

FINDING OF NO SIGNIFICANT IMPACT
SOLID ROCKET MOTOR PRODUCTION MODERNIZATION AND UPGRADE
AEROJET ROCKETDYNE FACILITY, ORANGE, VIRGINIA

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code 4321 et seq.), the President's Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the Department of the Air Force (DAF) Environmental Impact Analysis Process (EIAP) codified at 32 CFR Part 989, the DAF in partnership with Aerojet Rocketdyne (AR) has prepared an Environmental Assessment (EA) to evaluate and document the potential environmental impacts associated with the expansion of the AR facility in Orange, Virginia. This EA is incorporated by reference into this Finding of No Significant Impact (FONSI).

Purpose and Need for the Proposed Action (EA Sections (§§) 1.3.1 & 1.3.2, pages 1-4 to 1-5): The purpose of the Proposed Action is for the DAF to address a capability gap in the production of Solid Rocket Motors (SRMs) that power the Department of Defense's (DoD's) Javelin and Stinger tactical missile systems. The need for this action is to increase SRM production capacity to meet strong current and future demands for the missile systems mentioned above. Increasing SRM production is critical for national defense as well as supporting U.S. allies across the globe in both near-term and future conflicts. This need, recently highlighted due to the conflict in Ukraine where these missiles have proven invaluable, has shown manufacturing limitations in quickly replenishing domestic stock supplies.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action (EA §2.3, pages 2-1 to 2-6): The Proposed Action would use federal funding to expand an existing missile production campus operated by AR in Orange, Virginia northeast of Charlottesville (EA Figure 1-1, page 1-3). The project area encompasses approximately 266 acres of undeveloped land adjacent to the existing campus. Approximately 210 acres of the 266 acres would be cleared and graded prior to demolition and construction activities. The Proposed Action includes construction or upgrades for facilities and their associated infrastructure in this area, including construction access roads, expand parking areas & security fencing, upgrades to domestic water, fire suppression, electrical, sanitary sewer & gas lines, and other miscellaneous support structures. The majority of the work would occur in an area previously used for tree farming (EA Figure 2-1 on page 2-6). Construction is expected to take one year and includes adding:

- 3,600 square foot (sf) office building
- 34,490-sf Stinger cast and final assembly building
- 18,300-sf Javelin cast and final assembly building
- 2,400-sq mixer building
- 2,200-sq Javelin sparge and dryer building
- 2,600-sf grinder building
- 2,250 control room building, and
- 1,400-sf dryer building

Alternatives Eliminated from Further Analysis (EA §2.5, page 2-7): AR initially looked at developing new facilities at either a new supplier location and/or at an alternative AR location within the Orange campus. Engaging another organization to develop the needed manufacturing capacity for SRMs was considered, however, this would substantially extend both the construction and production timelines and would not support increasing SRM supply production by the third quarter of 2026 as directed by Section 303 of the Defense Production Act and in support of the Additional Ukraine Supplemental Appropriations Act, 2022 (Public Law 117-128). In addition, the overall environmental impact would potentially be greater, as full greenfield construction would result in a higher volume of earth movement due to a greater construction footprint along with increased air quality and water quality impacts. For these reasons, these two alternatives were dismissed from further review.

No Action Alternative (EA §2.2, page 2-1): Both 32 CFR §989.8(d) and the President's CEQ guidance recommends inclusion of the No Action alternative to assess any environmental consequences that may occur if the Proposed Action is not implemented. Under the No Action Alternative, the Title III Executive Agent Program Office would not proceed with funding the Proposed Action. While the No Action alternative does not support the Additional Ukraine Supplemental Appropriations Act, 2022 (Public Law 117-128), it is being carried forward to compare the scale of environmental effects the Proposed Action would have on the environment.

ENVIRONMENTAL CONSEQUENCES

The EA evaluated whether the Proposed Action would result in significant impacts on the human environment, including the natural environment. In addition to project-specific impacts resulting from the Proposed Action, the EA analyzed the potential for significant cumulative impacts to resources affected by the Proposed Action. Resources that could have cumulative effects are geology and soils, air quality, noise, water resources, floodplains, vegetation, hazardous materials and waste, and socioeconomics. AR will be responsible for implementing all required federal, state, and local construction and operating permits along with any associated best management practices (BMPs). The Proposed Action and No Action Alternative were determined to have no or negligible impact on land use, recreation, and visual resources; therefore, impacts to these resources were not analyzed further in the EA (EA §3.2, pg. 3-1 to pg. 3-2). Below summarizes the remaining environmental impacts:

Geology and Soils (EA §3.3.1, pgs. 3-2 to 3-4): The Proposed and No Action Alternatives would temporarily impact up to 210 acres of soils and permanently impact 26.5 acres, of which 16.9 acres would have impervious surfaces; however, the majority of the soils have been previously disturbed as part of timber harvest and disturbed areas will be revegetated upon construction completion. Cumulatively, the Sunfish Solar Project, which is adjacent to this action, contributes an additional 434 acres of temporary disturbances to soils. AR will minimize the overall construction footprint for the Proposed Action as well as be responsible for incorporating stormwater infrastructure into the design. All fill soils will be locally sourced. The Natural Resources Conservation Service Soil Survey indicated the presence of prime farmlands and scored 141 points on the USDA Farmland Conversion Impact Rating form AD-1006. The Farmland Protection Policy Act states that "sites receiving a total score of less than 160 need not be given further consideration for protection and no additional sites need to be evaluated" (7 CFR Part 658.4(c)(2)). The USDA NRCS cannot issue formal concurrence letters but concurred with the use of 7 CFR Part 658.4(c)(2) that no further consideration for protection is needed. Based on this, there will be no significant direct, indirect and/or cumulative impacts to geology and soil resources with implementation of the Proposed Action.

Air Quality (EA §3.3.2, pgs. 3-4 to 3-7): Orange Co., Virginia, where the campus is located, is in attainment for all criteria pollutants; therefore, conformity analysis is not required for the No Action or Proposed Action. Short-term direct, indirect impacts on air quality will occur during construction from fugitive dust emissions as well as from increased SRM operations. For the Proposed Action, AR will be required to modify their existing Title V air permit to accommodate the operational emission increases. The Air Conformity Applicability Model (ACAM) located within Appendix H of the EA concluded that none of the estimated annual net emissions associated with the No Action, Proposed Action, or cumulative effects exceed the insignificance indicators for criteria pollutants or greenhouse gases (GHG). Therefore, the No Action, Proposed Action, and cumulative effects will not cause or contribute to an exceedance of one of more National Ambient Air Quality Standards (NAAQS) and will have an insignificant impact on air quality. Overall, there will be no significant direct, indirect, and/or cumulative impacts to air quality resources with implementation of the Proposed Action.

Noise (EA §3.3.3, pgs. 3-7 to 3-8): The Orange campus is currently located adjacent to two highways and within the vicinity of the Sunfish Solar Project. The Proposed Action will have short-term, temporary impacts as part of construction. These impacts would cease within one year of project completion. Any operational noise from the SRM expansion would be buffered by ~0.25 miles of timbered land. In addition, AR maintains an employee hearing protection program. Overall, there will be no significant direct, indirect and/or cumulative impacts to noise with implementation of the Proposed Action.

Water Resources (EA §3.3.4, pgs. 3-8 to 3-13): Groundwater is not anticipated to be encountered during construction for either action as below ground surface depths were encountered at 24 to 29 feet in 3 out of 42 soil

borings during a geotechnical evaluation conducted in November 2023. Construction under the Proposed Action will potentially impact Mountain Run along with both jurisdictional / non-jurisdictional wetlands (EA Table 3-3, page 3-10). Approximately 0.11 acres of wetlands and 113 linear feet of surface waters will be permanently impacted under the Proposed Action. A preliminary jurisdictional determination (PJD; NAO-2023-02496) of WOTUS, including wetlands, was obtained for the expansion area on November 17, 2023. The PJD was approved and submitted with the State Program General Permit application for impacts to state and federal waters, which was approved in September 2024. Additionally, the Proposed Action would permanently convert approximately 16.9 acres to impervious surfaces increasing stormwater runoff on site. Prior to construction AR will obtain and adhere to the Virginia Dept. of Environmental Quality General Construction Stormwater General Permit (VAR10). As part of this permit, AR is required to prepare a stormwater pollution prevention plan identifying all applicable BMPs to be implemented. Overall, there will be no significant direct, indirect and/or cumulative impacts to water resources with implementation of the Proposed Action.

Floodplains (EA §3.3.5, pg. 3-14): Under the Proposed Action, the 100-year floodplain would not be impacted during construction activities. Stormwater mitigation and BMPs would protect the 100-year floodplain area from soil, sedimentation, and nonpoint source pollution. Overall, there will be no significant direct, indirect and/or cumulative impacts to floodplains with implementation of the Proposed Action.

Vegetation (EA §3.3.6, pgs. 3-15 to 3-16): While vegetation will be impacted from ground clearing activities, the construction footprint for the Proposed Action has been kept small to minimize these impacts. No land disturbance would occur as part of the No Action while 210 acres would be disturbed under the Proposed Action. Disturbed areas will be revegetated with low-maintenance landscaping in areas that are not paved. Trees and shrubs will be replanted to compensate for those removed during construction. Overall, there will be no significant direct, indirect and/or cumulative impacts to vegetation with implementation of the Proposed Action.

Threatened and Endangered Species (EA §3.3.7, pgs. 3-16 to 3-18): A U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation report generated for the entire project area reported three endangered species and seven migratory birds that could potentially be affected. Field reconnaissance on March 15, 2024, determined there are relatively small areas of mature trees along with no streams of an adequate size to support their habitat. Based on these findings, the DAF concluded ‘*no effect*’ determination, which was transmitted to the USFWS Virginia Ecological Services Field Office on June 5, 2024. Additional documentation concerning onsite stream classifications, and erosion and sediment control measures, and a project review package and self-certification letter for the DAF’s determination were submitted to the field office on June 28, 2024. After their review, the Virginia Ecological Services Field Office responded on August 23, 2024, and concurred with the DAF’s determination. The project review package and self-certification letter serve as formal concurrence in accordance with the Endangered Species Act (ESA) of 1973 (16 U.S.C. 4321-4347, 83 Stat. 852), as amended (Refer to Appendix A of the EA). Overall, there will be no significant direct and/or indirect impacts to threatened and endangered species with implementation of the Proposed Action.

Hazardous Materials/Waste (EA §3.3.8, pgs. 3-18 to 3-20): The Proposed Action would generate common construction-related waste streams, which would be temporary and easily supported by nearby landfills and recycling centers. However, there will be an overall increase to hazardous waste generation from increased SRM production. AR has in place hazmat spill response and onsite spill response training along with designated storage and chemical handling areas managed in accordance with all federal, state, and local regulations. Overall, there will be no significant direct, indirect and/or cumulative impacts to hazardous materials and waste with implementation of the Proposed Action.

Public Safety and Occupational Health (EA §3.3.9, pgs. 3-20 to 3-21): The Proposed Action will have insignificant impacts to worker safety as AR and their contractors are required to follow internal health and safety work plans in accordance with the Occupational Health and Safety Administration regulations. In addition, the Proposed Action will install added security fencing, lighting, and cameras throughout the campus area as well as utilize an existing guard post to control access into this area. Overall, there will be no significant direct, and/or indirect impacts to public safety and occupational health with implementation the Proposed Action.

Socioeconomics (EA §3.3.10, pgs. 3-21 to 3-23): The Proposed Action would create up to 90 new positions within the local communities. The Environmental Justice Screen Community Report determined no low income, minority, and/or children populations will be impacted by these actions. Overall, there will be no significant direct and/or indirect impacts to socioeconomics with the No Action. In addition, the Proposed Action will result in a cumulative long-term beneficial impact from the generation of job opportunities throughout Orange County.

Historical and Cultural Resources (EA §3.3.11, pgs. 3-23 to 3-25): There are no historical properties and/or archaeological sites on or within the immediate vicinity of the No Action and Proposed Action. The closest historic area identified by the Virginia Department of Historic Resources (DHR) is approximately 500 feet from the furthest northwest proposed boundary. Based on this, the DAF made a ‘no adverse effect to historic properties’ determination and submitted this finding to the Virginia DHR and State Historic Preservation Office (SHPO) on July 8, 2024. A response was received on August 8, 2024, with a request to provide additional documentation on how the area of potential effect (APE) was developed. DAF responded on August 13, 2024, with supporting documentation. DHR requested an updated cultural survey be conducted at the site. The onsite cultural survey was completed in October 2024, with findings submitted to DHR on December 5, 2024. DHR responded on January 3, 2025 concurring with DAF’s “no adverse effect to historic properties” determination. Two sovereign tribal nations have interests in Orange County, Virginia. Each tribe was provided consultation letters on July 8, 2024, with follow-up correspondence submitted August 16, 2024. The Monacan Nation responded on July 30, 2024, stating that the Proposed Action is not expected to disturb known properties of cultural or sacred significance to their tribe. Delaware Nation, Oklahoma did not respond to request for consultation or subsequent attempts at contact. Refer to Appendix A for detailed status of tribal and SHPO consultations. Overall, there will be no significant direct and/or indirect impacts to historical and cultural resources with implementation of the No Action or Proposed Action.

AGENCY AND PUBLIC COMMENT

The DAF published an early public notice stating the Proposed Action could occur within identified wetland areas to encourage early and meaningful public involvement (Department of the Air Force Manual 32-7003, Environmental Conservation, 26 June 2024, paragraphs 3.20.3 and 3.23.1.1; Executive Order (EO) 11988, Floodplain Management, section 2(a)(4); and EO 11990, Protection of Wetlands, section 2(b)). An advertisement was posted within the *Orange County Review* and the *Culpeper Star Exponent* on April 18, 2024, with the comment period ending on May 18, 2024. The posting was also made available for public review at the Orange County Public Library, as well as posted on the DAF website (<https://www.afrl.af.mil/Environmental>). No public comments were received during this period.

The draft EA and draft FONSI were made available to interested parties and agencies as well as made available for public review through a notice of availability in the *Orange County Review* and the *Culpeper Star Exponent* and on a DAF-hosted website (<https://www.afrl.af.mil/Environmental>). The public comment period occurred from January 23, 2025 to February 22, 2025. Hard copies of the documents were made available at the Orange County Public Library. Additionally, letters were provided to relevant federal, state, and local agencies stating the draft EA and draft FONSI were available for review and comment.

FINDING OF NO SIGNIFICANT IMPACT

Based on review of the facts and analysis summarized above and contained within the findings of this EA, I find the Proposed Action would not have a significant impact on the human environment. AR will be responsible for and adhere to all applicable federal, state, and local regulatory permitting requirements identified above. An environmental impact statement is not required. Considering the above information, I also find there is no practicable alternative to the expansion of the AR facility in Orange, Virginia within the wetland areas and floodplain which includes Mountain Run as described above. The Proposed Action has taken all practicable measures to minimize harm to these resources. This analysis fulfills the requirements of NEPA, the President’s CEQ regulations, 40 CFR 1500 – 1508, the DAF regulation on their environmental impact analysis process codified at 32 CFR 989, EO 11988, Floodplain Management, and EA 11990, Protection of Wetlands.

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