have been acquired, and that approximately six years have passed since VDEQ's consistency concurrence, NASA has prepared this supplemental FCD for VDEQ's review.

### Description of the Action

NASA's Proposed Action is to authorize the VCSFA and Orbital ATK to process, static fire test, and launch the 200 Configuration Antares ELV from WFF. Section 2.3 (pages 2-2 through 2-5) of the 2015 *Draft Supplemental EA Antares 200 Configuration Expendable Launch Vehicle at Wallops Flight Facility (Draft Supplemental EA)*,<sup>3</sup> which accompanies this FCD, provides a detailed description of the Proposed Action.

### Potential Effects to Resources

Because there is a complete description of all coastal resources and potential effects on them in Chapter 3 (pages 3-1 through 3-34) of the 2015 *Draft Supplemental EA* and Chapters 3 and 4 (pages 43 through 190) of the 2009 *Final EA*, they are incorporated by reference herein with the focus of this FCD being the applicability of the enforceable policies of Virginia's CZM Program and NASA's consistency with them.

### Consistency Determination

The VCP contains the following applicable enforceable policies:

- **Fisheries Management.** Administered by Virginia Marine Resources Commission (VMRC) and the Virginia Department of Game and Inland Fisheries (DGIF), this program stresses the conservation and enhancement of shellfish and finfish resources and the promotion of commercial and recreational fisheries.

The State Tributyltin (TBT) Regulatory Program is also part of the Fisheries Management program. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The VMRC, DGIF, and Virginia Department of Agriculture and Consumer Services share enforcement responsibilities.

- **Subaqueous Lands Management.** Administered by VMRC, this program establishes conditions for granting permits to use State-owned bottomlands.
- **Wetlands Management.** Administered by VMRC and the Virginia Department of Environmental Quality, the wetlands management program preserves and protects tidal wetlands.
- **Dunes Management.** Administered by VMRC, the purpose of this program is to prevent the destruction and/or alteration of primary dunes.
- **Non-point Source Pollution Control.** Administered by the Virginia Department of Conservation and Recreation, the Virginia Erosion and

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<sup>3</sup> The *Draft Supplemental EA* is available online at [http://sites.wff.nasa.gov/code250/Antares\\_DSEA.html](http://sites.wff.nasa.gov/code250/Antares_DSEA.html).

Sediment Control Law is intended to minimize non-point source pollution entering Virginia’s waterways.

- **Point Source Pollution Control.** Administered by the State Water Control Board, the National Pollutant Discharge Elimination System permit program regulates point source discharges to Virginia’s waterways.
- **Shoreline Sanitation.** Administered by the Department of Health, this program regulates the installation of septic tanks to protect public health and the environment.
- **Air Pollution Control.** Administered by the State Air Pollution Control Board, this program implements the Federal Clean Air Act through a legally enforceable State Implementation Plan.
- **Coastal Lands Management.** Administered by the DCR Division of Stormwater Management-Local Implementation and localities in Tidewater, Virginia, the Chesapeake Bay Preservation Act guides land development in coastal areas to protect the Chesapeake Bay and its tributaries.

Based upon the following information, data, and analysis, NASA finds that the proposed processing, static fire testing, and launch of the 200 Configuration Antares ELV is consistent to the maximum extent practicable with the enforceable policies of the VCP. The table below summarizes NASA’s analysis supporting this determination:

Virginia Policy	Applicable?	If Applicable, Consistent?	Analysis
Fisheries Management	Yes	Yes	<p>Although the nearshore waters surrounding Wallops Island would require clearance of vessels, temporarily relocating or halting commercial and recreational fishing activities, such closures would be short in duration (i.e., hours per event) and infrequent. Furthermore, WFF’s public affairs and range surveillance staff coordinate such closures/clearances directly with potentially affected parties, including the provision of advance notices as well as day-of-launch communication.</p> <p>Contracted range surveillance vessels would comply with TBT regulations.</p>
Subaqueous Lands Management	Yes	Yes	Antares launches would not require the use of Commonwealth-owned bottomland. Only under off-nominal flight conditions would the 200 Configuration Antares deposit flight

Virginia Policy	Applicable?	If Applicable, Consistent?	Analysis
			hardware within Commonwealth-owned bottomland. In such a case, NASA would coordinate directly with VMRC to identify items necessitating further evaluation and/or removal. The success of such coordination was demonstrated following the ORB-3 mishap.
Wetlands Management	No	N/A	Processing, static fire testing, and launching a 200 Configuration Antares ELV would not impact wetlands in a manner such that it would require authorization from either VDEQ or VMRC.
Dunes Management	No	N/A	Dunes on Wallops Island would be unaffected by Antares ELV launches.
Non-point Source Pollution Control	No	N/A	Land-disturbing construction or demolition is not part of the Proposed Action.
Point Source Pollution Control	Yes	Yes	NASA would continue to monitor both deluge and stormwater at Pad 0-A in accordance with its VDEQ-issued VPDES permit.
Shoreline Sanitation	No	N/A	The Proposed Action would not involve the construction of septic tanks.
Air Pollution Control	Yes	Yes	Static fire tests and launches would generate emissions of both criteria pollutants and greenhouse gases. However, emissions would be temporary and infrequent. Furthermore, MARS would ensure that static test fires are conducted in accordance with its VDEQ-issued air emissions permit.
Coastal Lands Management	No	N/A	The Proposed Action would not include land development activities that would impact the Chesapeake Bay or its tributaries. Moreover, although Accomack County has adopted the Chesapeake Bay Preservation Act restrictions for its seaside riparian areas, NASA's Wallops Island is specifically excluded from this overlay area.

Pursuant to 15 CFR § 930.41, the VCP has 60 days from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR § 930.41(b). Virginia's concurrence will be presumed if its response is not received by NASA on the 60<sup>th</sup> day from receipt of this determination.

The Commonwealth's response should be sent to:

Joshua A. Bundick  
Lead, Environmental Planning  
NASA Wallops Flight Facility  
Wallops Island, VA 23337  
(757) 824-2319  
Joshua.A.Bundick@nasa.gov