

1 **FINDING OF NO SIGNIFICANT IMPACT/FINDING OF NO SIGNIFICANT HARM**
2 **PROGRAMMATIC ENVIRONMENTAL ASSESSMENT / OVERSEAS ENVIRONMENTAL**
3 **ASSESSMENT (EA/OEA) FOR JOINT FLIGHT CAMPAIGN (JFC)**
4
5

6 **AGENCY:** Department of the Army, Department of the Navy

7 **BACKGROUND:** The Proposed Action, Joint Flight Campaign (JFC), is sponsored by the Office
8 of the Under Secretary of Defense for Research and Engineering and by the United States
9 Department of the Army (U.S. Army). These agencies have designated the United States
10 Department of the Navy (U.S. Navy) Strategic Systems Programs (SSP) and the U.S. Army
11 Rapid Capabilities and Critical Technologies Office (RCCTO) as the lead agencies for the
12 Proposed Action. That makes SSP and RCCTO the joint action proponents for this
13 Programmatic Environmental Assessment/ Overseas Environmental Assessment (PEA/OEA).

14 The Proposed Action entails up to six flight test launches at up to four different launch locations
15 per year, over the next 10 years. Test objectives are expected to dictate range selection from
16 Atlantic and Pacific test ranges. Due consideration will be given to existing launch ranges to
17 avoid any unnecessary changes to the environment. The launch range for each test will be
18 determined based on the test objectives, and the availability and technical suitability of the test
19 range. Test scenarios are planned to include broad ocean area (BOA) impacts of the spent
20 stages and the hypersonic payload, and do not include any land-based impacts. This PEA/OEA
21 is being prepared as a Programmatic EA to provide an analysis of multiple launch locations that
22 will be available to the test directorates over the next 10 years. The launch selection process will
23 utilize this PEA/OEA and also will include a check of the relevancy of this document to support
24 specific launch scenarios. It is anticipated that this PEA/OEA will support most future decisions;
25 however, tiered National Environmental Policy Act (NEPA) documents could occur if there are
26 significant changes to the proposed missile or facilities at a proposed launch location.

27 The U.S. Army RCCTO, the U.S. Navy SSP, and the United States Army Space and Missile
28 Defense Command (USASMDC), as Participating Agencies, along with the Department of
29 Energy (DOE) the National Aeronautics and Space Administration (NASA), the U.S. Air Force
30 Space Launch Delta 30, and the U.S. Air Force 45th Space Wing as Cooperating Agencies,
31 have prepared this PEA/OEA in accordance with the NEPA (42 United States Code 4321, as
32 amended), the Council on Environmental Quality (CEQ) Regulations for Implementing the
33 Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [CFR] Parts 1500-1508,
34 1978, July 1, 1986), the Department of the Army Procedures for Implementing NEPA (32 CFR
35 Part 651), the Department of the Air Force Procedures for Implementing NEPA (32 CFR Part
36 989), Chief of Naval Operations Instruction (OPNAVINST) 5090.1E, and Executive Order [EO]
37 12114, Environmental Effects Abroad of Major Federal Actions. The Proposed Action was
38 finalized prior to the 14 September 2020 version of the CEQ NEPA regulations, and therefore
39 the earlier versions of NEPA are being followed for this document.

40 **PURPOSE OF AND NEED FOR THE PROPOSED ACTION:** The purpose of the Proposed
41 Action is to perform the land-based tests needed to prove that the U.S. Navy Conventional
42 Prompt Strike (CPS) weapon system and Army Long Range Hypersonic Weapon (LRHW)
43 system meet all key performance requirements within the capabilities of the All-Up-Round
44 (AUR) missile used by both systems. The Proposed Action is needed to establish CPS and
45 LRHW capabilities required to improve the United States' capabilities to respond to time-
46 sensitive threats, thereby maintaining technical superiority against its adversaries. The

1 successful development and eventual fielding of the CPS and LRHW weapon systems has been
 2 identified as a National priority by the Department of Defense (DOD).

3 This series of land-based tests is needed to allow the U.S. Army and the U.S. Navy to collect
 4 the data required to prove that weapon system development has been successful, thereby
 5 enabling these key weapons systems to be fielded by the warfighter. To meet the CPS and
 6 LRHW program objectives, test events must satisfy certain critical objectives, to include
 7 demonstrating weapon system effectiveness, demonstrating applicable design features, and
 8 establishing effective operating procedures, which also ensure the safety of the warfighter and
 9 the public.

10 **ALTERNATIVES CONSIDERED:** The U.S. Army RCCTO and U.S. Navy SSP determined that
 11 four launch locations meet the screening criteria / evaluation factors and the test requirements
 12 for vehicle performance and data collection. They also considered the No Action Alternative, as
 13 required by the CEQ regulations. There is one launch location on the west coast and one in
 14 Hawai`i, both with sites in the Pacific Ocean and two launch locations on the east coast, with
 15 sites in the Atlantic Ocean. The Pacific locations analyzed are the Pacific Missile Range Facility
 16 (PMRF), Barking Sands, Kauai, Hawai`i; Vandenberg Space Force Base (VSFB), California;
 17 and BOAs in the Pacific Ocean. The east coast locations include the NASA Wallops Flight
 18 Facility (WFF), Virginia; Cape Canaveral Space Force Station (CCSFS), Florida; and the
 19 Atlantic BOA.

20 **SUMMARY OF ENVIRONMENTAL RESOURCES EVALUATED IN THE EA/OEA:** CEQ
 21 regulations, NEPA, and Navy instructions for implementing NEPA, specify that an EA/OEA
 22 should address those resource areas potentially subject to impacts. In addition, the level of
 23 analysis should be commensurate with the anticipated level of environmental impact.

24 The following table summarizes the resources that were evaluated (E) in detail in the PEA/OEA.
 25 The resources that were not further evaluated had potential impacts that were determined to be
 26 negligible or nonexistent.

	Alternative 1 (Preferred Alternative) – Proposed Action					
	PMRF	VSFB	Pacific Ocean	WFF	CCSFS	Atlantic Ocean
Air Quality		E	E		E	E
Water Resources						
Geological Resources						
Cultural Resources	E	E		E	E	
Biological Resources	E	E	E	E	E	E
Land Use						
Airspace						
Noise						
Infrastructure					E	
Transportation					E	
Public Health & Safety	E	E		E	E	
Hazardous Materials & Wastes	E	E		E	E	
Socioeconomics						
Environmental Justice						
Visual Resources						
Marine Sediments						
Note: Shaded areas marked "E" indicate resource areas that were evaluated in detail.						

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

SUMMARY OF POTENTIAL ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION AND MAJOR MITIGATING ACTIONS

Alternative 1 (Preferred Alternative) – Proposed Action

Pacific Missile Range Facility:

The Proposed Action will have no significant direct, indirect, or cumulative impacts to biological resources, public health and safety, and hazardous materials and wastes. There will be no disproportionate and adverse impacts to minority and low-income populations as a result of the Proposed Action.

Biological Resources – The potential impacts of the Proposed Action on terrestrial biological resources are expected to be minimal. No ground clearing or construction is expected and no long-term adverse impacts on vegetation are expected. Noise from launches may startle nearby wildlife but impacts will be minimal and short-term. The launch site at Kauai Test Facility (KTF) is in an area that has routine human activity, equipment operation, and launch activity. Emissions from vehicle launches will have little effect on wildlife due to the low-levels and short-duration of emissions. Because aluminum oxide and hydrogen chloride do not bioaccumulate, no indirect effects on the food chain are anticipated from these exhaust emissions. Impact to Endangered Species Act-listed (ESA-listed) species will be minimal and short-term and are not expected to be different than those of ongoing operations at Sandia National Laboratories (SNL)/KTF. Potential effects on ESA-listed species as a result of the Proposed Action are covered, in part, under Section 7 consultations and the existing Biological Opinion for base-wide operations at PMRF. The U.S. Navy and U.S. Army have determined that launch activities, including noise and emissions, are not likely to adversely affect terrestrial ESA-listed species and will ensure that the appropriate Section 7 consultations are completed prior to each flight test. The U.S. Navy and U.S. Army plan to pursue informal consultation with the USFWS under Section 7 of the ESA for the potential effects of launch activities for the first JFC flight test, including noise and launch emissions, on terrestrial ESA-listed species at PMRF. Marine wildlife are not expected to be impacted by JFC activities. Vehicle launch and overflight will result in elevated noise levels in marine areas, but no marine wildlife will be exposed to artificial lighting or increased levels of human activity and equipment operation. At most, elevated noise levels might cause temporary behavioral disturbance. No impacts on marine wildlife due to direct contact from debris are expected during normal flight operations.

Cultural Resources – The Proposed Action would not require construction at KTF Pad 42 or PMRF THAAD Launch Site. There are no properties eligible for listing on the National Register of Historic Places at either launch site. No impacts on cultural resources would be expected as a result of this Proposed Action.

Public Health and Safety – JFC mission personnel will follow the same health and safety procedures developed under existing plans at PMRF. Federal, state, and local regulations as well as PMRF standard operating procedures (SOPs) will be followed for launch site preparation, booster handling, and all hazardous operations. PMRF Missile Flight Analysis, Ground Safety, Range Safety, Ocean Clearance, Transportation Safety, and Fire and Crash Safety procedures will be followed to ensure the safety of workers and members of the public. PMRF will issue Notice to Airmen (NOTAMs) and Notice to Mariners (NTMs) ahead of any JFC flight test, in accordance with range safety and Federal Aviation Administration (FAA) requirements. In accordance with EO 13045, Protection of Children from Environmental Health

1 and Safety Risks, the proponents have determined that since the JFC flight tests will be
2 conducted on DOD property and out in the open ocean, the JFC flight test has no environmental
3 health and safety risks that may disproportionately affect children. The Proposed Action will not
4 impact public health and safety at PMRF.

5 *Hazardous Materials and Waste* – All applicable local, state, and federal regulations, range
6 operating procedures, and JFC-specific safety plans will be followed to prevent accidents that
7 could release hazardous materials or waste into the local environment. Although unlikely,
8 should a release of hazardous materials or waste occur, PMRF is capable of mitigating
9 personnel and environmental health risks by following SOPs and utilizing on-site emergency
10 response teams. The Proposed Action will not exceed PMRF's ability to manage, store, and
11 dispose of hazardous materials and waste.

12 Major Mitigating Actions are not required for any of the noted resources at PMRF. Minor
13 mitigation activities are incorporated into the Proposed Action such that there are no significant
14 impacts to any resource from the planned activities.

15 **Vandenberg Space Force Base:**

16 The Proposed Action will have no significant direct, indirect, or cumulative impacts to air quality,
17 biological resources, public health and safety, and hazardous materials and wastes. There will
18 be no disproportionate and adverse impacts to minority and low-income populations as a result
19 of the Proposed Action.

20 *Air Quality* – No significant impacts to air quality are expected at VSFB. Estimated annual
21 emissions do not exceed the Prevention of Significant Deterioration (PSD) significant indicator
22 levels for pollutants of concern, and where applicable, launch activities are conducted in
23 compliance with all applicable Santa Barbara County Air Pollution Control District rules and
24 regulations equating to insignificance. Therefore, no significant impacts to air quality are
25 anticipated from flight test.

26 *Biological Resources* – JFC activities will have no long-term adverse impact on vegetation.
27 Vegetation could be temporarily affected by the heat generated at launch and from launch
28 emissions. However, these effects on vegetation will be temporary. Terrestrial wildlife may be
29 impacted by elevated sound pressure levels from launch as well as hazardous chemicals, and
30 artificial lighting. The launch site is in an area that has routine human activity, equipment
31 operation, and launch activity. Noise from launches and launch related activity may startle
32 nearby wildlife but disturbance to wildlife from launches will be brief and is not expected to have
33 any long-term impacts. Wildlife are not likely to be physically harmed by heat or emissions
34 during launch. Overall, terrestrial wildlife will not be significantly impacted by Proposed Action
35 activities. Impact to ESA-listed species will be minimal and short-term and are not expected to
36 be different than those of ongoing operations at VSFB. Any potential effects on ESA-listed
37 species as a result of the Proposed Action are covered under Section 7 consultations and the
38 existing Biological Opinion for ongoing launch operations at VSFB. Marine wildlife are not
39 expected to be significantly impacted by the Proposed Action. Any impacts, if realized, will likely
40 be limited to short-term startle reactions due to elevated noise levels and marine wildlife will be
41 expected to return to normal behaviors within minutes.

42 *Cultural Resources* – The Proposed Action would not require construction at TP-01 and there
43 are no properties eligible for listing on the National Register of Historic Places at TP-01. Launch
44 activities at TP-01 are covered under existing agreements and, therefore, no impacts on cultural

1 resources are anticipated as a result of the Proposed Action.

2 *Public Health and Safety* – JFC launch activities will follow established protocols at VSFb and
3 will involve risks to safety that are similar to those previously analyzed in NEPA documents.
4 VSFb will implement protective measures to ensure risks to personnel and the general public
5 from these operations are minimized. The JFC mission personnel will follow the same health
6 and safety procedures developed under existing plans at VSFb. Federal, state, and local
7 regulations as well as VSFb SOPs will be followed for launch site preparation, booster handling,
8 and all hazardous operations. VSFb Missile Flight Analysis, Ground Safety, Range Safety,
9 Ocean Clearance, Transportation Safety, and Fire and Crash Safety procedures will be followed
10 to ensure the safety of workers and members of the public. VSFb will issue NOTAMs and NTMs
11 ahead of any JFC flight test, in accordance with range safety and FAA requirements. In
12 accordance with EO 13045, Protection of Children from Environmental Health and Safety Risks,
13 the proponents have determined that since the JFC flight tests will be conducted on DOD
14 property and out in the open ocean, the JFC flight test has no environmental health and safety
15 risks that may disproportionately affect children. The Proposed Action will not impact health and
16 safety in the VSFb ROI.

17 *Hazardous Materials and Waste* – All applicable local, state, and federal regulations, range
18 operating procedures, and JFC-specific safety plans will be followed to prevent accidents that
19 could release hazardous materials or waste into the local environment. Although unlikely,
20 should a release of hazardous materials or waste occur, VSFb is capable of mitigating
21 personnel and environmental health risks by following SOPs and utilizing on-site emergency
22 response teams. The Proposed Action will not exceed VSFb's ability to manage, store, and
23 dispose of hazardous materials and waste.

24 Major Mitigating Actions are not required for any of the noted resources at VSFb. Minor
25 mitigation activities are incorporated into the Proposed Action such that there are no significant
26 impacts to any resource from the planned activities.

27 **Pacific Ocean Flight Corridor and Booster Drop/Payload Impact Zones:**

28 The Proposed Action will have no significant direct, indirect, or cumulative impacts to air quality
29 or biological resources. There will be no disproportionate and adverse impacts to minority and
30 low-income populations as a result of the Proposed Action.

31 *Air Quality* – Under the Proposed Action, following the JFC flight test, the majority of aluminum
32 oxide will be removed from the stratosphere through dry deposition and precipitation. Emissions
33 from a JFC launch (using Strategic Target System [STARS] vehicle emissions as a surrogate)
34 will be relatively small compared to all emissions released on a global scale. The large air
35 volume over which the JFC emissions are spread, and the dispersion of the emissions by
36 stratospheric winds will reduce potential impacts. Ozone-depleting gas emissions from up to six
37 flight tests per year represent such a minute increase that any incremental effects on the global
38 atmosphere will be discountable and insignificant. The Proposed Action will not have a
39 significant impact on stratospheric ozone or on the upper atmosphere. The amount of
40 Greenhouse Gas (GHG) emissions that will be released from activities associated with up to six
41 JFC flight tests is assumed to be negligible based on the small number of vessels and aircraft
42 utilized and the short period of time for conducting each flight test. This limited amount of
43 emissions will not likely contribute to global warming and climate change to any discernible
44 extent. Implementation of the Proposed Action will not result in significant impacts to air quality
45 or GHG emissions.

1 *Biological Resources* – The Proposed Action will have minimal to no impacts on marine wildlife
2 in the BOA. The potential exists for exposure to elevated sound levels, direct contact from
3 expended test components, hazardous materials, and vessel traffic. Based on the expected
4 sound pressure levels and estimated density of special-status wildlife, no injury from elevated
5 sound levels is expected. Any effects due to sound will likely be limited to short-duration
6 behavioral response with no long-term impacts. Based on the available animal densities in the
7 Pacific BOA and on the size and number of expended test components, no physical injury to
8 special-status species is expected as a result of direct contact. Any hazardous chemicals
9 introduced to the water column will be quickly diluted and dispersed and are not likely to impact
10 marine wildlife or their habitats. Any test components or debris will sink to the ocean floor where
11 most marine wildlife will not come into contact with it. The Proposed Action will not meaningfully
12 increase vessel traffic in the BOA and vessel traffic will have minimal to no impacts. The
13 Proposed Action may affect but is not likely to adversely affect ESA-listed marine species in the
14 BOA. The U.S. Navy and U.S. Army plan to pursue informal consultation with NMFS under
15 Section 7 of the ESA. No incidental take or harassment of marine mammals protected under the
16 Marine Mammal Protection Act (MMPA) is expected.

17 No impacts to environmentally sensitive habitats are expected, including designated critical
18 habitat, Essential Fish Habitat (EFH), Habitat Areas of Particular Concern (HAPCs), marine
19 national monuments, national marine sanctuaries, and Biologically Important Areas (BIAs).

20 **Wallops Flight Facility:**

21 The Proposed Action will have no significant direct, indirect, or cumulative impacts to biological
22 resources, public health and safety, and hazardous materials and wastes. There will be no
23 disproportionate and adverse impacts to minority and low-income populations as a result of the
24 Proposed Action.

25 *Biological Resources* – Terrestrial vegetation will not be significantly impacted. No ground
26 clearing or construction is expected for the Proposed Action, and the launch will take place at a
27 location routinely used for launch activities. Terrestrial wildlife species have the potential to be
28 impacted by elevated sound pressure levels from launch as well as hazardous chemicals, and
29 artificial lighting. The launch site at WFF is in an area that has routine human activity, equipment
30 operation, and launch activity. Noise from launches and launch related activity may startle
31 nearby wildlife but any disturbance will be brief with no long-term impacts. Emissions from
32 vehicle launches will have little effect on wildlife due to the low-levels and short-duration of
33 emissions. No impacts on wildlife due to direct contact from debris are expected during normal
34 flight operations. Vibrations from launches and lighting present at launch pads may affect
35 loggerhead turtles at nest sites close to launch pads but the impacts of launch activities on
36 loggerhead populations will be minor. Overall, terrestrial wildlife will not be significantly impacted
37 by activities at WFF. Impacts to ESA-listed species will be minimal and short-term and are not
38 expected to be different than those of ongoing operations at WFF. Any potential effects on ESA-
39 listed species as a result of the Proposed Action are covered under Section 7 consultations and
40 the existing Biological Opinion for ongoing launch operations at WFF. Marine wildlife are not
41 expected to be significantly impacted by the Proposed Action. Any impacts, if realized will likely
42 be limited to short-term startle reactions due to elevated noise levels and marine wildlife will be
43 expected to return to normal behaviors within minutes. Noise from launches and launch related
44 activity may startle nearby wildlife, but this startle reaction will be of short duration and no injury
45 will occur. No impacts on marine wildlife due to direct contact or exposure to hazardous
46 chemicals from debris are expected during normal flight operations.

1 *Cultural Resources* – The Proposed Action would not require new construction at Launch Pad
2 0-B—only the potential modification on an existing structure. In addition, the facilities to be used
3 as part of the Proposed Action are not listed or eligible for listing on the National Register of
4 Historic Places. The launch site does not contain a historic or tribal site of significance.
5 Therefore, no impacts on cultural resources are anticipated as a result of the Proposed Action.

6 *Public Health and Safety* – JFC launch activities will follow established protocols at WFF and
7 will involve risks to safety that are similar to those previously analyzed in NEPA documents
8 (Flight Experiment-2, etc.). WFF will implement protective measures to ensure risks to
9 personnel and the general public from these operations are minimized. The JFC mission
10 personnel will follow the same health and safety procedures developed under existing plans at
11 WFF. Federal, state, NASA, and local regulations as well as WFF SOPs will be followed for
12 launch site preparation, booster handling, and all hazardous operations. WFF Missile Flight
13 Analysis, Ground Safety, Range Safety, Ocean Clearance, Transportation Safety, and Fire and
14 Crash Safety procedures will be followed to ensure the safety of workers and members of the
15 public. WFF will issue NOTAMs and NTMs ahead of any JFC flight test, in accordance with
16 range safety and FAA requirements. In accordance with EO 13045, Protection of Children from
17 Environmental Health and Safety Risks, NASA and the JFC proponents have determined that
18 since the JFC flight tests will be conducted on NASA property and out in the open ocean, the
19 JFC flight test has no environmental health and safety risks that may disproportionately affect
20 children. The Proposed Action will not impact health and safety in the WFF ROI.

21 *Hazardous Materials and Waste* – All applicable local, state, and federal regulations, range
22 operating procedures, NASA requirements, and JFC-specific safety plans will be followed to
23 prevent accidents that could release hazardous materials or waste into the local environment.
24 The modification of the existing Mobile Service Structure (MSS) at the launch pad will have no
25 impact on management of hazardous materials and wastes at WFF. All federal, state, local and
26 WFF-specific SOPs will be followed during MSS modification to ensure worker and
27 environmental safety. Although unlikely, should a release of hazardous materials or waste
28 occur, WFF is capable of mitigating personnel and environmental health risks by following SOPs
29 and utilizing on-site emergency response teams. The Proposed Action will not exceed WFF's
30 ability to manage, store, and dispose of hazardous materials and waste.

31 Major Mitigating Actions are not required for any of the noted resources at WFF. Minor
32 mitigation activities are incorporated into the Proposed Action such that there are no significant
33 impacts to any resource from the planned activities.

34 **Cape Canaveral Space Force Station:**

35 The Proposed Action will have no significant direct, indirect, or cumulative impacts to biological
36 resources, public health and safety, hazardous materials and wastes, infrastructure, and
37 transportation resources. There will be no disproportionate and adverse impacts to minority and
38 low-income populations as a result of the Proposed Action.

39 *Air Quality* – No significant impacts to air quality are expected at CCSFS. Estimated annual
40 emissions do not exceed the PSD significant indicator levels for pollutants of concern, and
41 where applicable, launch activities are conducted in compliance with all applicable Brevard
42 County rules and regulations equating to insignificance. Therefore, no significant impacts to air
43 quality are anticipated from the JFC flight test.

1 *Biological Resources* – Terrestrial vegetation near the launch complex may be temporarily
2 affected by heat and launch emissions. However, impacts will be minimal and short-term.
3 Terrestrial wildlife may be impacted by elevated sound pressure levels from launch as well as
4 hazardous chemicals, and artificial lighting. The launch site is in an area that has routine human
5 activity, equipment operation, and launch activity. Noise from launches and launch related
6 activity may startle nearby wildlife but disturbance to wildlife from launches will be brief and is
7 not expected to have any long-term impacts. Wildlife are not likely to be physically harmed by
8 heat or emissions during launch. Overall, terrestrial wildlife will not be significantly impacted.
9 Impact to ESA-listed species will be minimal and short-term and are not expected to be different
10 than those of ongoing operations at CCSFS. Any potential effects on ESA-listed species as a
11 result of the Proposed Action are covered under numerous Section 7 consultations and existing
12 Biological Opinions for ongoing launch operations at CCSFS. Marine wildlife are not expected to
13 be significantly impacted by the Proposed Action. Any impacts, if realized will likely be limited to
14 short-term startle reactions due to elevated noise levels and marine wildlife will be expected to
15 return to normal behaviors within minutes. No impacts on marine wildlife due to direct contact or
16 exposure to hazardous chemicals from debris are expected during normal flight operations.

17 *Cultural Resources* – The Proposed Action would not require new construction at LC-46—only
18 the potential modification on an existing structure. In addition, the facilities to be used as part of
19 the Proposed Action are not listed or eligible for listing on the National Register of Historic
20 Places. The launch site does not contain a historic or tribal site of significance. Therefore, no
21 impacts on cultural resources are anticipated as a result of the Proposed Action.

22 *Public Health and Safety* – JFC launch activities will follow established protocols at CCSFS and
23 will involve risks to safety that are similar to those previously analyzed in NEPA documents.
24 CCSFS will implement protective measures to ensure risks to personnel and the general public
25 from these operations are minimized. The JFC mission personnel will follow the same health
26 and safety procedures developed under existing plans at CCSFS. Federal, state, and local
27 regulations as well as CCSFS SOPs will be followed for launch site preparation, booster
28 handling, and all hazardous operations. CCSFS Missile Flight Analysis, Ground Safety, Range
29 Safety, Ocean Clearance, Transportation Safety, and Fire and Crash Safety procedures will be
30 followed to ensure the safety of workers and members of the public. CCSFS will issue NOTAMs
31 and NTMs ahead of any JFC flight test, in accordance with range safety and FAA requirements.
32 In accordance with EO 13045, Protection of Children from Environmental Health and Safety
33 Risks, the proponents have determined that since the JFC flight tests will be conducted on DOD
34 property and out in the open ocean, the JFC flight test has no environmental health and safety
35 risks that may disproportionately affect children. The Proposed Action will not impact health and
36 safety in the CCSFS ROI.

37 *Hazardous Materials and Waste* – All applicable local, state, and federal regulations, range
38 operating procedures, and JFC-specific safety plans will be followed to prevent accidents that
39 could release hazardous materials or waste into the local environment. The modification of the
40 existing MSS at the launch pad will have no impact on management of hazardous materials and
41 wastes at CCSFS. All federal, state, local and CCSFS-specific SOPs will be followed during
42 MSS modification to ensure worker and environmental safety. Although unlikely, should a
43 release of hazardous materials or waste occur, CCSFS is capable of mitigating personnel and
44 environmental health risks by following SOPs and utilizing on-site emergency response teams.
45 The Proposed Action will not exceed CCSFS's ability to manage, store, and dispose of
46 hazardous materials and waste.

1 Major Mitigating Actions are not required for any of the noted resources at CCSFS. Minor
2 mitigation activities are incorporated into the Proposed Action such that there are no significant
3 impacts to any resource from the planned activities.

4 *Infrastructure* – CCSFS launch pad suitability, data collection and storage capabilities, booster
5 and explosive materials storage capabilities, and security systems were reviewed to be suitable
6 for the JFC Flight Tests. CCSFS power, potable water management, wastewater, and
7 stormwater management resources are numerous and will be capable of absorbing any
8 potential stressors from the JFC Flight Launch. The modification of the existing MSS at the
9 launch pad will have no significant impact on infrastructure resources at CCSFS. Any ground-
10 disturbing activities are not expected to remove vegetation or earth as the MSS will be designed
11 on existing man-made structures. All federal, state, local, and CCSFS-specific SOPs will be
12 followed during MSS modification to ensure worker and environmental safety. The Proposed
13 Action will not impact infrastructure resources in the CCSFS ROI.

14 *Transportation* – The transportation network at CCSFS will be capable of absorbing any
15 potential stressors from the JFC Flight Launch. Fewer than 100 support personnel will be at
16 each JFC Flight Test, and are required to follow all applicable federal, state, DoD and local
17 traffic laws, rules, and regulations. The modification of the existing MSS at the launch pad will
18 have no significant impact on infrastructure resources at CCSFS. Any ground-disturbing
19 activities are not expected to remove vegetation or earth as the MSS will be designed on
20 existing man-made structures and will not impact the CCSFS transportation network. All federal,
21 state, local, and CCSFS-specific SOPs will be followed during MSS modification to ensure
22 worker and environmental safety. The Proposed Action will not impact transportation resources
23 in the CCSFS ROI.

24 **Atlantic Ocean Flight Corridor and Booster Drop/Payload Impact Zones:**

25 The Proposed Action will have no significant direct, indirect, or cumulative impacts to air quality
26 or biological resources. There will be no disproportionate and adverse impacts to minority and
27 low-income populations as a result of the Proposed Action.

28 *Air Quality* – Under the Proposed Action, following the JFC flight test, the majority of aluminum
29 oxide will be removed from the stratosphere through dry deposition and precipitation. Emissions
30 from a JFC vehicle launch (using STARS vehicle emissions as a surrogate) will be relatively
31 small compared to all emissions released on a global scale. The large air volume over which the
32 JFC emissions are spread, and the dispersion of the emissions by stratospheric winds will
33 reduce potential impacts. Ozone-depleting gas emissions from up to six flight tests per year
34 represent such a minute increase that any incremental effects on the global atmosphere will be
35 discountable and insignificant. The Proposed Action will not have a significant impact on
36 stratospheric ozone or on the upper atmosphere. The amount of GHG emissions that will be
37 released from activities associated with up to six JFC flight tests is assumed to be negligible
38 based on the small number of vessels and aircraft utilized and the short period of time for
39 conducting a JFC flight test. This limited amount of emissions will not likely contribute to global
40 warming and climate change to any discernible extent. Implementation of the Proposed Action
41 will not result in significant impacts to air quality or GHG emissions.

42 *Biological Resources* – The Proposed Action will have minimal to no impacts on marine wildlife
43 in the BOA. The potential exists for exposure to elevated sound levels, direct contact from
44 expended test components, hazardous materials, and vessel traffic. Based on the expected
45 sound pressure levels and estimated density of special-status wildlife, no injury from elevated

1 sound levels is expected. Any effects due to sound will likely be limited to short-duration
2 behavioral response with no long-term impacts. Based on the available animal densities in the
3 Atlantic BOA and on the size and number of expended test components, no physical injury to
4 special-status species is expected as a result of direct contact. Any hazardous chemicals
5 introduced to the water column will be quickly diluted and dispersed and are not likely to impact
6 marine wildlife or their habitats. Any test components or debris will sink to the ocean floor where
7 most marine wildlife will not come into contact with it. The Proposed Action will not meaningfully
8 increase vessel traffic in the BOA and vessel traffic will have minimal to no impacts. The
9 Proposed Action may affect but is not likely to adversely affect ESA-listed species in the BOA.
10 The U.S. Navy and U.S. Army plan to pursue informal consultation with NMFS under Section 7
11 of the ESA. No incidental take or harassment of marine mammals protected under the MMPA is
12 expected.

13 No impacts to environmentally sensitive habitats are expected, including designated critical
14 habitat, EFH, HAPCs, marine national monuments, national marine sanctuaries, and BIAs.

15 **PUBLIC INVOLVEMENT:** The U.S. Navy and U.S. Army circulated the Draft PEA/OEA for
16 public review for 30 days from June 11, 2021 to July 10, 2021. TBD comments were received
17 from the public. U.S. agencies provided TBD comments on the Draft PEA/OEA, and responses
18 to those comments are provided in Appendix B of the Final PEA/OEA.

19 **POINT OF CONTACT:** The EA/OEA addressing this action may be obtained from: U.S. Army
20 Space and Missile Defense Command, P.O. Box 1500 Huntsville, AL 35807, Attn: David Fuller,
21 256-425-2016, or at the project website: JFCeaoea.govsupport.us

22 **CONCLUSION:** Based on the analysis presented in the EA/OEA, the U.S. Navy and U.S. Army
23 conclude that the Proposed Action will not significantly impact the quality of the human and
24 natural environment. Accordingly, there is no requirement to prepare an Environmental Impact
25 Statement.

26

1 **APPROVED:**

2

3

4

5

6

7 L. NEIL THURGOOD
8 Lieutenant General, U.S. Army
9 Director of Hypersonics, Directed Energy,
10 Space and Rapid Acquisition

DATE

11

12

13

14

15

16

17 JOHNNY R. WOLFE, JR
18 Vice Admiral, U.S. Navy
19 Director, Strategic Systems Programs

DATE

20

21