

Appendix D – Federal Consistency Determination

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VDEQ Concurrence

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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February 13, 2020

Ms. Brenda Barber, P.E.
U.S. Army Corps of Engineers Baltimore District
ATTN: CENAB-ENE-C
2 Hopkins Plaza/09-A-10 (Cube)
Baltimore, Maryland 21201
Sent via email: [REDACTED]

RE: U.S. Army Corps of Engineers Draft Environmental Assessment and Federal Consistency Determination: Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility, U.S. Army Garrison Fort Belvoir, Fairfax County (DEQ 19-157F).

Dear Ms. Barber:

The Commonwealth of Virginia has completed its review of the draft Environmental Assessment (EA), which includes a federal consistency determination (FCD), for the above-referenced project. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal environmental documents prepared pursuant to the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating state reviews of FCDs submitted under the Coastal Zone Management Act. The following agencies participated in this review:

Department of Environmental Quality
Department of Conservation and Recreation
Department of Game and Inland Fisheries
Department of Health
Department of Historic Resources
Marine Resources Commission

Fairfax County and the Northern Virginia Regional Commission also were invited to comment on the project.

PROJECT DESCRIPTION

The U.S. Army Corps of Engineers (Corps) Baltimore District proposes to fully decommission and dismantle the Deactivated Stationary Medium Power Model 1 (SM-1) Reactor Facility on Fort Belvoir in Fairfax County, Virginia (proposed action). Under the proposed action, the Corps would implement an Army Reactor Office-approved Decommissioning Plan to safely remove, transport, and dispose of remaining structures, equipment, and media from the Deactivated SM-1 site; validate that site conditions meet applicable cleanup standards; restore the site to a vegetated condition; and return the site to Fort Belvoir for future use.

FEDERAL CONSISTENCY PURSUANT TO THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, activities both within and outside of the Commonwealth's designated coastal zone with reasonably foreseeable effects on any coastal uses or resources resulting from a Federal agency activity (15 CFR Part 930, Subpart C) must be consistent to the maximum extent practicable with Virginia's Coastal Zone Management (CZM) Program. The Virginia CZM Program consists of a network of programs administered by several agencies. DEQ coordinates the review of FCDs with agencies administering the enforceable policies of the Virginia CZM Program.

PUBLIC PARTICIPATION

In accordance with 15 CFR §930.2, a public notice with a comment period of January 10, 2020 to February 3, 2020 of this proposed action was published in OEIR's Program Newsletter and on the DEQ website. No public comments were received in response to the notice.

FEDERAL CONSISTENCY CONCURRENCE

The FCD states that the project is consistent to the maximum extent practicable with the enforceable policies of the Virginia CZM Program. The reviewing agencies that are responsible for the administration of the enforceable policies generally agree with the FCD. Based on the review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia CZM Program, DEQ concurs that the proposed project is consistent to the maximum extent practicable with the Virginia CZM Program provided all applicable permits and approvals are obtained as described. In addition, in accordance with 15 CFR §930.39(c), DEQ recommends that the Corps consider the impacts of the proposed action on the [advisory policies](#) of the Virginia CZM Program. However, other state approvals which may apply to this project are not included in this concurrence. Therefore, the responsible agent must also ensure that

this project is constructed and operated in accordance with all applicable federal, state and local laws and regulations.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Wetlands and Water Quality. The EA (Appendix D, FCD, page 5) states that the proposed action would not involve dredging, filling, or other permanent alteration of or impacts on tidal wetlands. The Corps would submit a Joint Permit Application (JPA) for review and/or authorization from applicable regulatory agencies prior to conducting in-water activities associated with the proposed action.

1(a) Agency Jurisdiction. The State Water Control Board promulgates Virginia's water regulations covering a variety of permits to include the Virginia Pollutant Discharge Elimination System Permit regulating point source discharges to surface waters, Virginia Pollution Abatement Permit regulating sewage sludge, storage and land application of biosolids, industrial wastes (sludge and wastewater), municipal wastewater, and animal wastes, the Surface and Groundwater Withdrawal Permit, and the Virginia Water Protection (VWP) Permit regulating impacts to streams, wetlands, and other surface waters. The VWP Permit is a state permit which governs wetlands, surface water, and surface water withdrawals and impoundments. It also serves as §401 certification of the federal Clean Water Act and §404 permits for dredge and fill activities in waters of the U.S. The VWP Permit Program is under the Office of Wetlands and Stream Protection within the DEQ Division of Water Permitting. In addition to central office staff who review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities:

- Clean Water Act, §401;
- Section 404(b)(i) Guidelines Mitigation Memorandum of Agreement (2/90);
- State Water Control Law, Virginia Code section 62.1-44.15:20 *et seq.*; and
- State Water Control Regulations, 9VAC25-210-10.

Tidal wetlands are regulated by the Virginia Marine Resources Commission (VMRC) under the authority of Virginia Code §28.2-1301 through §28.2-1320.

1(b) Requirements. The DEQ Northern Regional Office (NRO) states that a VWP permit from DEQ may be required. Upon receipt of a JPA, for the proposed surface water impacts, DEQ VWP Permit staff will review the proposed project in accordance with the VWP permit program regulations and current VWP permit program guidance.

VMRC states that should any changes to the planned work result in work performed in, or construction access through, tidal wetlands, a tidal wetlands permit will be required from the Fairfax County Wetlands Board.

1(c) Agency Recommendations. In general, DEQ recommends that stream and wetland impacts be avoided to the maximum extent practicable. To minimize unavoidable impacts to wetlands and waterways, DEQ recommends the following practices:

- Operate machinery and construction vehicles outside of stream-beds and wetlands; use synthetic mats when in-stream work is unavoidable.
- Preserve the top 12 inches of material removed from wetlands for use as wetland seed and root-stock in the excavated area.
- Design erosion and sedimentation controls in accordance with the most current edition of the *Virginia Erosion and Sediment Control Handbook*. These controls should be in place prior to clearing and grading, and maintained in good working order to minimize impacts to state waters. The controls should remain in place until the area is stabilized.
- Place heavy equipment, located in temporarily impacted wetland areas, on mats, geotextile fabric, or use other suitable measures to minimize soil disturbance, to the maximum extent practicable.
- Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub or forested). The applicant should take all appropriate measures to promote revegetation of these areas. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed.
- Place all materials which are temporarily stockpiled in wetlands, designated for use for the immediate stabilization of wetlands, on mats or geotextile fabric in order to prevent entry in state waters. These materials should be managed in a manner that prevents leachates from entering state waters and must be entirely removed within thirty days following completion of that construction activity. The disturbed areas should be returned to their original contours, stabilized within thirty days following removal of the stockpile, and restored to the original vegetated state.
- Clearly flag or mark all non-impacted surface waters within the project or right-of-way limits that are within 50 feet of any clearing, grading or filling activities for the life of the construction activity within that area. The project proponent should notify all contractors that these marked areas are surface waters where no activities are to occur.
- Employ measures to prevent spills of fuels or lubricants into state waters.

1(d) Conclusion. Provided the appropriate permits or approvals are obtained if necessary and the requirements are met, the proposed project would be consistent to the maximum extent practicable with the wetlands management enforceable policy of the Virginia CZM Program.

2. Subaqueous Lands. The EA (Appendix D, FCD, page 4) states that the removal of the intake pier and water discharge pipe would have the potential to disturb subaqueous bottomlands in Gunston Cove. Gunston Cove is a tidal embayment of the Potomac River.

2(a) Agency Jurisdiction. The VMRC regulates encroachments in, on or over state-owned subaqueous beds as well as tidal wetlands pursuant to Virginia Code §28.2-1200 through 1400. For nontidal waterways, VMRC states that it has been the policy of the Habitat Management Division to exert jurisdiction only over the beds of perennial streams where the upstream drainage area is 5 square miles or greater. The beds of such waterways are considered public below the ordinary high water line.

2(b) Agency Findings. VMRC states that the proposed project is outside of its jurisdictional areas and will not require a permit from the agency.

2(c) Conclusion. As proposed, the project would be consistent to the maximum extent practicable with the subaqueous lands management enforceable policy of the Virginia CZM Program.

3. Air Pollution Control. The EA (Appendix D, FCD, page 6) states that dismantlement of the Deactivated SM-1 Nuclear Reactor Facility would generate increased emissions from heavy equipment, worker vehicles and fugitive dust. Adverse short-term impacts on air quality would be minimized through the use of standard best management practices such as vegetating soils that would remain exposed for extended periods and sweeping or wetting pavements.

3(a) Agency Jurisdiction. The DEQ Air Division, on behalf of the State Air Pollution Control Board, is responsible for developing regulations that implement Virginia's Air Pollution Control Law (Virginia Code §10.1-1300 *et seq.*). DEQ is charged with carrying out mandates of the state law and related regulations as well as Virginia's federal obligations under the Clean Air Act as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate DEQ regional office is directly responsible for the issuance of necessary permits to construct and operate all stationary sources in the region as well as monitoring emissions from these sources for compliance. As a part of this mandate, environmental impact reviews (EIRs) of projects to be undertaken in the state are also reviewed. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

The Air Division regulates emissions of air pollutants from industries and facilities and implements programs designed to ensure that Virginia meets national air quality standards. The most common regulations associated with projects are:

- Open burning: 9VAC5-130 *et seq.*
- Fugitive dust control: 9VAC5-50-60 *et seq.*
- Permits for fuel-burning equipment: 9VAC5-80-1100 *et seq.*

3(b) Ozone Nonattainment Area. According to the DEQ Air Division, the project site is located in an ozone nonattainment area and an emission control area for volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), which are contributors to ozone pollution.

3(c) Requirements. The following requirements may be applicable to the proposed project.

3(c)(i) Fugitive Dust. During land-disturbing activities, fugitive dust must be kept to a minimum by using control methods outlined in 9VAC5-50-60 *et seq.* of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, of water or suitable chemicals for dust control during the proposed demolition and construction operations and from material stockpiles;
- Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials;
- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

3(c)(ii) Open Burning. If project activities change to include the burning of vegetative debris, this activity must meet the requirements under 9VAC5-130 *et seq.* of the regulations for open burning, and it may require a permit. The regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. Contact officials with the locality to determine what local requirements, if any, exist.

3(c)(iii) Fuel-Burning Equipment. Fuel-burning equipment (generators, compressors, etc.) or any other air-pollution-emitting equipment may be subject to registration or permitting requirements.

3(d) Conclusion. Provided the project adheres to any applicable requirements, the project would be consistent to the maximum extent practicable with the air pollution control enforceable policy of the Virginia CZM Program.

4. Coastal Lands Management. The EA (Appendix D, FCD, page 7) states that the proposed action would occur in Chesapeake Bay Resource Protection Areas (RPAs) that are recognized by Fort Belvoir. All disturbance of the RPA would be limited to the portion of the RPA within the Deactivated SM-1 Nuclear Reactor Facility perimeter. RPA disturbance during the proposed action would be mitigated through the planting of two new trees for the removal of every tree four inches in diameter and breast height (dbh) or greater in accordance with Fort Belvoir Policy Memorandum #27, *Tree Removal and Protection*. Vegetation replacement in the RPA would also adhere to the requirements of the Department of Conservation and Recreation's *Riparian Buffers Modification and Mitigation Guidance Manual*. In the long term, restoration and re-vegetation of the site following the completion of ground-disturbing activities would have a beneficial effect on RPAs in this part of Fort Belvoir. No ongoing or permanent activities with potential to disturb RPAs would be established by the proposed action.

4(a) Agency Jurisdiction. The DEQ Local Government Assistance Programs (LGAP) administers the Chesapeake Bay Preservation Act (Virginia Code §62.1-44.15:67 *et seq.*) (Bay Act) and Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830-10 *et seq.*). Each Tidewater locality must adopt a program based on the Chesapeake Bay Preservation Act and the Chesapeake Bay Preservation Area Designation and Management Regulations. The Act and regulations recognize local government responsibility for land use decisions and are designed to establish a framework for compliance without dictating precisely what local programs must look like. Local governments have flexibility to develop water quality preservation programs that reflect unique local characteristics and embody other community goals. Such flexibility also facilitates innovative and creative approaches in achieving program objectives. The regulations address nonpoint source pollution by identifying and protecting certain lands called Chesapeake Bay Preservation Areas. The regulations use a resource-based approach that recognizes differences between various land forms and treats them differently.

4(b) Chesapeake Bay Preservation Area. In Fairfax County, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented, require conformance with performance criteria. These areas include RPAs and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria, include those areas of the County not included in the RPAs.

4(c) Requirements. Under the Federal Consistency Regulations of the *Coastal Zone Management Act of 1972*, federal actions in Virginia must be conducted in a manner consistent to the maximum extent practicable with the enforceable policies of the

Virginia CZM Program. Those enforceable policies are administered through the Chesapeake Bay Preservation Act and Regulations.

Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated RPAs and RMAs, as provided in 9VAC25-830-130 and 140 of the Regulations, including the requirement to minimize land disturbance (including access and staging areas), retain existing vegetation and minimize impervious cover as well as including compliance with the requirements of the *Virginia Erosion and Sediment Control Handbook*, and stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Regulations*. For land disturbance over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*.

RPA disturbance resulting from the proposed project would consist of vegetation clearing and soil excavation, fill, and compaction. Vegetation clearing and soil disturbance would be temporary and limited to that needed to complete the proposed decommissioning activities. All disturbance in the RPA would be limited to that portion of the RPA within the Deactivated SM-1 Nuclear Reactor Facility perimeter. Adherence to requirements of the CGP and associated SWPPP, ESC and SWM plans during ground-disturbing activities would minimize or prevent the erosion of exposed soils and manage the quantity and quality of stormwater generated on the site, which would be ultimately discharged to Gunston Cove and further downstream, the Potomac River and Chesapeake Bay. The extent and intensity of RPA disturbance would vary over the five-year decommissioning process and not all ground disturbance would occur simultaneously, further minimizing adverse effects.

RPA disturbance would be mitigated through the planting of two new trees for the removal of every tree four inches in diameter and breast height or greater in accordance with Fort Belvoir Policy Memorandum #27, Tree Removal and Protection. Vegetation replacement in the RPA would also adhere to the requirements of the DCR's Riparian Buffers Modification and Mitigation Guidance Manual. In the long term, restoration and re-vegetation of the site following the completion of the proposed ground-disturbing activities would have a beneficial effect on RPAs in this part of Fort Belvoir. No ongoing or permanent activities with potential to disturb RPAs would be established by the proposed action.

4(d) Conclusion. Provided adherence to the above requirements, the proposed activity would be consistent to the maximum extent practicable with the coastal lands management enforceable policy of the Virginia CZM Program.

5. Erosion and Sediment Control and Stormwater Management. According to the EA (Appendix D, FCD, page 5), the proposed action would involve more than 1 acre of

land disturbance. An erosion and sediment control plan and stormwater management plan will be prepared. The decommissioning contractor would also obtain coverage under Virginia's General Permit for Discharges of Stormwater from Construction Activities.

5(a) Agency Jurisdiction. The DEQ Office of Stormwater Management (OSM) administers the following laws and regulations governing construction activities:

- Virginia Erosion and Sediment Control Law (VESCL) (§ 62.1-44.15:51 *et seq.*) and Regulations (VESCL&R) (9VAC25-840);
- Virginia Stormwater Management Act (VSMA) (§ 62.1-44.15:24 *et seq.*);
- Virginia Stormwater Management Program (VSMP) regulation (9VAC25-870); and
- 2014 General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities (9VAC25-880).

In addition, DEQ is responsible for the VSMP General Permit for Stormwater Discharges from Construction Activities related to Municipal Separate Storm Sewer Systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program (9VAC25-890-40).

5(b) Requirements.

5(b)(i) Erosion and Sediment Control and Stormwater Management Plans. The applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with VESCL&R and VSMA and regulations, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 2,500 square feet in Chesapeake Bay Preservation Area would be regulated by *VESCL&R*. Accordingly, the applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. Land-disturbing activities that result in the total land disturbance of equal to or greater than 2,500 square feet in Chesapeake Bay Preservation Area would be regulated by VSMA and regulations. Accordingly, the applicant must prepare and implement a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM plan is submitted to the DEQ regional office that serves the area where the project is located for review for compliance. The applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field

inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy (VESCL 62.1-44.15 *et seq.*) (Reference: VESCL 62.1-44.15 *et seq.*).

5(b)(ii) General Permit for Stormwater Discharges from Construction Activities (VAR10). The operator or owner of a construction project involving land-disturbing activities equal to or greater than one acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific SWPPP. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the VSMP Permit Regulations. General information and registration forms for the General Permit are available on DEQ's website at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx> (Reference: VSMA 62.1-44.15 *et seq.*; VSMP Permit Regulations 9VAC 25-870-10 *et seq.*).

5(c) Conclusion. Provided the above requirements are satisfied, the project would be consistent to the maximum extent practicable with the nonpoint pollution control enforceable policy of the Virginia CZM Program.

6. Solid and Hazardous Waste Management. The EA (page 3-73) states that hazardous waste would be properly packaged, removed and transported to the final disposal location in accordance with federal, state and local regulations. Best management practices would be implemented to ensure none of the dismantled or removed materials are placed in areas that could impact the surrounding environment (e.g., wetland or other coastal resources). Possible hazardous materials that may be removed include PCBs (mainly in electrical cables, gaskets, grout/caulking, other electrical components, and paint), asbestos-containing materials (insulation materials and wallboard), lead-based paint, mercury in electrical switches and other components, fuels, oils, lubricants, and some ozone depleting substances in refrigerants.

In addition, the EA (page 2-3) states that decontamination of some surfaces would occur to meet the release criteria prior to dismantlement. Power washing, scabbling, and other methods would be employed to remove contamination from the metal and concrete surfaces. All residual solid and liquid wastes would be captured, containerized, characterized, and, as necessary, treated and disposed of at an appropriate permitted facility.

6(a) Agency Jurisdiction. On behalf of the Virginia Waste Management Board, the DEQ Division of Land Protection and Revitalization is responsible for carrying out the mandates of the Virginia Waste Management Act (Virginia Code §10.1-1400 *et seq.*), as well as meeting Virginia's federal obligations under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response Compensation Liability Act (CERCLA), commonly known as Superfund. The DEQ Division of Land

Protection and Revitalization also administers those laws and regulations on behalf of the State Water Control Board that govern Petroleum Storage Tanks (Virginia Code §62.1-44.34:8 *et seq.*), including Aboveground Storage Tanks (9VAC25-91 *et seq.*) and Underground Storage Tanks (9VAC25-580 *et seq.* and 9VAC25-580-370 *et seq.*), also known as Virginia Tank Regulations, and § 62.1-44.34:14 *et seq.* which covers oil spills. Virginia:

- Virginia Waste Management Act, Virginia Code § 10.1-1400 *et seq.*
- Virginia Solid Waste Management Regulations, 9VAC20-81
 - (9VAC20-81-620 applies to asbestos-containing materials)
- Virginia Hazardous Waste Management Regulations, 9VAC20-60
 - (9VAC20-60-261 applies to lead-based paints)
- Virginia Regulations for the Transportation of Hazardous Materials, 9VAC20-110.

Federal:

- Resource Conservation and Recovery Act (RCRA), 42 U.S. Code sections 6901 *et seq.*
- U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 Code of Federal Regulations, Part 107
- Applicable rules contained in Title 40, Code of Federal Regulations.

6(b) Database Search. The DEQ Division of Land Protection and Revitalization (DLPR) conducted a search (500-foot radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR identified two petroleum release sites within the project area which might impact the project:

- PC Number 20023029, Fort Belvoir – Building 07350, Routes 1 and 611, Telegraph and Potomac River Rds, Fort Belvoir, Virginia 22060, Release Date: 07/06/2001, Status: Closed.
- PC Number 19973110, Fort Belvoir – Building 00371, Routes 1 and 611, Telegraph and Potomac River Rds, Fort Belvoir, Virginia 22060, Release Date: 12/27/1996, Status: Closed.

6(c) Agency Recommendations. Evaluate the identified petroleum releases to determine their ability to affect the project site. DEQ encourages all projects to implement pollution prevention principles, including:

- the reduction, reuse and recycling of all solid wastes generated; and
- the minimization and proper handling of generated hazardous wastes.

6(d) Requirements.

- Test and dispose of any soil/sediment that is suspected of contamination (including petroleum contamination) or wastes that are generated during construction-related activities in accordance with applicable federal, state, and local laws and regulations.
- All structures being demolished or removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM and LBP are found, in addition to the federal waste-related regulations mentioned above, state regulations 9VAC20-81-640 for ACM and 9VAC20-60-261 for LBP must be followed.

7. Natural Heritage Resources. The EA (page 3-36) states that project activities would have the potential to disturb and/or remove vegetation. Tree clearing would be limited to those areas necessitating clearing. During the site restoration, trees would be replanted on the site. Other disturbed areas would be reseeded with native grasses and/or shrubs to promote revegetation of the site. Therefore, impacts on terrestrial vegetation and plant communities would be short-term and less than significant.

7(a) Agency Jurisdiction.

7(a)(i) The Virginia Department of Conservation and Recreation's (DCR) Division of Natural Heritage (DNH): DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorized DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and to protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

7(a)(ii) The Virginia Department of Agriculture and Consumer Services (VDACS): The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

7(b) Agency Findings – Natural Heritage Resources and Forest Fragmentation.

The Biotics Data System documents the presence of natural heritage resources within the project boundary, including a 100-foot buffer. However, due to the scope of the activity, DCR does not anticipate that this project will adversely impact these natural heritage resources.

7(c) Agency Findings – State-listed Plant and Insect Species. DCR states that the proposed project will not affect any documented state-listed plants or insects.

7(d) Agency Findings – Natural Area Preserves. There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

7(e) Agency Recommendations. Contact the DCR DNH and re-submit project information and a map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

8. Floodplain Management. According to the EA (page 3-16), the intake pier/pump house, concrete discharge pipe, and outfall structure are in the 100-year floodplain. The EA (page 3-17) states that the removal of these structures would have beneficial impacts on the 100-year floodplain and associated functions and values by promoting the return of the Gunston Cove shoreline and subaqueous bottom to conditions resembling those that existed prior to the development of the facility.

8(a) Agency Jurisdiction. DCR is the lead coordinating agency for the Commonwealth's floodplain management program and the National Flood Insurance Program (Executive Memorandum 2-97). Pursuant to §10.1-603 of the Virginia Code and in accordance with 44 CFR section 60.12 of the National Flood Insurance Program Regulations for Floodplain Management and Flood Hazard Identification, all construction or land-disturbing activities initiated by an agency of the Commonwealth, or by its contractor, in floodplains shall be submitted to the locality and comply with the locally adopted floodplain management ordinance.

8(b) Agency Comments. The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

The DCR Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must contact the local floodplain administrator for an official floodplain determination and comply with the community's local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality.

8(c) Agency Recommendation. DCR recommends that Fort Belvoir contact the local floodplain administrator and comply with the community's local floodplain ordinance. To find community NFIP participation and local floodplain administrator contact information, use DCR's Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory.

8(d) Requirement. Projects conducted by federal agencies within the SFHA must comply with Executive Order 11988: Floodplain Management.

9. Water Supply. The EA (page 3-4) states that the proposed action would install and operate temporary utilities for power and water necessary to support decommissioning activities; however, this demand would be accommodated under existing private sector contracts held by Fort Belvoir. No local service disruptions are anticipated to result from the proposed action.

9(a) Agency Jurisdiction. The Virginia Department of Health (VDH) Office of Drinking Water (ODW) reviews projects for the potential to impact public drinking water sources (groundwater wells, springs and surface water intakes). The VDH ODW administers both federal and state laws governing waterworks operation.

9(b) Agency Finding. VDH states that there are no apparent impacts to public drinking water sources due to this project.

9(c) Requirement. Potential impacts to public water distribution systems must be verified by the local utility, according to VDH.

10. Historic Resources. The EA (page 3-63) states that the proposed action would not affect traditional cultural resources.

10(a) Agency Jurisdiction. The Virginia Department of Historic Resources (DHR) conducts reviews of both federal and state projects to determine their effect on historic properties. Under the federal process, DHR is the State Historic Preservation Office, and ensures that federal undertakings – including licenses, permits, or funding – comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulation at 36 CFR Part 800. Section 106 requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places.

10(b) Requirements. Continued coordination with DHR on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800 is required.

11. Pesticides and Herbicides. In general, when pesticides or herbicides must be used, their use should be strictly in accordance with manufacturers' recommendations. In addition, we recommend that the applicable use the least toxic pesticides or herbicides effective in controlling the target species to the extent feasible. For more information on pesticide or herbicide use, contact VDACS (804-371-6560).

12. Energy Conservation. Architectural and engineering designers should consider incorporating the energy, environmental, and sustainability concepts listed in the Leadership in Energy and Environmental Design (LEED) Green Building Rating System into the development and procurement of their projects.

Please contact Department of Mines, Minerals and Energy (David Spears at 434-951-6350) for additional information on energy conservation measures. For more information on the LEED rating system, visit www.leadbuilding.org.

13. Pollution Prevention. DEQ advocates that principles of pollution prevention and sustainability be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. However, pollution prevention and sustainability techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source.

13(a) Recommendations. We have several pollution prevention recommendations that may be helpful in constructing or operating this facility:

- Consider development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed facility is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods.
- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.

- Choose sustainable materials and practices for building construction and design.

DEQ's Office of Pollution Prevention provides information and technical assistance relating to pollution prevention techniques and EMS. If interested, please contact DEQ (Meghann Quinn at 804-698-4021).

14. Fisheries Management. The FCD (Appendix D, FCD, page 3) states that this enforceable policy is not applicable to the proposed project.

14(a) Agency Jurisdiction. The fisheries management enforceable policy is administered by the Virginia Marine Resources Commission (VMRC) (Virginia Code § 28.2-200 to § 28.2-713) and the Department of Game and Inland Fisheries (DGIF) (Virginia Code § 29.1-100 to § 29.1-570). In addition, the Virginia Department of Health (VDH) Division of Shellfish Sanitation (DSS) is responsible for protecting the health of the consumers of molluscan shellfish and crustacea by ensuring that shellfish growing waters are properly classified for harvesting, and that molluscan shellfish and crustacea processing facilities meet sanitation standards.

14(b) Agency Finding. DGIF states that Gunston Cove, its tributaries, and the Potomac River downstream have been designated Confirmed Anadromous Fish Use Areas.

14(c) Agency Recommendation. DGIF has the following recommendations:

- To best protect anadromous fishes from harm associated with instream work, ensure that such work adhere to a time-of-year restriction from February 15 through June 30 of any year.
- Conduct any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures.
- To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, use matting made from natural/organic materials such as coir fiber, jute, and/or burlap.
- To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, ensure that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water.
- Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, construct stream crossings via clear-span bridges. However,

if this is not possible, countersink any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms.

- Install floodplain culverts to carry bankfull discharges.

VMRC recommends that erosion and run-off controls be in place to prevent impacts to marine fisheries.

14(d) Conclusion. Assuming adherence to erosion and sediment controls during instream work and land disturbances, and placement of waste in appropriate receptacles, the project would be consistent with the fisheries management enforceable policy of the Virginia CZM Program.

REGULATORY AND COORDINATION NEEDS

1. Wetlands and Water Quality. The project must adhere to the requirements of any DEQ permit or authorization issued pursuant to Virginia Code § 62.1-44.15:20 *et seq.* and 9VAC25-210 *et seq.* and a tidal wetlands permit if issued from the Fairfax County Wetlands Board pursuant to Virginia Code §28.2-1301 through 28.2-1320 for consistency with the wetlands management enforceable policy. A VWP Permit or approval may be required. Contact DEQ NRO (Trisha Beasley at [REDACTED]) for coordination. Submit a JPA application to VMRC (Mark Eversole at [REDACTED]) for proposed impacts to surface waters, including wetlands.

2. Air Quality. The following sections of Virginia Administrative Code may be applicable:

- fugitive dust and emissions control (9VAC5-50-60 *et seq.*);
- permits for fuel-burning equipment (9VAC5-80-110 *et seq.*); and
- open burning restrictions (9VAC5-130 *et seq.*).

Contact DEQ NRO (Justin Wilkinson at Justin.Wilkinson@deq.virginia.gov) for additional information about air quality regulations and to determine air permitting or registration needs for fuel-burning equipment.

3. Coastal Lands Management. The project must be conducted in a manner that is consistent with the coastal lands management enforceable policy of the Virginia CZM Program as administered by DEQ pursuant to the Chesapeake Bay Preservation Act (Virginia Code 62.1-44.15 *et seq.*) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9VAC25-830 *et seq.*). For additional information about DEQ's comments, contact DEQ OLGP (Daniel Moore at [REDACTED]).

4. Erosion and Sediment Control and Stormwater Management. This project must comply with Virginia's Erosion and Sediment Control Law (Virginia Code § 62.1-44.15:61) and Regulations (9VAC25-840-30 *et seq.*) and Stormwater Management Law (Virginia Code § 62.1-44.15:31) and Regulations (9VAC25-870-210 *et seq.*) as administered by DEQ. Erosion and sediment control, and stormwater management requirements should be coordinated with the DEQ NRO (Kelly Vanover at [REDACTED]).

5. General Permit for Stormwater Discharges from Construction Activities (VAR10). The operator or owner of a construction activity involving land disturbance of equal to or greater than 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project specific stormwater pollution prevention plan (SWPPP). Specific questions regarding the Stormwater Management Program requirements should be directed to DEQ (Holly Sepey at [REDACTED]) (Reference: VSMA §62.1-44.15 *et seq.*).

6. Solid and Hazardous Wastes. Contact DEQ NRO (Richard Doucette at 703-583-3813 or [REDACTED]) for additional information about waste management if necessary. All solid waste, hazardous waste and hazardous materials must be managed in accordance with all applicable federal, state and local environmental regulations.

6(a) Asbestos-Containing Material. It is the responsibility of the owner or operator of a renovation or demolition activity, prior to the commencement of the renovation or demolition, to thoroughly inspect the affected part of the facility where the operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos-containing material (as applicable). Upon classification as friable or non-friable, all asbestos-containing material shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9VAC20-81-640) and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9VAC20-110-10 *et seq.*). Contact the DEQ Division of Land Protection and Revitalization (Carlos Martinez at [REDACTED]) and the Department of Labor and Industry (804-371- 2327) for additional information.

6(b) Lead-Based Paint. If applicable, this project must comply with the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulations and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements, contact the Department of Professional and Occupational Regulation (804-367-8500).

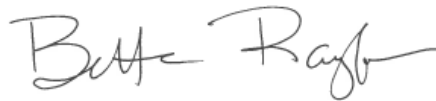
7. Natural Heritage Resources. Contact the DCR DNH (804-371-2708) to re-submit project information and a map for an update on natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

8. Floodplain Management. Contact the local floodplain administrator for an official floodplain determination to comply with the community's local floodplain ordinance. To find local floodplain administrator contact information, use DCR's Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory.

9. Historic Resources. Continue to coordinate with DHR (Marc Holma at [REDACTED] or [REDACTED]) on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800.

Thank you for the opportunity to comment on this EA and FCD. The detailed comments of reviewers are attached. If you have questions, please do not hesitate to call me at [REDACTED] or Julia Wellman at [REDACTED].

Sincerely,



Bettina Rayfield, Manager
Environmental Impact Review and Long Range
Priorities Program

Enclosures

ec: Amy Ewing, DGIF
Robbie Rhur, DCR
Arlene Warren, VDH
Roger Kirchen, DHR
Tony Watkinson, VMRC
Robert Lazaro, NRVC
Bryan J. Hill, Fairfax County
Kevin Taylor, Aecom
Craig Carver, Aecom

**DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION**

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: Julia H. Wellman

We thank OEIR for providing DEQ-AIR an opportunity to review the following project:

Document Type: Federal Consistency Determination

Project Sponsor: Army Corps of Engineers

Project Title: Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility, U. S. Army Garrison Fort Belvoir

Location: Fairfax County

Project Number: DEQ #19-157F

Accordingly, I am providing following comments for consideration.

**PROJECT LOCATION: X OZONE NON ATTAINMENT
AND EMISSION CONTROL AREA FOR NOX & VOC**

**REGULATORY REQUIREMENTS MAY BE APPLICABLE TO: X DECOMMISSIONING
 OPERATION**

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. 9 VAC 5-45-760 et seq. – Asphalt Paving operations
3. **X** 9 VAC 5-130 et seq. – Open Burning
4. **X** 9 VAC 5-50-60 et seq. Fugitive Dust Emissions
5. 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to _____
6. 9 VAC 5-60-300 et seq. – Standards of Performance for Toxic Pollutants
7. 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the _____
8. 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
9. 9 VAC 5-80-1605 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
10. 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
11. 9 VAC 5-80-800 et seq. Of the regulations – State Operating Permits. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x).



**(Kotur S. Narasimhan)
Office of Air Data Analysis**

DATE: January 13, 2020

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



Rochelle Altholz
Deputy Director of
Administration and Finance

Russell W. Baxter
Deputy Director of
Dam Safety & Floodplain
Management and Soil & Water
Conservation

Thomas L. Smith
Deputy Director of Operations

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: January 21, 2020
TO: Julia Wellman, DEQ
FROM: Roberta Rhur, Environmental Impact Review Coordinator
SUBJECT: DEQ 19-157F, Deactivated SM-1 Nuclear Reactor Facility Decommissioning and Dismantlement

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Biotics documents the presence of natural heritage resources within the project boundary including a 100ft buffer. However, due to the scope of the activity we do not anticipate that this project will adversely impact these natural heritage resources.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Ernie Aschenbach at [REDACTED] or [REDACTED].

Division of Dam Safety and Floodplain Management

Floodplain Management Program:

The National Flood Insurance Program (NFIP) is administered by the Federal Emergency Management Agency (FEMA), and communities who elect to participate in this voluntary program manage and enforce the program on the local level through that community's local floodplain ordinance. Each local floodplain

ordinance must comply with the minimum standards of the NFIP, outlined in 44 CFR 60.3; however, local communities may adopt more restrictive requirements in their local floodplain ordinance, such as regulating the 0.2% annual chance flood zone (Shaded X Zone).

All development within a Special Flood Hazard Area (SFHA), as shown on the locality's Flood Insurance Rate Map (FIRM), must be permitted and comply with the requirements of the local floodplain ordinance.

State Agency Projects Only

[Executive Order 45](#), signed by Governor Northam and effective on November 15, 2019, establishes mandatory standards for development of state-owned properties in Flood-Prone Areas, which include Special Flood Hazard Areas, Shaded X Zones, and the Sea Level Rise Inundation Area. These standards shall apply to all state agencies.

1. Development in Special Flood Hazard Areas and Shaded X Zones
 - A. All development, including buildings, on state-owned property shall comply with the locally-adopted floodplain management ordinance of the community in which the state-owned property is located and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
 - B. If any state-owned property is located in a community that does not participate in the NFIP, all development, including buildings, on such state-owned property shall comply with the NFIP requirements as defined in 44 CFR §§ 60.3, 60.4, and 60.5 and any flood-related standards identified in the Virginia Uniform Statewide Building Code.
 - (1) These projects shall be submitted to the Department of General Services (DGS), for review and approval.
 - (2) DGS shall not approve any project until the State NFIP Coordinator has reviewed and approved the application for NFIP compliance.
 - (3) DGS shall provide a written determination on project requests to the applicant and the State NFIP Coordinator. The State NFIP Coordinator shall maintain all documentation associated with the project in perpetuity.
 - C. No new state-owned buildings, or buildings constructed on state-owned property, shall be constructed, reconstructed, purchased, or acquired by the Commonwealth within a Special Flood Hazard Area or Shaded X Zone in any community unless a variance is granted by the Director of DGS, as outlined in this Order.

The following definitions are from Executive Order 45:

Development for NFIP purposes is defined in 44 CFR § 59.1 as "Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."

The Special Flood Hazard Area may also be referred to as the 1% annual chance floodplain or the 100-year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study. This includes the following flood zones: A, AO, AH, AE, A99, AR, AR/AE, AR/AO, AR/AH, AR/A, VO, VE, or V.

The Shaded X Zone may also be referred to as the 0.2% annual chance floodplain or the 500-year floodplain, as identified on the effective Flood Insurance Rate Map and Flood Insurance Study.

The Sea Level Rise Inundation Area referenced in this Order shall be mapped based on the National Oceanic and Atmospheric Administration Intermediate-High scenario curve for 2100, last updated in 2017, and is intended to denote the maximum inland boundary of anticipated sea level rise.

"State agency" shall mean all entities in the executive branch, including agencies, offices, authorities, commissions, departments, and all institutions of higher education.

“Reconstructed” means a building that has been substantially damaged or substantially improved, as defined by the NFIP and the Virginia Uniform Statewide Building Code.

Federal Agency Projects Only

Projects conducted by federal agencies within the SFHA must comply with federal Executive Order 11988: Floodplain Management.

DCR’s Floodplain Management Program does not have regulatory authority for projects in the SFHA. The applicant/developer must contact the local floodplain administrator for an official floodplain determination and comply with the community’s local floodplain ordinance, including receiving a local permit. Failure to comply with the local floodplain ordinance could result in enforcement action from the locality. For state projects, DCR recommends that compliance documentation be provided prior to the project being funded. For federal projects, the applicant/developer is encouraged reach out to the local floodplain administrator and comply with the community’s local floodplain ordinance.

To find flood zone information, use the Virginia Flood Risk Information System (VFRIS):
www.dcr.virginia.gov/vfris

To find community NFIP participation and local floodplain administrator contact information, use DCR’s Local Floodplain Management Directory: www.dcr.virginia.gov/dam-safety-and-floodplains/floodplain-directory

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.



Wellman, Julia [REDACTED]

ESSLog# 40303_19-157F_FtBelvoirNuclearReactorRemoval_DGIF_AME20200124

1 message

Ewing, Amy [REDACTED]

Fri, Jan 24, 2020 at 4:04 PM

To: Julia Wellman [REDACTED]

Cc: Stephen Reeser [REDACTED]

Julia,

We have reviewed the subject project that proposes to dismantle and remove the nuclear reactor located on the installation but which was decommissioned years ago. This will include removal of structures in Gunston Bay along with those located on land. Gunston Cove, its tributaries, and the Potomac River downstream have been designated Confirmed Anadromous Fish Use Areas. To best protect anadromous fishes from harm associated with instream work, we recommend that such work adhere to a time of year restriction from February 15 through June 30 of any year. We recommend conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. To minimize potential wildlife entanglements resulting from use of synthetic/plastic erosion and sediment control matting, we recommend use of matting made from natural/organic materials such as coir fiber, jute, and/or burlap. To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, we recommend that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges.

Assuming adherence to erosion and sediment controls during instream work and land disturbances, and placement of waste in appropriate receptacles, we find this project consistent with the Fisheries Enforceable Policies of the CZMA.

Thanks, Amy

**Amy Ewing***Environmental Services Biologist**Manager, Fish and Wildlife Information Services*

P [REDACTED]

Virginia Department of Game & Inland Fisheries*CONSERVE. CONNECT. PROTECT.*

A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228

www.dgif.virginia.gov



Wellman, Julia [REDACTED]

SM-1 Nuclear Reactor decommissioning and deactivation, Fort Belvoir (DHR #2015-1247/DEQ #19-157F)

1 message

Holma, Marc [REDACTED]
To: Julia Wellman [REDACTED]

Mon, Jan 6, 2020 at 3:39 PM

Julia,

Please accept this email as DHR's official response to DEQ's request for our review and comment regarding the above referenced project. The Army Corps of Engineers and Fort Belvoir have been in consultation with DHR on this undertaking pursuant to Section 106 of the National Historic Preservation Act, as amended, and its implementing regulation 36 CFR Part 800. We anticipate these agencies will continue to consult with DHR, but request DEQ remind them to do so in its response.

Sincerely,
Marc

--
Marc Holma
Architectural Historian
Division of Review and Compliance
[REDACTED]



MEMORANDUM

TO: Julia Wellman, DEQ/EIR Environmental Program Planner

FROM: Carlos A. Martinez, Division of Land Protection & Revitalization Review Coordinator

DATE: January 13, 2020

COPIES: Sanjay Thirunagari, Division of Land Protection & Revitalization Review Manager; file

SUBJECT: Environmental Impact Review: 2020-01-13 Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility US Army Garrison at Fort Belvoir in Fort Belvoir, Virginia.

The Division of Land Protection & Revitalization (DLPR) has completed its review of the Army Corps of Engineers' December 27, 2019 EIR for Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility US Army Garrison at Fort Belvoir in Fort Belvoir, Virginia.

Solid and hazardous waste were not addressed in the submittal. The submittal did not indicate that a search of Federal or State environmental databases was conducted. DLPR staff conducted a search (500 ft. radius) of the project area of solid and hazardous waste databases (including petroleum releases) to identify waste sites in close proximity to the project area. DLPR identified two (2) petroleum release sites within the project area which might impact the project.

DLPR staff has reviewed the submittal and offers the following comments:

Hazardous Waste/RCRA Facilities – none in close proximity to the project area

CERCLA Sites – none in close proximity to the project area

Formerly Used Defense Sites (FUDS) – none in close proximity to the project area.

Solid Waste – none in close proximity to the project area

Virginia Remediation Program (VRP) – none in close proximity to the project area

Petroleum Releases – Two (2) found in close proximity to the project area.

- 1. PC Number 20023029, Fort Belvoir – Building 07350, Routes 1 and 611, Telegraph and Potomac River Rds, Fort Belvoir, Virginia 22060, Release Date: 07/06/2001, Status: Closed.**
- 2. PC Number 19973110, Fort Belvoir – Building 00371, Routes 1 and 611, Telegraph and Potomac River Rds, Fort Belvoir, Virginia 22060, Release Date: 12/27/1996, Status: Closed.**

Please note that the DEQ's Pollution Complaint (PC) cases identified should be further evaluated by the project engineer or manager to establish the exact location, nature and extent of the petroleum release and the potential to impact the proposed project. In addition, the project engineer or manager should contact the DEQ's Northern Regional Office at (703) 583-3800 (Tanks Program) for further information about the PC cases.

PROJECT SPECIFIC COMMENTS

None

GENERAL COMMENTS

Soil, Sediment, Groundwater, and Waste Management

Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Pollution Prevention – Reuse - Recycling

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Carlos A. Martinez by phone at ([REDACTED]) or email [REDACTED].



Wellman, Julia [REDACTED]

Re: EXPEDITED REVIEW - NEW PROJECT ACOE Decommissioning of Deactivated SM-1 Nuclear Reactor, DEQ #19-157F

1 message

Holland, Benjamin [REDACTED]

Sat, Dec 28, 2019 at 10:05 AM

To: Julia Wellman [REDACTED]

Julia - basically the standard language. They cover pretty much everything in their FCD document, so there's not many additional comments that need to be said.

Northern Regional Office comments regarding the FCD for *Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility, U. S. Army Garrison Fort Belvoir, DEQ #19-157F*, are as follows:

Land Protection Division – The project manager is reminded that if any solid or hazardous waste is generated/encountered during construction/demolition, including the lead and radioactive wastes alluded to in the FCD document, the project manager would follow applicable federal, state, and local regulations for their disposal.

Air Compliance/Permitting - The project manager is reminded that during the construction phases that occur with this project; the project is subject to the Fugitive Dust/Fugitive Emissions Rule 9 VAC 5-50-60 through 9 VAC 5-50-120. In addition, should any open burning or use of special incineration devices be employed in the disposal of land clearing debris during demolition and construction, the operation would be subject to the Open Burning Regulation 9 VAC 5-130-10 through 9 VAC 5-130-60 and 9 VAC 5-130-100.

Virginia Water Protection Permit (VWPP) Program – The project manager is reminded that a VWP permit from DEQ may be required should impacts to surface waters be necessary. DEQ VWP staff recommends that the avoidance and minimization of surface water impacts to the maximum extent practicable as well as coordination with the US Army Corps of Engineers. Upon receipt of a Joint Permit Application for the proposed surface water impacts, DEQ VWP Permit staff will review the proposed project in accordance with the VWP permit program regulations and current VWP permit program guidance. VWPP staff reserve the right to provide comment upon receipt of a permit application requesting authorization to impact state surface waters, and at such time that a wetland delineation has been conducted and associated jurisdiction determination made by the U.S. Army Corps of Engineers.

Erosion and Sediment Control and Storm Water Management – DEQ has regulatory authority for the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities. Erosion and sediment control measures are addressed in local ordinances and State regulations. Additional information is available at <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx>. Non-point source pollution resulting from this project should be minimized by using effective erosion and sediment control practices and structures. Consideration should also be given to using permeable paving for parking areas and walkways where appropriate, and denuded areas should be promptly revegetated following construction work. If the total land disturbance exceeds 10,000 square feet, an erosion and sediment control plan will be required. Some localities also require an E&S plan for disturbances less than 10,000 square feet. A stormwater management plan may also be required. For any land disturbing activities equal to one acre or more, you are required to apply for coverage under the VPDES General Permit for Discharges of Storm Water from Construction Activities. The Virginia Stormwater Management Permit Authority may be DEQ or the locality.

On Fri, Dec 27, 2019 at 1:42 PM Fulcher, Valerie [REDACTED] wrote:

Good a. ernoon - this is a new OEIR review request/project:

Document Type: Federal Consistency Determinaon

D-32

Project Sponsor: Army Corps of Engineers

Project Title: Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility, U.S. Army Garrison Fort Belvoir

Location: Fairfax County

Project Number: DEQ #19-157F

The documents are attached.

The due date for comments is **JANUARY 21, 2020**. You can send your comments either directly to JULIA WELLMAN by email ([REDACTED]), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 1111 East Main St., Richmond, VA 23219.

NOTE: The deadline is expedited due to the federal deadline.

If you cannot meet the deadline, please notify the project coordinator prior to the comment due date. Arrangements may be made to extend the deadline for comments if possible. An agency will be considered to have no concerns if comments are not received (or contact is made) within the review period. However, it is important that agencies consistently participate in accordance with Virginia Code Section 10.1-1192.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been previously reviewed (e.g. as a draft EIS or a Part 1 EIR), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency (agency stationary or email) and include the project number on all correspondence.

If you have any questions, please email Julia.

Thanks!

--

Valerie A. Fulcher, CAP, OM, Environmental Program Specialist

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

[REDACTED]

[REDACTED]

[REDACTED]

<http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx>

For program updates and public notices please subscribe to Constant Contact: <https://lp.constantcontact.com/su/MVcCump/EIR>

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BENJAMIN D. HOLLAND, MPH
DEQ Regional Enforcement Specialist

VA Department of Environmental Quality
Northern Regional Office
13901 Crown Court
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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

MEMORANDUM

TO: Julia Wellman, DEQ Environmental Program Planner

FROM: Daniel Moore, DEQ Principal Environmental Planner

DATE: January 12, 2020

SUBJECT: DEQ #19-157F: US Army, Ft. Belvoir Decommissioning and Dismantlement of Deactivated SM-1 Nuclear Reactor, Fairfax County

We have reviewed the Federal Consistency Determination for the above-referenced project at Fort Belvoir in Fairfax County and offer the following comments regarding consistency with the provisions of the *Chesapeake Bay Preservation Area Designation and Management Regulations* (Regulations):

In Fairfax County, the areas protected by the Chesapeake Bay Preservation Act, as locally implemented, require conformance with performance criteria. These areas include Resource Protection Areas (RPAs) and Resource Management Areas (RMAs) as designated by the local government. RPAs include tidal wetlands, certain non-tidal wetlands and tidal shores. RPAs also include a 100-foot vegetated buffer area located adjacent to and landward of these features and along both sides of any water body with perennial flow. RMAs, which require less stringent performance criteria, include those areas of the County not included in the RPAs.

Under the Federal Consistency Regulations of the *Coastal Zone Management Act of 1972*, federal actions in Virginia must be conducted in a manner “consistent to the maximum extent practicable” with the enforceable policies of the Virginia Coastal Zone Management Program. Those enforceable policies are administered through the Chesapeake Bay Preservation Act and Regulations.

Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated RPAs and RMAs, as provided in §9VAC25-830-130 and 140 of the Regulations, including the requirement to minimize land disturbance (including access and staging areas), retain existing

vegetation and minimize impervious cover as well as including compliance with the requirements of the *Virginia Erosion and Sediment Control Handbook*, and stormwater management criteria consistent with water quality protection provisions of the *Virginia Stormwater Management Regulations*.” For land disturbance over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion and Sediment Control Handbook*.

RPA disturbance resulting from the proposed project would consist of vegetation clearing and soil excavation, fill, and compaction. Vegetation clearing and soil disturbance would be temporary and limited to that needed to complete the proposed decommissioning activities. All disturbance in the RPA would be limited to that portion of the RPA within the Deactivated SM-1 Nuclear Reactor Facility perimeter. Adherence to requirements of the CGP and associated SWPPP, E&SC, and SWM plans during ground-disturbing activities would minimize or prevent the erosion of exposed soils and manage the quantity and quality of stormwater generated on the site, which would be ultimately discharged to Gunston Cove and further downstream, the Potomac River and Chesapeake Bay. The extent and intensity of RPA disturbance would vary over the five-year decommissioning process and not all ground disturbance would occur simultaneously, further minimizing adverse effects.

RPA disturbance would be mitigated through the planting of two new trees for the removal of every tree four inches in diameter and breast height (dbh) or greater in accordance with Fort Belvoir Policy Memorandum #27, Tree Removal and Protection. Vegetation replacement in the RPA would also adhere to the requirements of the Virginia Department of Conservation and Recreation’s Riparian Buffers Modification and Mitigation Guidance Manual. In the long term, restoration and re-vegetation of the site following the completion of the proposed ground-disturbing activities would have a beneficial effect on RPAs in this part of Fort Belvoir. No ongoing or permanent activities with potential to disturb RPAs would be established by the Proposed Action.

Provided adherence to the above requirements, the proposed activity would be consistent with the *Chesapeake Bay Preservation Act* and the Regulations.



Wellman, Julia [REDACTED]

Re: EXPEDITED REVIEW - NEW PROJECT ACOE Decommissioning of Deactivated SM-1 Nuclear Reactor, DEQ #19-157F

1 message

Gavan, Lawrence [REDACTED]

To: "Wellman, Julia" [REDACTED]

Tue, Jan 14, 2020 at 3:14 PM

(a) Agency Jurisdiction. The Department of Environmental Quality (DEQ) administers the *Virginia Erosion and Sediment Control Law and Regulations (VESCL&R)* and *Virginia Stormwater Management Law and Regulations (VSWML&R)*.

(b) Erosion and Sediment Control and Stormwater Management Plans. The Applicant and its authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with *VESCL&R* and *VSWML&R*, including coverage under the general permit for stormwater discharge from construction activities, and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act-Section 313, federal consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities that result in the total land disturbance of equal to or greater than 10,000 square feet (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VESCL&R*. Accordingly, the Applicant must prepare and implement an erosion and sediment control (ESC) plan to ensure compliance with state law and regulations. Land-disturbing activities that result in the total land disturbance of equal to or greater than 1 acre (2,500 square feet in Chesapeake Bay Preservation Area) would be regulated by *VSWML&R*. Accordingly, the Applicant must prepare and implement a Stormwater Management (SWM) plan to ensure compliance with state law and regulations. The ESC/SWM plan is submitted to the DEQ Regional Office that serves the area where the project is located for review for compliance. The Applicant is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and other mechanisms consistent with agency policy. [Reference: *VESCL 62.1-44.15 et seq.*]

(c) General Permit for Stormwater Discharges from Construction Activities (VAR10). DEQ is responsible for the issuance, denial, revocation, termination and enforcement of the Virginia Stormwater Management Program (VSMP) General Permit for Stormwater Discharges from Construction Activities related to municipal separate storm sewer systems (MS4s) and construction activities for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program.

The owner or operator of projects involving land-disturbing activities of equal to or greater than 1 acre is required to register for coverage under the General Permit for Discharges of Stormwater from Construction Activities and develop a project-specific Stormwater Pollution Prevention Plan. Construction activities requiring registration also include land disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan of development will collectively disturb equal to or greater than one acre. The SWPPP must be prepared prior to submission of the registration statement for coverage under the general permit and the SWPPP must address water quality and quantity in accordance with the *VSMP Permit Regulations*. General information and registration forms for the General Permit are available at: <http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPPermits/ConstructionGeneralPermit.aspx>

[Reference: Virginia Stormwater Management Act 62.1-44.15 et seq.; VSMP Permit Regulations 9VAC25-880 et seq.]

On Fri, Dec 27, 2019 at 1:42 PM Fulcher, Valerie [REDACTED] wrote:

Good a. ernoon - this is a new OEIR review request/project:

Document Type: Federal Consistency Determinaon

Project Sponsor: Army Corps of Engineers

Project Title: Decommissioning and Dismantlement of the Deacv ated SM-1 Nuclear Reactor Facility, U. S. Army Garrison Fort Belvoir

Locaon: Fairfax County

Project Number: DEQ #19-157F

The documents are a^hached.

The due date for comments is **JANUARY 21, 2020**. You can send your comments either directly to JULIA WELLMAN by email ([REDACTED]), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 1111 East Main St., Richmond, VA 23219.

NOTE: The deadline is expedited due to the federal deadline.

If you cannot meet the deadline, please nof y the project coordinator prior to the comment due date. Arrangements may be made to extend the deadline for comments if possible. An agency will be considered to have no concerns if comments are not received (or contact is made) within the review period. However, it is important that agencies consistently participa te in accordance with Virginia Code Secon 10.1-1192.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been previously reviewed (e.g. as a dra EIS or a P art 1 EIR), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency (agency staonar y or email) and include the project number on all correspondence.

If you have any quesons, please email Julia.

Thanks!

--

Valerie A. Fulcher, CAP, OM, Environmental Program Specialist

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

[REDACTED]

[REDACTED]

[REDACTED]

<http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx>

For program updates and public notices please subscribe to Constant Contact: <https://lp.constantcontact.com/su/MVcCump/EIR>



Wellman, Julia [REDACTED]

Fwd: EXPEDITED REVIEW - NEW PROJECT ACOE Decommissioning of Deactivated SM-1 Nuclear Reactor, DEQ #19-157F

1 message

Fulcher, Valerie [REDACTED]

Tue, Jan 14, 2020 at 1:23 PM

To: "Wellman, Julia" [REDACTED]

VDH Comments.

----- Forwarded message -----

From: **Warren, Arlene** [REDACTED]

Date: Tue, Jan 14, 2020 at 12:22 PM

Subject: Re: EXPEDITED REVIEW - NEW PROJECT ACOE Decommissioning of Deactivated SM-1 Nuclear Reactor, DEQ #19-157F

To: Fulcher, Valerie [REDACTED]

Project Name: Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility, U. S. Army Garrison Fort Belvoir
Project #: 19-157 F
UPC #: N/A
Locaon: Fairfax County

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potenal impacts to public water distribuon s ystems or sanitary sewage collecon s ystems **must be verified by the local ulity** .

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is not within the watershed of any public surface water intakes.

There are no apparent impacts to public drinking water sources due to this project.

Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any quesons, please let me know.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

[REDACTED]

On Fri, Dec 27, 2019 at 1:43 PM Fulcher, Valerie [REDACTED] wrote:

Good afternoon - this is a new OEIR review request/project:

Document Type: Federal Consistency Determination

Project Sponsor: Army Corps of Engineers

Project Title: Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility, U.S. Army Garrison Fort Belvoir

Location: Fairfax County

Project Number: DEQ #19-157F

The documents are attached.

The due date for comments is **JANUARY 21, 2020**. You can send your comments either directly to **JULIA WELLMAN** by email ([REDACTED]), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, **1111 East Main St., Richmond, VA 23219**.

NOTE: The deadline is expedited due to the federal deadline.

If you cannot meet the deadline, please notify the project coordinator prior to the comment due date. Arrangements may be made to extend the deadline for comments if possible. An agency will be considered to have no concerns if comments are not received (or contact is made) within the review period. However, it is important that agencies consistently participate in accordance with Virginia Code Section 10.1-1192.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been previously reviewed (e.g. as a draft EIS or a Part 1 EIR), please consider whether your earlier comments have been adequately addressed.**
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency (agency stationary or email) and include the project number on all correspondence.**

If you have any questions, please email Julia.

Thanks!

--

Valerie A. Fulcher, CAP, OM, Environmental Program Specialist

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

[Redacted]

[Redacted]

[Redacted]

<http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx>

For program updates and public notices please subscribe to Constant Contact: <https://lp.constantcontact.com/su/MVcCump/EIR>

--

Valerie A. Fulcher, CAP, OM, Environmental Program Specialist

Department of Environmental Quality

Environmental Enhancement - Office of Environmental Impact Review

1111 East Main Street

Richmond, VA 23219

[Redacted]

[Redacted]

[Redacted]

<http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx>

For program updates and public notices please subscribe to Constant Contact: <https://lp.constantcontact.com/su/MVcCump/EIR>



COMMONWEALTH of VIRGINIA

Marine Resources Commission
380 Fenwick Road
Bldg 96
Fort Monroe, VA 23651-1064

Matthew J. Strickler
Secretary of Natural Resources

Steven G. Bowman
Commissioner

January 2, 2020

Department of Environmental Quality
Attn: Julia Wellman
Office of Environmental Impact Review
1111 East Main St.
Richmond, VA 23219

Re: Federal Consistency Determination
Decommissioning and Dismantlement of the Deactivated
SM-1 Nuclear Reactor Facility, U. S. Army Garrison Fort
Belvoir
DEQ #19-157F

Dear Ms. Wellman:

This will respond to the request for comments regarding the Federal Consistency Determination for the Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility project (DEQ #19-157F), prepared by AECOM, on behalf of US Army Corps of Engineers (USACE), Baltimore District. Specifically, the USACE has proposed to safely remove, transport, and dispose of any remaining structures and equipment from the site. The project is located in Fairfax County, Virginia.

We reviewed the provided documents and found the proposed project is outside the jurisdictional areas of the Marine Resources Commission (VMRC) and will not require a permit from this agency. Should any changes to the planned work result in work performed in, or construction access through, tidal wetlands, a tidal wetlands permit will be required from the Fairfax County Wetlands Board.

Please be advised that the Virginia Marine Resources Commission (VMRC) pursuant to Chapter 12, 13, & 14 of Title 28.2 of the Code of Virginia administers permits required for submerged lands, tidal wetlands, and beaches and dunes. The VMRC administers the enforceable policies of fisheries management, subaqueous lands, tidal wetlands, and coastal primary sand dunes and beaches which comprise some of Virginia's Coastal Zone Management Program. VMRC staff has reviewed the submittal and offers the following comments:

Fisheries and Shellfish: Erosion and run-off controls should be in place to prevent any impacts to marine fisheries.

State-owned Submerged Lands: No impacts expected.

Tidal Wetlands: If the planned work results in impacts to tidal wetlands, either in, on, or through, a permit will be required from the Fairfax County Wetlands Board.

An Agency of the Natural Resources Secretariat

www.mrc.virginia.gov

Telephone (757) 247-2200 (757) 247-2292 V/TDD Information and Emergency Hotline 1-800-541-4646 V/TDD

Department of Environmental Quality
January 2, 2020
Page Two

Beaches and Coastal Primary Sand Dunes: None in close proximity to the project area.

As such, this project has no foreseeable impact on the VMRC's enforceable policies. As proposed, we have no objection to the consistency findings provided by the applicant. Should the proposed project change, a new review by this agency may be required relative to these jurisdictional areas.

If you have any questions please contact me at [REDACTED] or by email at [REDACTED]. Thank you for the opportunity to comment.

Sincerely,



Mark Eversole
Environmental Engineer, Habitat Management

MCE/keb
HM

USACE Federal Consistency Determination

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Federal Consistency Determination
Decommissioning and Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility
U.S. Army Garrison Fort Belvoir
Fairfax County, Virginia

Pursuant to Section 307 of the Coastal Zone Management Act of 1972, as amended, and 15 Code of Federal Regulations (CFR) Subpart C, this Federal Consistency Determination has been prepared for the United States Army Corps of Engineers (USACE) Baltimore District's Proposed Action to decommission and dismantle the Deactivated SM-1 Nuclear Reactor Facility at U.S. Army Garrison Fort Belvoir (Fort Belvoir) in Fairfax County, Virginia. USACE is required to determine the consistency of the Proposed Action and potential effects on Virginia's coastal resources or coastal uses with the enforceable policies of the Virginia Coastal Zone Management Program (VCP).

This consistency determination represents an analysis of the Proposed Action in light of established VCP Enforceable Policies and Programs. Submission of this consistency determination reflects the commitment of USACE to comply to the maximum extent practicable with those Enforceable Policies and Programs. The Proposed Action would be implemented in a manner consistent with the VCP. USACE has determined that the effects of the Proposed Action would be less than significant on land and water uses as well as natural resources of the Commonwealth of Virginia's coastal zone and is consistent to the maximum extent practicable with the enforceable policies of the VCP.

Background

The Deactivated SM-1 Nuclear Reactor Facility occupies an approximately five-acre site on Fort Belvoir's South Post along the shoreline of Gunston Cove, an embayment of the Potomac River (**Figures 1 and 2**). SM-1 began operation in 1957 and was deactivated in 1973. Following removal of the nuclear fuel and limited decontamination, SM-1 was placed into a safe storage (SAFSTOR) condition to allow for natural decay of residual radionuclides. U.S. Nuclear Regulatory Commission (NRC) and Army Reactor Office (ARO) regulations require nuclear facility decommissioning to be completed within 60 years of the facility's deactivation; thus, decommissioning of the Deactivated SM-1 Nuclear Reactor Facility must occur by 2033.

Proposed Action

USACE's Proposed Action is to decommission and dismantle the Deactivated SM-1 Nuclear Reactor Facility at Fort Belvoir. Decommissioning the facility consists of removing all radiologically and non-radiologically contaminated structures, equipment, and media associated with the operation of the reactor; restoration of the site to allow for unrestricted release and future use; and termination of the Army's reactor possession permit under which the facility is currently maintained. Three structures that extend into Gunston Cove would be removed under the Proposed Action: a water outfall pipe, an intake pier, and a pump house (situated on the pier).

Following the completion of decommissioning and restoration activities, the SM-1 site would be maintained as open/vegetated space. Any future development of the site would be at the discretion of Fort Belvoir and is not included in the Proposed Action.

The Proposed Action can be broken down into several components, as described below (some variability in the sequence of these activities is anticipated).

- **Site preparation.** Preparatory activities would include the establishment of radiological controls on and around the SM-1 site; the installation of temporary support facilities or modifications to existing facilities to support field activities throughout the duration of the Proposed Action; the removal of most vegetation

from the site and some non-contaminated structures and equipment; and potential upgrades and repairs to onsite roadways.

- **Removal of materials and equipment (M&E) from Building 372.** These activities would include the removal of regulated contaminated and clean M&E from the building. Areas where surface contamination has been detected would be decontaminated to the extent practicable to allow for open air dismantlement and minimize the amount of low-level radioactive waste (LLRW) to be transported and disposed of.
- **Dismantlement of Building 372.** Dismantlement would occur in two sequential phases starting with structural components in the Unrestricted Area (i.e., the area of the facility where residual radioactivity is below applicable regulatory thresholds). This phase of dismantlement would include the above ground structure and removal of the remaining floor slab, foundation, and any tanks and piping still present. The resultant debris from these activities would be disposed of as clean waste. The second phase of dismantlement would occur within the Restricted Area (i.e., the area of the facility with low levels of residual radioactivity above applicable regulatory thresholds) and result in the removal of structures around, and including, the Vapor Container (VC).
- **Dismantlement and removal of other structures.** This component includes the dismantlement or removal of the water intake pump house and pier, a sewage pump station, and a storage warehouse. It also includes the removal of the water intake pipe to Building 372, the water discharge piping from Building 372 to associated infrastructure on the site, including the water outfall pipe, and the unused sanitary sewer line associated with the sewage pump station.

Removal of the water intake pump house and pier, which extends into Gunston Cove approximately 100 feet from the shoreline, would likely require the use of a barge-mounted crane and other vessels to provide the dismantlement crew and equipment with access to the structures. Superstructures would be removed first, followed by the piles if they are determined to be structurally sound. If the piles are determined to be in a condition that would not allow for complete removal, they may be cut at the mudline and the portions below the cut would be left in place. A containment boom and turbidity curtain would be placed around the work area to prevent the migration of disturbed sediment into the water, minimize turbidity, and ensure disturbed sediments settle near their original location. A containment boom and turbidity curtain would also be used to contain sediment disturbed by the removal of the underwater portion of the outfall pipe.

- **Soil remediation and restoration.** Contaminated soils around and below Building 372 would be removed following dismantlement. In addition to radiological contamination, surveys have shown the presence of lead around the building, likely from the deterioration of lead-based paint over time. Soils around the underground tanks and piping are also assumed to be contaminated and would be removed along with those structures.
- **Waste disposal and transportation.** The Proposed Action would generate large quantities of waste. All waste would be characterized, segregated, and disposed of as clean waste (i.e., no contamination and suitable for recycling or disposal at a regular landfill), LLRW, hazardous waste, or mixed waste. Permitted off-post disposal facilities appropriate for each category of waste would be identified and the waste would be shipped to those facilities by licensed contractors in accordance with applicable federal and state regulations.

All waste would be transported off post by trucks, including a 53-foot trailer truck for the Reactor Pressure Vessel (RPV) cask, which would be the most radioactive element of the SM-1 reactor and the

most significant in terms of weight. After leaving Fort Belvoir, the trucks would travel on public roads to either the disposal site or to a road-to-rail transfer location for rail transport to the final destination.

- **Safety, health, and environmental control measures.** The Proposed Action would involve disturbing, dismantling, and moving materials, structures, and soils that are hazardous or radiologically contaminated. These materials would be handled in a controlled manner that would minimize the risk of exposure to project personnel, the general public, and the environment.

Enforceable Policies

The Commonwealth of Virginia has developed and implemented the federally approved VCP encompassing nine enforceable policies for the coastal area pertaining to:

- Fisheries management
- Subaqueous lands management
- Wetlands management
- Dunes management
- Non-point source pollution control
- Point source pollution control
- Shoreline sanitation
- Air pollution control
- Coastal lands management

A summary analysis of how the Proposed Action would affect each of the enforceable policies is presented below. This analysis is based on the more detailed analyses presented in the environmental assessment (EA) being prepared by USACE in accordance with the National Environmental Policy Act of 1969 (NEPA).

Fisheries Management

The program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Marine Resources Commission (MRC) (Virginia Code §28.2-200 through §28.2-713) and the Department of Game and Inland Fisheries (DGIF) (Virginia Code §29.1-100 through §29.1-570).

The State Tributyltin (TBT) Regulatory Program has been added to the Fisheries Management program. The General Assembly amended the Virginia Pesticide Use and Application Act as it related to the possession, sale, or use of marine antifoulant paints containing TBT. The use of TBT in boat paint constitutes a serious threat to important marine animal species. The TBT program monitors boating activities and boat painting activities to ensure compliance with TBT regulations promulgated pursuant to the amendment. The MRC, DGIF, and Virginia Department of Agriculture and Consumer Services share enforcement responsibilities (Virginia Code §3.1-249.59 through §3.1-249.62).

Consistent to the Maximum Extent Practicable? Not Applicable (NA)

Analysis

The Proposed Action does not involve the use of TBT. In-water dismantlement activities associated with the Proposed Action would have no potential to affect finfish or shellfish resources or commercial and recreational fisheries. Therefore, this enforceable policy is not applicable.

Subaqueous Lands Management

The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the DEQ Water Division. The program is administered by the MRC (Virginia Code §28.2-1200 through §28.2-1213).

Consistent to the Maximum Extent Practicable? YES

Analysis

Removal of the intake pier and water discharge pipe under the Proposed Action would have the potential to disturb subaqueous bottomlands in Gunston Cove. Gunston Cove is a tidal embayment of the Potomac River. Water depths in Gunston Cove vary from approximately 1 meter (m) in the northern portion to approximately 2.25 m in the center. The mean tidal range is approximately 0.64 m.

The area where in-water work associated with the Proposed Action would occur includes the portion of Gunston Cove that contains the water outfall pipe, pump house, and water intake pier footprint (390 square meters [m²]); adjacent work areas; and the estimated extent of the turbidity plumes that would result from removal of the structures (3.6 hectares [ha]) (**Figure 2**). This area is expected to encompass all of the direct and indirect effects of the Proposed Action.

USACE and its contractors would minimize disturbance of subaqueous bottomlands during in-water activities to the extent practicable. As noted above, containment booms and sediment curtains would be used during in-water and nearshore work to prevent the migration of disturbed sediment into the water column, minimize turbidity, and ensure disturbed sediments settle near their original location.

As determined necessary through continued project planning and ongoing consultation with the Virginia Department of Environmental Quality (VDEQ) and other applicable regulatory agencies, USACE would submit a Joint Permit Application (JPA) for review and/or authorization from the Virginia Marine Resources Commission (VMRC), VDEQ, and/or the Fairfax County Local Wetlands Board (LWB) to work in the tidal waters and wetlands of Gunston Cove. Work would be conducted in accordance with the applicable requirements of permits issued by applicable regulatory agencies.

For these reasons, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Wetlands Management

The purpose of the wetlands management program is to preserve tidal wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.

- (i) *The tidal wetlands program is administered by the MRC (Virginia Code §28.2-1301 through §28.2-1320).*
- (ii) *The Virginia Water Protection Permit program administered by the DEQ includes protection of wetlands – both tidal and non-tidal. This program is authorized by Virginia Code § 62.1-44.15.5 and the Water Quality Certification requirements of §401 of the Clean Water Act of 1972.*

Consistent to the Maximum Extent Practicable? YES

Analysis

The Proposed Action would not involve dredging, filling, or other permanent alteration of or impacts on tidal wetlands. As noted above, USACE would submit a JPA for review and/or authorization from applicable regulatory agencies prior to conducting in-water activities associated with the Proposed Action. USACE and its contractors would limit in-water activity and disturbance to that necessary to remove structures associated with SM-1. Measures would also be implemented voluntarily as well as in accordance with applicable permit requirements to minimize temporary impacts on tidal wetlands. Following completion of the Proposed Action, tidal wetlands in Gunston Cove adjacent to the SM-1 site would naturally return to a pre-disturbance condition.

Therefore, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Dunes Management

Dune protection is carried out pursuant to the Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission (Virginia Code §28.2-1400 through §28.2-1420).

Consistent to the Maximum Extent Practicable? NA

Analysis

The Proposed Action has no potential to affect sand dunes, as none are located on or in the vicinity of the project site. Thus, this enforceable policy is not applicable.

Non-point Source Pollution Control

Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by DEQ (Virginia Code §62.1-44.15:51 et seq.).

Consistent to the Maximum Extent Practicable? YES

Analysis

The Proposed Action would involve more than 2,500 square feet of land disturbance. Therefore, as required by Fort Belvoir's Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), the decommissioning contractor would be required to prepare and adhere to an erosion and sediment control (E&SC) plan in accordance with 9VAC25-840-40, as well as a stormwater management (SWM) plan in accordance with 9VAC25-870-55. Because the Proposed Action would also disturb more than one acre of land, the decommissioning contractor would also obtain coverage under Virginia's General Permit for Discharges of Stormwater from Construction Activities (Construction General Permit [CGP]). Coverage under the CGP would require the contractor to submit a Registration Statement to VDEQ and prepare and adhere to a site-specific SWPPP. Adherence to the requirements of the CGP and E&SC and SWM plans would manage the quantity and quality of stormwater discharged from land-disturbing activities associated with the Proposed Action and would minimize adverse effects on water quality in receiving water bodies.

Thus, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Point Source Pollution Control

The point source program is administered by the State Water Control Board pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to §402 of the federal Clean Water Act and administered in Virginia as the VPDES permit program. The Water Quality Certification requirements of §401 of the Clean Water Act of 1972 is administered under the Virginia Water Protection Permit program.

Consistent to the Maximum Extent Practicable? YES

Analysis

No new point source discharges of stormwater would be created as a result of the Proposed Action. The water outfall pipe at the Deactivated SM-1 Nuclear Reactor Facility that would be removed by the Proposed Action has not been active since the facility was deactivated in 1973. As determined necessary, Fort Belvoir would amend its VPDES permit following completion of the proposed decommissioning to reflect the removal of this outfall.

Therefore, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Shoreline Sanitation

The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth. This program is administered by the Department of Health (Virginia Code §32.1-164 through §32.1-165).

Consistent to the Maximum Extent Practicable? YES

Analysis

An inactive septic tank and associated leach field are suspected to be present immediately southwest of Building 372. If present, the septic tank would be removed during the Proposed Action in accordance with applicable state and Fort Belvoir requirements. Soils in the area of the septic tank and leach field would be replaced with clean fill soils during site restoration activities. No new septic tanks would be installed as part of the Proposed Action.

Thus, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Air Pollution Control

The program implements the federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards. This program is administered by the State Air Pollution Control Board (Virginia Code §10.1-1300 through 10.1-1320).

Consistent to the Maximum Extent Practicable? YES

Analysis

Dismantlement of the Deactivated SM-1 Nuclear Reactor Facility would generate increased emissions from heavy equipment, worker vehicles and fugitive dust. Adverse short-term impacts on air quality would be minimized through the use of standard best management practices (BMP) such as vegetating soils that would remain exposed for extended periods and sweeping or wetting pavements.

Dismantlement-related emissions would remain below thresholds for General Conformity Applicability, and no formal conformity determination is required. In the long term, the implementation of the Proposed Action would not involve the installation of new generators or boilers, nor would it result in an increase of vehicle trips to Fort

Belvoir. No new sources of emissions would be created and thus, no exceedances of applicable *de minimis* limits for criteria pollutants regulated under the Clean Air Act would occur. Short-term adverse impacts on air quality would be minor, and there would be no long-term impacts.

Therefore, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Coastal Lands Management

Coastal Lands Management is a state-local cooperative program administered by DEQ's Water Division and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act (Virginia Code §§ 62.1-44.15:67 through 62.1-44.15:79) and Chesapeake Bay Preservation Area Designation and Management Regulations (Virginia Administrative Code 9 VAC 25-830-10 et seq.).

Consistent to the Maximum Extent Practicable? YES

Analysis

Consistent with the Deactivated SM-1 Nuclear Reactor Facility's location adjacent to Gunston Cove, a tidal embayment of the Potomac River, the Proposed Action would occur in Chesapeake Bay Resource Protection Areas (RPAs) recognized by Fort Belvoir. Fort Belvoir defines RPAs as vegetated buffers no less than 100 feet wide located adjacent to and landward of all tidal shores and tidal wetlands. RPAs on the installation also include 100-year floodplains and 35-foot buffers adjacent to all intermittent streams.

RPA disturbance resulting from the Proposed Action would consist of vegetation clearing and soil excavation, fill, and compaction. Vegetation clearing and soil disturbance would be temporary and limited to that needed to complete the proposed decommissioning activities. All disturbance of the RPA would be limited to the portion of the RPA within the Deactivated SM-1 Nuclear Reactor Facility perimeter.

Adherence to requirements of the CGP and associated SWPPP, E&SC, and SWM plans during ground-disturbing activities would minimize or prevent the erosion of exposed soils and manage the quantity and quality of stormwater generated on the site, which would be ultimately discharged to Gunston Cove and further downstream, the Potomac River and Chesapeake Bay. The extent and intensity of RPA disturbance would vary over the five-year decommissioning process and not all ground disturbance would occur simultaneously, further minimizing adverse effects.

RPA disturbance during the Proposed Action would be mitigated through the planting of two new trees for the removal of every tree four inches in diameter and breast height (dbh) or greater in accordance with Fort Belvoir Policy Memorandum #27, *Tree Removal and Protection*. Vegetation replacement in the RPA would also adhere to the requirements of VDCR's *Riparian Buffers Modification and Mitigation Guidance Manual*.

In the long term, restoration and re-vegetation of the site following the completion of ground-disturbing activities in the Proposed Action would have a beneficial effect on RPAs in this part of Fort Belvoir. No ongoing or permanent activities with potential to disturb RPAs would be established by the Proposed Action.

For these reasons, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Figure 1



Figure 2

