U.S. Department of Energy
Categorical Exclusion Determination Form

Proposed Action Title: CEBAF Renovation & Expansion Project – TJSO-SC-19-01

Program or Field Office: Thomas Jefferson Site Office

Location(s) (City/County/State): Newport News, VA

Proposed Action Description:

The CEBAF Renovation & Expansion (CRE) project will consolidate the TJNAF workforce that is currently scattered in several lease spaces and provide more effective and efficient operations. The project will modernize and expand the CEBAF Center Building, modernize the ARC Building after conveyance to DOE, discontinue costly leases, improve energy efficiency in existing buildings, and better address functional workspace needs for TJNAF staff and users.

The project includes expanding the CEBAF Center and renovating some interior portions, while also taking ownership of and renovating the Applied Research Center (63,000 square feet of renovations). Site work on the project will involve approximately 10 acres.

There would be minor impacts to the environment during construction operations. The proposed area of disturbance includes previously developed land located in the central portion of the Thomas Jefferson National Accelerator Facility campus area. Existing paved roads are present and would serve as construction access routes.

The project would require authorization under an approved project specific General VPDES Permit for Discharges of Stormwater from Construction Activities per the requirements of the Virginia Stormwater Management Program (VSMP) laws and regulations, and Virginia E&SC Laws (62.1-44.15:51 through 62.1-44.15:66) and Regulations (VAC25-840-10 through 9VAC25-840-110). However, applicable Best Management Practices (BMPs) will be utilized during project execution. Applicable erosion and sediment controls would be installed prior to any land disturbance and maintained per the standards and specifications described in Chapter 3 of the *Virginia Erosion and Sediment Control Handbook*. Temporary stormwater management controls will be installed and utilized during construction activities. The installation and maintenance of permanent stormwater management controls will occur during construction activities and all long-term maintenance activities will occur for all applicable permanent structures installed for the project. Therefore, no negative impacts from any stormwater discharges and/or erosion or sedimentation to downstream storm channels are anticipated during construction.

Cultural Resources and Historic Preservation was addressed through coordination with the Virginia Department of Historic Resources (VADHR) as referenced in DOE/EA-1384 (*Proposed Improvements at the Thomas Jefferson National Accelerator Facility, last updated in 2007*). DOE was advised by the VADHR that their archives indicated no recorded architectural or archaeological within or adjacent to the property and no adverse impacts to archaeological and historic resources would be expected from improvements at the TJNAF.

The proposed action would not impact any threatened/endangered species or protected habitat, wetlands or waters of the U.S., or cultural/historical resources. The proposed action would not be part of an ongoing Environmental Assessment or Environmental Impact Statement. The proposed action would not be related to any extraordinary circumstances or other actions with potentially significant impacts.

Categorical Exclusion(s) Applied:

B1.15 - Support buildings

B1.24 - Property transfers

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR Part 1021.

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

☒ The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part
1021, Subpart D, Appendix B.

☒ There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

☒ The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The above description accurately describes the proposed action, which reflects the requirements of the CX cited above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

TJSO NEPA Coordinator: Patricia Hunt Patricia Hunt **Date Determined:** 6-28-19

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer: Peter Siebach **Date Determined:** 7/12/2019

ENVIRONMENTAL COMPLIANCE CHECKLIST

1. ADMINISTRATIVE INFORMATION

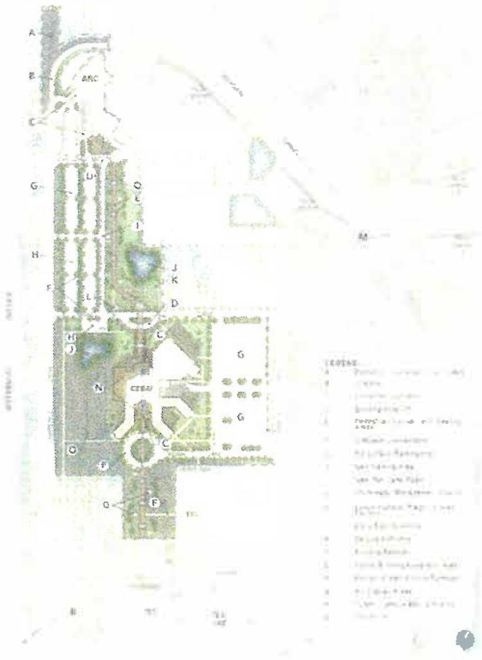
Project Title: CEBAF Renovation and Expansion (CRE)			Date: **04/12/2019**
Charge No. (if applicable):	Estimated Start Work Date: Oct 2020	Individual Submitting Checklist: **Russ Fries**	
Project Engineer/Manager: **Russ Fries**		Bldg/MS/Phone No/Fax No.: 757-269-7751	
Project Location (Plant, Site, Area, Bldg No.): CEBAF Center		Environmental Compliance Rep: **Scott Conley**	Safety Advocate: **Jennifer Williams**

2. **LOCATION OF PROPOSED ACTION:** Describe the location at which the action would take place. Attach maps where appropriate. If applicable, provide the total acreage of the areas that are to be disturbed during construction activities (construction activities include any clearing, grading, excavating, grubbing, and/or filling). Also, if known, provide plant coordinates and identify the center point of the acreage in question.

The proposed action would occur on the campus of the Thomas Jefferson National Accelerator Facility (TJNAF) located in the City of Newport News (estimate population of 180,000) in the southeastern region of Virginia. The TJNAF is a U.S. Department of Energy owned physics research facility that includes approximately 680 fulltime employees and 1,500 researchers (users).

The action would include expansion and renovation of the Continuous Electron Beam Accelerator Facility (CEBAF) Center building located in the central portion of the TJNAF campus, with the work occurring adjacent to the northwestern and southern portions of the existing building. The project would also include minor landscape construction and interior renovation to the Applied Research Center (ARC) located in the northern portion of the campus. See CEBAF Renovation and Expansion Site Plan Attachment 1.

- *ARC interior renovation (57,000sf – 121,000sf)*
- *CEBAF Additions (22,000 – 27,000. Area disturbed during construction (0.75) acres*
- *CEBAF interior renovation 66,000sf – 127,500sf)*
- *Site work (308,000 – 436,000 sf). Area disturbed during construction (7-10) acres.*



3. WORK SCOPE DESCRIPTION: Describe your proposed action's work scope in detail providing as much specific information as possible. Be sure to include all support facilities/activities that will be involved from the initiation to the conclusion of the proposed action (e.g., utility lines, access roads, and equipment decontamination). Include attachments where appropriate.

The proposed CRE includes the 22,000 square feet (SF) office and atrium addition and renovation portion of the project includes a complete renovation of the 1988 section of the building and minor renovation to the 2006 section. This option also includes the acquisition and remodeling of the Applied Research Center (ARC) currently owned by the City of Newport News Economic Develop Authority. Following acquisition the seven story, 121,000 SF facility will be renovated.

The main entrance to the CEBAF Center will be located along the northern side of the facility, in order to foster campus connectivity and to establish a new relationship with the ARC where visitors will be welcomed. The main lobby will serve as a commons area, providing facilities such as an auditorium, café/kitchen, restrooms, reception area, and conference rooms. Adjacent to the main lobby will be the new West addition that features additional common use cluster space and wellness rooms. The renovated wings and F-wing will be located directly off of the main lobby and include open office, private office and collaboration areas.

The main entrance to the ARC will remain in the same location, with new exterior signage to welcome staff, users and visitors to the campus. The main lobby will house a reception area, badging center and visitor center for the community. A secondary entrance will be located on the first floor for the BEAMS (Being Enthusiastic About Math and Science) program in order to reduce noise and traffic in the main lobby while creating a sense of identity for the program. The second and third floors will remain as is, housing university and community tenants along with some space occupied by TJNAF staff. The forth through seventh floors will house offices zones and suites. See Conceptual Rendition of New North Entrance to CEBAF Center. Attachment 2.

Conceptual Rendition of New North Entrance to CEBAF Center

4. ENVIRONMENTAL SUMMARY: Indicate if this action may generate, use, or cause disturbance to any of the following (**please check all that apply**). Unchecked items indicate that there are "no issues." If unknown, please check the item and explain in Item 5 below.

1. Air emissions (fugitive, stack, rad, etc.)		11. Radiological area		21. Clearing or excavation (>5 acres)	
2. Asbestos		12. Solid Waste Management Unit/ CERCLA Area of Contamination		22. Threatened or endangered species	
3. Ozone-depleting substance (CFCs, HCFCs)		13. Solid waste	√	23. Floodplain/wetland/streams	
4. Liquid effluents	√	14. Mixed waste		24. Prime agricultural lands	
5. Drinking water system		15. Radioactive waste/soil		25. Archeological/cultural resources	
6. Surface/stormwater	√	16. Hazardous waste (RCRA, PCB, Asbestos)		26. Transportation issues	
7. Water use/diversion	√	17. Chemical/petroleum storage/use		27. Pesticide/herbicide use	
8. Groundwater	√	18. Environmental Elevated Noise Level		28. Off-site releases (Environmental Justice Concern)	
9. Sewage System	√	19. Clearing or excavation (<1 acre)		29. Other	
10. Tanks (under- or above-ground)		20. Clearing or excavation (1-5 acres)	√		

5. EXPLAIN THOSE AREAS IDENTIFIED IN ITEM 4 THAT WERE CHECKED AND ANY HAZARD CONTROLS TO BE EXECUTED (e.g., spill prevention, erosion controls, air emission controls including dust suppression, etc.). Give details of chemical storage/use noting both the average use on-hand and the potential maximum use (include reportable quantity [RQ] amounts, waste storage areas, etc.). Include attachments where appropriate.

Liquid effluents:

- *Construction and improvements to plumbing will produce minor liquid effluent to sanitary sewer. Routine sanitary sewer flows will be generated with the general use of the newly constructed or renovated building wings/portions and authorized under the existing industrial wastewater discharge permit with the Hampton Roads Sanitation District (HRSD). Any special discharges to sanitary sewer will obtain proper authorization under HRSD regulatory requirements prior to release to sewer.*

Surface/stormwater:

- *A regulated land disturbance will be required for this activity; estimated land disturbance thresholds will most likely require authorization under the Virginia Department of Environmental Quality's (DEQ) General VPDES Permit for Discharges of Stormwater from Construction Activities; appropriate controls required by the stormwater permit will include: Stormwater Management (SWM), Erosion & Sediment Control (E&SC), and Pollution Prevention to comply with Virginia Stormwater Management Program (VSMP) regulations.*

Water use/diversion:

- *Minor volumes of groundwater dewatering will occur associated with construction activities; proper E&SC measures will be installed prior to initiation of site work in order to contained disturbed soils and prevent migration into downstream areas.*

Groundwater:

- *Minor disturbance to the shallow groundwater table will occur during construction activities that include shallow excavation for installation of resources including but not limited to building foundation and underground utility lines; there is no historical knowledge of groundwater contamination in the area of the proposed disturbance; pollution prevention measures will also be implemented to prevent the introduction of contaminants to groundwater resources during construction activities. During all dewatering of construction*

excavations onsite, effluent will be properly discharged through an approved dewatering BMP per requirements of the Virginia Erosion & Sediment Control Handbook (VESCH). No other impacts to groundwater are anticipated during the project.

Sewage System:

- *Changes made to existing plumbing will have minor effects to existing sewer flow volumes as approved by Jefferson Lab's HRSD permit. The project will require the disconnections of existing sewage utilities and the connection of new infrastructure to the site sewage system that discharges to an offsite wastewater treatment plant operated by the HRSD. As previously discussed, any special discharge requests will receive proper authorization under HRSD regulatory requirements prior to release to sewer.*

Solid waste:

- *Some solid waste will be generated as a result of construction activities and will be properly managed and disposed of at an approved municipal landfill. This waste includes universal waste. Existing lighting fixtures and ballasts will be removed. These materials will be properly packaged and sent to a licensed recycler for proper disposal or reuse.*

Clearing or excavation (1-5 acres):

- *Land disturbing activities in the vicinity of the propose activity will occur associated with construction operations; proper E&SC measures will be installed prior to initiation of the land disturbance for containment of sediment and prevention of eroding soils; SWM measures will be installed during and following land disturbance activities in order to maintain proper water quality and quantity as required by VSMP regulations. Land disturbing activities associated with the project will be limited to those area immediately adjacent to the proposed location. A General VPDES Permit for Discharges of Stormwater from Construction Activities will be required prior to the initiation of land disturbing activities onsite.*

6.POLLUTION PREVENTION/WASTE MINIMIZATION/AS LOW AS REASONABLY ACHIEVABLE (ALARA): Describe pollution prevention/waste minimization principles to be used to reduce or eliminate liquid, solid, or gaseous waste/materials (e.g., substituting less hazardous materials, reusing or recycling materials, etc.). Have air, water, and waste disposal/stream discharges of radionuclides been minimized in accordance w/ ALARA principles (describe any actions taken below)?

Jefferson Lab's Waste Minimization/Pollution Prevention program includes several controls: screening the purchase of items requiring Safety Data Sheets and recommending less harmful materials where possible, reducing the quantity of radioactive waste generated through proper materials management to adhere to ALARA, identifies opportunities for the potential to conserve resources usage, and institutes recycling and reuse to the extent possible. No additional discharges of radionuclides to air, water and soil have been proposed for the project, sanitary sewer discharges will continue to be authorized under the existing permit with the Hampton Roads Sanitation District (HRSD), and pollution prevention measures will be executed according to permit compliance requirements and applicable environmental regulations during the activity. All waste generated by the activity will be managed according to applicable environmental regulations for solid waste management.

7. DESCRIPTION OF WASTES AND DISPOSAL METHODS: Describe the type of waste (Radioactive, RCRA, Mixed, etc.); the waste form (solid, liquid, gas, etc.); approximate amount of waste expected to be generated; waste disposal method (landfill, storm sewer, other); and, if known, the disposal container (boxes, drums, etc.).

Waste Type	Check	Waste Form (Solid, Liquid, Gas, Sludge) (list all that apply)	Amount Expected to be Generated (specify units of measure)	[1]Waste Disposal Method (landfills [specify], sanitary sewer, etc.) and Disposal Container (boxes, drums, etc.)
Radioactive				
RCRA				
TSCA				
Mixed				
Sanitary/Industrial				
Biohazard				
PCB				
Oil/Oily				
Asbestos				
Mercury				
Beryllium				
Organics/Solvents				
Heavy Metals				
Construction Debris	√	**Solid**	**5000cy**	**Approved Land Fill with dumpster and dump truck**
Soil Debris	√	**Solid**	**500cy**	**Approved Clean Soil Fill Site with dump trucks**
Other				

Completion of this column may require input from Waste Operations or Waste Disposition Projects personnel.

8. PROJECT SIGNATURE: This section is to be completed by the Project Evaluator (individual completing this checklist).

I have reviewed this action and to the best of my knowledge have answered all questions completely to describe the proposed action.

Project Signature: _____ **Date:** 6-28-19

Please note: Any changes or unanticipated events to the project must be documented by updating this form.

This section to be completed by the Environmental Compliance Representative

9. ENVIRONMENTAL COMPLIANCE (EC) REPRESENTATIVE:

I have reviewed the proposed project and based on the actions described in this checklist, the following hazard controls should be implemented.

Check	Environmental Compliance Hazard Control Issue	Hazard Control Measure(s) to be Implemented
	Air Permit - Exempt Air Emission Source - Fugitive Dust Suppression	Not applicable
	RCRA Permit - Satellite Accumulation Area - 90-day Accumulation Area - Closure Plan	Not applicable
	NPDES Permit - Stormwater Notice of Intent	Not applicable
	Section 404 Type Permits -Aquatic Resources Alteration Permit -TVA 26(a) Permit -Corps of Engineer Permit -Watts Bar Interagency Group -Other	Not applicable
√	**Excavation/Penetration Permit**	Approved Jefferson Lab dig permit
	Asbestos Notifications -Building Demolition Notice of Intent	Not applicable
	NESHAPs (RAD)	Not applicable
√	**Stormwater Controls**	Stormwater runoff generated during the project will be properly managed through General VPDES Permit for Discharges of Stormwater from Construction Activities issued by the Virginia DEQ.
√	**Spill Prevention**	All activities requiring the use and/or handling of oil or petroleum products will adhere to applicable requirements of Jefferson Lab's existing SPCC Plan.
	Floodplain/Wetland	Not applicable
√	**Level of NEPA Documentation Required (specify NEPA reference used)**	Categorical Exclusions: B1.15 – Support Buildings; B1.24 – Property Transfers
	Historical/Cultural Resource	Not applicable
	Environmental Justice	Not applicable
	Hazardous Materials (HMIS Inventories)	Not applicable
√	**Waste Management** - Approved Treatment, Storage, Disposal and Recycle Facility (TSDRF)	Construction debris generated by project activities will be properly disposed of at an offsite licensed landfill. Universal waste (bulbs, ballasts, batteries, etc.) generated by the project will be properly managed/recycled at offsite licensed waste management facility.
	Safe Dam (FERC)	Not applicable
	HSWA, SWMUs	Not applicable
	Other	

EC Rep Signature: Edward Scott Carley Date: 6/19/19

Attachment 1

CEBAF Renovation and Expansion Site Plan

Attachment 2

Conceptual Rendition of New North Entrance to CEBAF Center