

**DEPARTMENT OF DEFENSE  
DEPARTMENT OF THE NAVY**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE ENVIRONMENTAL ASSESSMENT (EA) FOR IMPLEMENTATION OF ENERGY CONSERVATION MEASURES AT NORFOLK NAVAL SHIPYARD, PORTSMOUTH, VIRGINIA**

Pursuant to the National Environmental Policy Act (NEPA; 42 United States Code 4321 et seq.), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Department of the Navy (Navy) regulation and procedures for implementing NEPA (32 CFR Part 775), the Navy gives notice that an EA has been prepared and an Environmental Impact Statement (EIS) is not required for the implementation of Energy Conservation Measures (ECMs) through the award of an Energy Savings Performance Contract (ESPC) at the Norfolk Naval Shipyard (NNSY) in Portsmouth, Virginia. The ECMs would be implemented within the NNSY Mainsite, the Scott Center, Southgate, and the St. Juliens Creek annexes. The ECMs would be owned and operated by the Navy and installed and maintained by an Energy Service Company (ESCO).

**Proposed Action:** The Navy is proposing to implement ECMs through award of an ESPC at NNSY in Portsmouth, Virginia. The Proposed Action includes the construction and operation of a Combined Heat and Power (CHP) Plant; installation of a Micro - Grid Control (MCS) system within the CHP Plant; installation of a Battery Energy Storage System (BESS) next to the CHP Plant; and replacement of the existing Industrial Wastewater Treatment Plant (IWTP). The proposed CHP Plant would provide the installation with its own source of steam and electricity. The proposed 20 - megawatt (MW) CHP Plant would consist of two dual fuel (natural gas / fuel oil) - fired turbines with an electrical capacity of 7.6 MW, one 4.3 - MW steam - driven turbine, two heat recovery steam generators, three high efficiency, low emissions dual fuel backup steam boilers, one 1.5 - MW non - emergency diesel generator, one 550,000 gallon diesel fuel tank, and one cooling water tower. The turbines would be fired with natural gas, with Ultra Low Sulfur Diesel (ULSD) as back - up in times when natural gas is unavailable. A new steam distribution line would connect the CHP Plant to existing main steam lines. A proposed new high - pressure, natural gas line would also be installed, owned, and operated by a natural gas provider and would run from an existing transport line on Military Highway (U.S. Route 13) north along area roads through St. Juliens Creek Annex to the site of the proposed CHP Plant. All proposed construction would occur within previously developed areas of NNSY. Numerous non - construction ECMs, which primarily consist of upgrading and installing efficient energy systems and fixtures within existing facilities to manage and reduce energy consumption, are also proposed to be implemented at NNSY Mainsite, Scott Center, Southgate and St. Juliens Creek annexes.

**Purpose and Need:** The purpose of the Proposed Action is to reduce the Navy's energy use and increase energy security, strategic flexibility, and resource availability at NNSY Mainsite and the Navy's Scott Center, Southgate, and St. Juliens Creek annexes. The Proposed Action is needed to assist the Navy in meeting Federal policies, goals, and standards concerning energy security through enhancing resiliency and finding efficiencies by reducing energy and water use.

**Existing Conditions:** NNSY is located in the Hampton Roads region of southeastern Virginia. The region is home to numerous Navy installations and support activities. The mission of NNSY is to: provide logistics support for assigned ships and service craft; conversion, overhaul, repair, alteration, and dry dock work and outfitting of ships; manufacture, research, development, and test work; and other services and materials. NNSY Mainsite occupies approximately 498 acres. Scott Center Annex is located south of NNSY Mainsite in the City of Portsmouth. The 62 - acre parcel currently provides housing and a recreation center. Southgate Annex is an 83 - acre riverfront parcel located in the City of Portsmouth that houses the Inactive Ship Facility and Intra - Fleet Supply Support

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE ENVIRONMENTAL ASSESSMENT (EA) FOR IMPLEMENTATION OF ENERGY CONSERVATION MEASURES AT NORFOLK NAVAL SHIPYARD, PORTSMOUTH, VIRGINIA**

Operations. St. Juliens Creek Annex occupies approximately 490 acres located approximately one mile south of NNSY in the City of Chesapeake. The site provides a radar testing range and various administrative offices, light industrial shops, and storage facilities for tenant naval commands at NNSY.

**Alternatives Analyzed:** The Navy considered two alternatives: the Preferred Alternative (Proposed Action) and the No Action Alternative.

The Preferred Alternative is selected for implementation and would implement the following ECMs:

ECM 8 - Steam Distribution Upgrades: Will repair insulation on steam pipe and fittings in 74 buildings (8.1), will replace failed steam traps in 70 buildings (8.4), and replace the St. Juliens Creek Annex Service Area 2 steam overhead distribution piping and install new concrete piers for the overhead pipe supports (8.5). See appendix E of EA for a listing of all building numbers or site locations.

ECM 10 - Energy Security: Would construct the proposed CHP Plant within a parking lot displacing 360 parking spaces; would include installation of a new high - pressure natural gas line (10.1), and would install a Micro - Grid Control System (MCS) and Battery Energy Storage System (BESS) (10.2).

ECM 14 - Transformer Modernization: Will replace transformers with high efficiency models in 33 buildings throughout NNSY Mainsite. See Appendix E of EA for a listing of all buildings or site locations.

ECM 16 - Industrial Wastewater Treatment Plant (IWTP): Would construct a new IWTP to replace the existing IWTP at the same location.

The Preferred Alternative would provide infrastructure updates and improve energy efficiency of the NNSY Mainsite, Scott Center, Southgate, and St. Juliens Creek annexes to maintain reliable operations in support of mission requirements.

The No Action alternative would not implement ECMs through award of an ESPC at NNSY. As a result, no energy cost savings or needed infrastructure improvements would be realized.

Several categories of ECMs were considered but eliminated from further consideration because they did not meet the Purpose and Need for the Proposed Action or satisfy the reasonable alternative screening factors. The alternatives considered but not carried forward include: construction of a central steam plant, installation of solar photovoltaic systems, and energy and water efficiencies consisting of boiler and chiller plant improvements; installation of low - flow plumbing fixtures and flow control valves; and tanks to reuse water in various test areas such as cable assembly hydrostatic tests, dynamometer motor tests, pipe pressure tests, and fire hose tests.

**Environmental Effects:** The potential impacts to airspace, land use, noise, public health and safety, socioeconomics, and traffic and transportation were considered to be negligible or nonexistent, so they were not analyzed in detail in the EA.

The following is a summary of the environmental consequences of the Preferred Alternative.

Air Quality: The Preferred Alternative would result in short - term impacts to air quality during the construction phases of ECM 10 and ECM 16; criteria pollutant emissions would be below *de minimis* and less than significant. The Title V operating permit under the Clean Air Act (CAA)

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE ENVIRONMENTAL ASSESSMENT (EA) FOR IMPLEMENTATION OF ENERGY CONSERVATION MEASURES AT NORFOLK NAVAL SHIPYARD, PORTSMOUTH, VIRGINIA**

for NNSY would require major modification for the new stationary source (CHP Plant); and, the submission of a pre - construction application (New Source Review) for the CHP Plant to the Virginia Department of Environmental Quality (DEQ) for a Prevention of Significant Deterioration (PSD) permit. The issuance of a PSD Permit would signify that the CHP Plant would demonstrate compliance with all ambient standards and would result in no significant deterioration of air quality in the area. The addition of the CHP Plant would result in increases to all criteria pollutants, particularly increases in nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO). Because the CHP plant will be a new stationary source, it will be regulated under the CAA and would be permitted and operated in accordance with Federal and State criteria pollutant requirements. It is not anticipated that operation of the CHP Plant would itself result in violations of the National Ambient Air Quality Standards (NAAQS), 40 CFR Part 50. Operation of the CHP Plant would result in a substantial increase in Greenhouse Gas (GHGs) emissions; the GHGs would be limited as much as possible through good combustion and work practices. Implementation of the Preferred Alternative would not result in a significant impact to air quality.

Water Resources: The Preferred Alternative would result in no significant short - term, long - term, direct, or indirect impacts to water resources (i.e., groundwater, surface water, wetlands, and floodplains) from CHP Plant and IWTP construction or operational activities. A Virginia Erosion and Sediment Control Plan would be adhered to during construction of the CHP Plant and the IWTP. The installation of the natural gas pipeline to supply the new CHP Plant will occur primarily within the existing utility easement and would involve horizontal directional boring to minimize excavation and disturbance to water resources. Best Management Practices (BMPs) would be used during the installation process to reduce the potential for impacts. The CHP Plant and IWTP will be located within the 100 - year floodplain. The CHP Plant will be built on concrete piles to raise the floor to 500 - year flood elevation or to four feet above the 100 - year flood elevation, whichever is higher. Consistent with Executive Order 11988, the Navy would ensure compliance with all floodplain management regulations for the CHP Plant and IWTP. The IWTP treated effluent would continue to be discharged to the Southern Branch of the Elizabeth River in accordance with Virginia Pollutant Discharge Elimination System permit: VA0005215. Implementation of the Preferred Alternative would not result in significant impacts to water resources.

Cultural Resources: The Preferred Alternative is anticipated to have no adverse effect on the NNSY Historic District or the Norfolk and Portsmouth Belt Line Railroad Bridge, and no effect on any other known historic properties within the area of potential effect. The NNSY consulted with the Virginia State Historic Preservation Office (SHPO) on its finding of no adverse effect for the Action Alternative; in correspondence dated May 22, 2019, the Virginia SHPO concurred with the Navy's finding. Implementation of the Preferred Alternative would not result in significant impacts to cultural resources.

Visual Resources: The Preferred Alternative would have minor short - term visual impacts during construction. Long - term minor visual impacts as the view from the surrounding area would change with construction of the proposed two - story CHP Plant building and associated features in place of an asphalt parking lot; however, the facility construction and proposed operations at the site would be consistent with the industrial land use designation of the surrounding areas at NNSY Mainsite. The Preferred Alternative would not result in significant impacts to visual resources.

Biological Resources: The Preferred Alternative would have no significant direct or indirect impacts to biological resources. There would be no effect on threatened and endangered species and no

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE ENVIRONMENTAL ASSESSMENT (EA) FOR IMPLEMENTATION OF ENERGY CONSERVATION MEASURES AT NORFOLK NAVAL SHIPYARD, PORTSMOUTH, VIRGINIA**

formal consultation between the NNSY and United States Fish and Wildlife Service (USFWS) would be required.

Infrastructure: The Preferred Alternative would have no adverse short - term impacts to infrastructure resources; however, implementing ECMs 10 and 16 would be anticipated to have a long - term positive impact. ECM 10 would receive potable water for the CHP Plant from the City of Portsmouth, and would allow NNSY to be self - reliant for electricity in the event of a grid failure and provide steam once the contract between Wheelabrator and the Navy expires in 2023. ECM 16 would increase wastewater treatment capacity at the new IWTP to 2.7 million gallons per year. Currently, approximately 1.9 million gallons per year is treated at the existing IWTP. The treated effluent will continue to be discharged to the Southern Branch of the Elizabeth River with some portion of treated effluent being stored in a 10,000 - gallon non - potable tank included with the proposed IWTP. The treated effluent in the non - potable tank would be used to wash down wastewater transport tanks and totes eliminating the need to purchase roughly 300,000 gallons of municipal water annually for this purpose. The Preferred Alternative would not result in significant impacts to infrastructure.

Hazardous Materials and Wastes: The Preferred Alternative would have no significant short - or long - term impacts. The types of hazardous materials, substances, and hazardous waste would be similar to those used or generated during current operations at NNSY. The handling of hazardous materials and wastes would continue to be conducted in accordance with Federal and State regulations and NNSY's Standard Operating Procedures (SOPs) and permit: VA1170024813. The installation of the proposed natural gas line to the new CHP Plant would be installed within the existing utility easements adjacent to Installation Restoration Program (IRP) Sites 2 and 21 at St. Juliens Creek Annex and Operable Unit 2 at the Paradise Creek Disposal Area. Disturbance of the IRP sites would not be anticipated. A proposed "tee" off the natural gas line to supply service to the boiler plant (Building 283) at St. Juliens Creek Annex would have the potential to affect IRP Site 2 as discussed in Section 3.7.3.2 of the EA. The alignment of the natural gas pipeline would be designed to avoid monitoring wells, and if unavoidable, the monitoring wells would be relocated though the Navy would need to first consult with U.S. Environmental Protection Agency (USEPA) and with Virginia DEQ. The new IWTP would be constructed near IRP Site 17; however, no disturbance of site 17 would be anticipated and all existing Land Use Controls (LUCs) would be followed. The Preferred Alternative would not result in significant impacts associated with hazardous materials and wastes.

Environmental Justice and Protection of Children: The analysis in the EA determined that no adverse short- or long-term impacts would occur to any resource area from implementing the Preferred Alternative; as such, the Preferred Alternative would not result in disproportionately high or adverse impacts to minority or low - income populations. Access to NNSY is restricted; there is no potential for children to be present in or near construction work areas. The Preferred Alternative would not result in significant impacts to environmental justice and protection of children.

Coastal Zone Management: The Preferred Alternative would be consistent to the maximum extent practicable with the enforceable polices of the Virginia Coastal Zone Management Program (VCZMP). The Navy prepared and submitted a Coastal Consistency Determination (CCD) dated June 6, 2019 to the Virginia DEQ pursuant to its responsibilities under the Coastal Zone Management Act (CZMA) for implementing the ECMs described under the Preferred Alternative and requested coordination concerning the potential effects on coastal resources within the study

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR THE ENVIRONMENTAL ASSESSMENT (EA) FOR IMPLEMENTATION OF ENERGY CONSERVATION MEASURES AT NORFOLK NAVAL SHIPYARD, PORTSMOUTH, VIRGINIA**

area. See Appendix D of the EA for a copy of the NNSY's CCD. The NNSY determined the projects under the Action Alternative would be consistent with the enforceable policies of the VCZMP. Virginia DEQ provided a letter response dated August 5, 2019 concurring with the NNSY's CCD that the Preferred Alternative is consistent to the maximum extent practicable with the VCZMP, provided all applicable permits and approvals are obtained prior to implementing the Preferred Alternatives. Also, Virginia DEQ noted in their letter that it published a public notice in accordance with 15 CFR Section 930.2 of the Navy's Preferred Alternative in the DEQ Office of Environmental Impact Review Program Newsletter and on the DEQ website from June 14, 2019 to July 9, 2019. In addition, Virginia DEQ invited the City of Portsmouth and the Hampton Roads Planning District Commission to also comment on the NNSY's Preferred Alternative. No public comments were received in response to the Virginia DEQ notice.

Public Participation: As required by CEQ regulations, the NNNSY involved the public by publishing a Notice of Preparation (NOP) in a local newspaper, *The Virginian Pilot*, on May 26, 2019, that provided an overview of the Proposed Action and provided for a public comment period which ended on June 7, 2019. No public comments were received by the Navy and, to date, there has been no public opposition to the Proposed Action.

Cumulative Impacts: Potential cumulative effects of the Preferred Alternative in combination with other past, present, or reasonably foreseeable future actions were analyzed and found not significant.

**Finding of No Significant Impact:** Based on the analysis presented in the EA, and coordination with the Virginia State Historic Preservation Office (SHPO), Virginia Department of Environmental Quality (DEQ), and the United States Fish and Wildlife Service (USFWS), the Navy finds that implementation of the Preferred Alternative will not significantly affect the quality of the human or natural environment or generate significant controversy. Therefore, preparation of an Environmental Impact Statement (EIS) will not be required.

The EA prepared by the Navy addressing this action is on file and interested parties may obtain a copy from Norfolk Naval Shipyard, 1500 Pennock Street, Building 1500, 5th floor, Portsmouth, Virginia 23709 (ATTN: M. Stuck, Installation Environmental Program Director). A limited number of copies of the EA are available to fill single copy requests.

22 JUL 2019

Date



C. W. ROCK  
Rear Admiral, U.S. Navy  
Commander, Navy Region Mid-Atlantic