



Environmental Evaluation Checklist

PPPO-F-450.1
Revision 1
February 2006

National Environmental Policy Act Review

Instructions: <ul style="list-style-type: none"> • Complete both the NEPA and Permits portion of the checklist • Submit one copy of the completed checklist with supplemental information to the DOE Project Coordinator • DOE Project Coordinator will distribute to PPPO NEPA Compliance Officer for approval 			
Activity title and project number (if any) Portsmouth Gaseous Diffusion Plant High Voltage Reconfiguration Project			Date: 4/30/2020
Project contact name	Telephone number	DOE Project Coordinator	Telephone number
Jack Hughes	(740)897-3471	Matt Vick	(740)897-2089
Activity start date	Activity end date	Estimated cost	Activity location
7/1/2020	3/31/2023	\$31 Million	Portsmouth Gaseous Diffusion Plant
Activity description: This should be a brief but thorough description of the proposed activity. Be very specific in explaining the purpose and location (a developed/non-developed area, outside/inside/adjacent to existing building number, etc.)			
<p>The DOE Portsmouth Gaseous Diffusion Plant (PORTS) reservation is currently supplied power through 345/13.8kV substations. Due to the significant reduction in the reservations power needs as well as recent agreements with the serving utilities, Ohio Valley Electric Corporation (OVEC) and American Electric Power (AEP) which are filed with the Public Utilities Commission of Ohio (PUCO), it is no longer practicable to maintain the current configuration. The project will reconfigure the plant power supply and distribution system to transition to a more adequately sized 138kV supply. The project will include AEP constructing a new substation using in part DOE funds in accordance with AEP line extension tariff that will be designed, constructed, owned, and operated by AEP. AEP will also construct, operate and maintain new transmission lines to the DOE X-555 and X-5000 substations. This substation will be near the intersection of the West Access Road and Perimeter Road. The project will also construct (by DOE) a new substation (X-555) near the X-530 Switchyard reconfigure the X-5000 substation, and install new transmission lines and towers to these facilities by AEP. The transmission lines will be designed and constructed by AEP. The new infrastructure will provide power to the entire reservation including the former gaseous diffusion plant, the Depleted Uranium Hexafluoride Conversion facility, and the gaseous centrifuge demonstration facility (currently leased to Centrus Energy Corporation) as well possibly provide power for future reindustrialization activities. The project will also reduce risks to the environment from the release of oil and sulfur hexafluoride from aged equipment.</p>			
Summary:			
<p>The proposed project will reconfigure the DOE PORTS power supply and redistribution system to transition to a 138kV supply system. The new infrastructure will provide power to the entire reservation including the former gaseous diffusion plant, the Depleted Uranium Hexafluoride Conversion facility, and the gaseous centrifuge demonstration facility (currently leased to Centrus Energy Corporation) as well as potentially provide power for future reindustrialization activities. The proposed activity is adequately addressed in the Categorical Exclusion (CX) Applicable to Power Marketing Administrations and to All of DOE with Regard to Power Resources</p>			

[references CX - 10 CFR 1021.410(b)) B4.6, B4.11 and B4.12.]

Detailed description: (Attach additional pages for description if necessary and include reference documents)

The scope of work for this project is to install electrical infrastructure necessary to replace one 345/13.8kV substation (X-530) and retrofit one 345kV/13.8kV substation (X-5001). The scope includes each substation, two new 138kV transmission lines from utility source to each substation (4 total transmission line circuits, installed and owned by AEP) and connection to existing 13.8kV switchgear, 2 circuits at each substation (4 total 13.8kV circuits). Also included in this scope is the construction of a new substation (Arboles) by AEP on the PORTS reservation. AEP will construct and own this substation and transmission line to DOE stations in an easement granted by DOE. The AEP substation construction will be funded in accordance with AEP line extension tariff. All new and modified facilities are contained within a 1 mile radius.

X-530 Description

The X-530 substation is a 345kV station with 8 bays, 7 of which being breaker-and-a-half arrangement. There are currently five 345kV transmission lines entering the substation and three 345kV underground cable duct banks leaving the substation, sending power to the X-5001 substation. Additionally, there are still 2 active circuits with 345/13.8kV transformers that have a cable bus which extends into a building (X-530B) where they feed power to double ended switchgear. The high voltage portion of the substation all the way to the 345/13.8kV transformers will be completely bypassed with the feeds from the new 138/13.8kV substation (X-555) such that the new 13.8kV circuits will tie into the existing X-530B switchgear.

X-5001 Description

The X-5001 substation is a 345/13.8 kV station with three circuits fed from the three underground 345kV cable duct banks that originate in the X-530. There are currently three 345/13.8kV transformers that each feed to the 13.8kV switchgear, via cable bus, in the X-5000 building. There are a set of 345kV risers for each of the three underground circuits.

X-555 138/13.8kV Substation (new)

The new X-555 138/13.8kV substation will be “green field” construction adjacent to the southwest corner of the existing X-530 substation. Two 138kV single circuits on steel pole transmission lines will originate in the Arboles 138kV substation with the DOE transmission line ownership/design beginning at the first connection inside of the DOE’s 138kV substation. Each 138kV transmission line will be on single circuit poles and will remain above ground for the entire run, terminating at a dead end structure in the X-555 substation. The substation will consist of two independent circuits, each with a 138kV breaker, 138/13.8kV transformer, 13.8kV switchgear, as well as all necessary supporting disconnect switches, voltage transformers, protection systems and auxiliary equipment. It is anticipated that each circuit will be capable of supplying 40MVA to the existing switchgear located in the X-530B. The outdoor switchgear in the X-555 substation will be used to transition to 13.8kV cable bus circuits that will run in a pre-cast concrete trench and then transition to above ground enclosures in order to tie into the existing switchgear in the X-530B. The outdoor switchgear will also have spare breaker compartments that will be used once load is transitioned from the existing switchgear to the new outdoor switchgear. The outdoor switchgear will have a tie breaker and 6 to 8 spare sections.

X-5001 Substation Retrofit

The X-5001 substation will be retrofitted to accept two 138kV circuits. This requires removing all 345kV equipment (345kV risers, 345/13.8kV transformers and a portion of each 13.8kV bus to the switchgear in the X-5000). The two 138kV single circuit transmission lines will originate in the Arboles 138kV substation with DOE transmission line ownership/design beginning connection inside of the X-5001 substation. It is expected that each

transmission line will be on single circuit steel poles and will remain above ground for the entire run, terminating at a dead end structure in the X-5001 substation. The substation will consist of two independent circuits, each with a 138kV breaker, 138/13.8kV transformer, 13.8kV switchgear, as well as all necessary supporting disconnect switches, voltage transformers, protection systems and auxiliary equipment. It is anticipated that each circuit is capable of supplying 70MVA to the existing switchgear located in the X-5000. It is expected that the existing transformer pads will be reused and that two 70MVA transformers will be installed. The design must also consider the ability to accommodate a future third 138kV circuit, identical to the two being installed. Preferably, the design shall consider reusing the existing oil containment system, ground grid, fencing, etc., however, recommendations relating to their reuse, replacement, or any combination thereof is expected.

No known extraordinary circumstances will be associated with these actions that might affect the significance of the environmental effects of the proposed action based on past similar actions. These actions will not be connected to other actions with potentially significant impacts or related to other proposed actions with cumulatively significant impacts; they will meet the conditions that are integral elements of the classes of actions which may be categorically excluded from further National Environmental Policy Act (NEPA) documentation.

The proposed activity is adequately addressed in the Categorical Exclusion (CX) Applicable to Power Marketing Administrations and to All of DOE with Regard to Power Resources [references CX - 10 CFR 1021.410(b)) B4.6, B4.11 and B4.12.]

National Environmental Policy Act (NEPA) Checklist

Questions to answer: *A checklist is required to be submitted, evaluated, and approved for all proposed site actions and projects that have the potential to meet any of the following:	Yes	No
1. Will this activity result in a change in emissions, generation rates, or new discharge of hazardous, mixed, radioactive, asbestos, PCB, sanitary/industrial, solid or liquid waste, petroleum substance, wastewater, or any other pollutants from a facility or process?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Will this activity be located in a previously developed area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Will this activity involve siting, construction, modification, renovation, closure or D&D of facilities or processes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Will this activity potentially affect environmentally sensitive areas/resources such as flood plain/wetlands, archeologically or historically significant areas, threatened or endangered species, and/or their habitat, special water sources (e.g. aquifer)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Will this activity involve site characterization, environmental monitoring, or R&D programs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Will this activity involve any type of land disturbance, underground storage tank (UST), or subsurface injection/extraction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will this activity involve a site evaluation area, RCRA/CERCLA area/facility? (X-530 Switchyard)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>*Note:</p> <ul style="list-style-type: none"> - If any unknown, call DOE PPPO NEPA Compliance Officer or Project Environmental Coordinator for consultation - Consult with DOE PPPO NEPA Compliance Officer or Project Environmental Coordinator; file with project & complete permits checklist - If any are marked "Yes", complete rest of NEPA checklist and permits checklist 		
Environmental Impacts Evaluation (Note: If any are "Yes", provide specifics/supplemental information.)		
<i>Air</i>		
• Will there be a new air emission or a change in the quantity of an existing air emission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Surface Water</i>		
• Will there be a liquid release to streams, swamps, wetlands, seepage basins, storm drains, process sewers, ponds, or lakes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Will river or stream water be utilized?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Groundwater</i>		
• Will there be a discharge to subsurface/groundwater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Will groundwater be utilized?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Safety</i>		
• Is there a potential exposure to hazardous substances (e.g. radiological/toxic/chemical materials)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Is there a potential for explosion or criticality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Does action involve transportation of hazardous materials? (Delivery of products for construction will include hazardous materials)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Natural/Cultural Resources</i>		
• Is there a potential for impacts on wetlands, swamps, streams, river beds, ponds, set aside areas? Wetlands were identified as areas to avoid as part of the design criteria	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Is there a potential impact on fish/wildlife resources or habitats?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Is there a potential impact on protected species (e.g. sensitive, rare, threatened, or endangered)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Is there a potential for impacting archaeological and historical sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Does this action require an excavation permit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
For DOE PPPO NEPA Compliance Officer use only (NEPA recommendation)		
• Are there potential cumulative effects when combined with other actions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Is the proposed activity a component of a larger line item project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Write in document title or reference number:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> CX applied for by DOE Project Coordinator (Must meet all requirements of 10 CFR 1021.410(b)): _____ <input checked="" type="checkbox"/> Covered by previous NEPA documentation (CX, EA, EIS): (Write in document title or reference number) Action covered under 10 CFR Part 1021.410(b) B4.6, B4.11 and B4.12		
<input type="checkbox"/> Additional NEPA documentation required: <input type="checkbox"/> EA <input type="checkbox"/> EIS <input type="checkbox"/> Revised ROD <input type="checkbox"/> Revised FONSI <input type="checkbox"/> EE/CA		
DOE Project Coordinator signature Matthew A. Vick <small>Digitally signed by Matthew A. Vick Date: 2020.05.18 10:25:00 -04'00'</small>	Date checklist completed: 5/18/20	
For DOE PPPO NEPA Compliance Officer Use Only (NEPA determination)		
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved - with comments <input type="checkbox"/> NOT approved – alternate NEPA action required		
DOE PPPO NEPA Compliance Officer signature Cynthia A. Zvonar <small>Digitally signed by Cynthia A. Zvonar</small>	Date of signature: May 19, 2020	