



U.S. Department of Energy  
Portsmouth/Paducah Project Office

## National Environmental Policy Act (NEPA) Environmental Evaluation Checklist

PPPO-F-450.18, Rev. 3  
June 2017

### National Environmental Policy Act Review

<b>Instructions:</b> <ul style="list-style-type: none"> <li>Submit one copy of the completed NEPA Checklist with supplemental information to the PPPO Project Coordinator.</li> <li>PPPO Project Coordinator will distribute to PPPO Program NEPA Coordinator and/or PPPO NEPA Compliance Officer (NCO) for approval.</li> <li>File the completed checklist with the project files, as appropriate.</li> <li>Completion of this checklist is not required for CERCLA actions. However, the Contractor's Project Coordinator is responsible for ensuring that a commensurate level of project detail is provided to the CERCLA Project Manager so that proper consideration and analysis of the work can be performed via the CERCLA process.</li> </ul>			
Activity title and project number (if any):			Date:
New 161-kV Delivery Point Substation - Paducah Gaseous Diffusion Plant (PGDP)			June 5, 2019
Contractor Project Contact Name: Cheryl Baker	Telephone Number: (270) 441-6008	PPPO Project Manager: James Johnson	Telephone Number: 270-331-0906
Forecast Activity start date: June 10, 2019	Estimated cost: \$18,000,000	Activity location: PORTS/PAD Other _____	PORTS <input type="checkbox"/> PAD <input checked="" type="checkbox"/>
<b>Activity description:</b> 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 an existing building number, etc.)			
<p>The Tennessee Valley Authority (TVA) is designing, constructing, and will be operating a new substation for the U.S. Department of Energy (DOE) at the Paducah Gaseous Diffusion Plant (PGDP). The new substation will be located to the east of the fenced portion of the PGDP on the northeast corner of the intersection of Dyke Road and McCaw Road in the vicinity of the current gravel parking lot designated as C-755-N.</p>			
<b>Detailed description:</b> (Attach additional pages for description if necessary and include references to the documents)			
<p>TVA will design, construct and operate a new substation for DOE with new power delivery points to replace the existing C-531 switchyard at the Paducah Gaseous Diffusion Plant (PGDP). The proposed substation location is east and adjacent to the PGDP within the DOE property boundary. This location is an existing gravel lot and is currently being used as an equipment staging area (C-755-N). This location will be graded in accordance with the TVA Site Development Grading Plan to accommodate the new substation. Easement and right-of-way on DOE property will be provided as required. The TVA 161-kV transmission lines currently running to the C-531 switchyard will be re-routed to the new TVA substation.</p>			
<p>As part of the site development, some trees will be removed around the perimeter of the existing gravel lot as required to provide adequate space for the substation components, electrical manholes/vaults, and substation security fence. In addition, impacts to the aquatic environment will be small. Based on an environmental review by TVA, no impacts to endangered, threatened, or special status species will occur (Attachment I).</p>			
<p>Approximately 4-5 acres of previously disturbed land will be used for this project, including approximately 2 acres for the substation, 1-2 acres for access roads and transmission structure placements, approximately 0.5 acre for a laydown area, and approximately 0.352 acre of wetlands. Appropriate storm water controls will be implemented for the construction and operation. Excavation within the existing gravel lot to provide a storm-water secondary containment basin for the substation will have minimal effect on the environment due to the area currently being used as equipment storage. Spoils from the excavation will be spread back on-site and area regraded/resurfaced. If spoils need to be removed from the site, DOE and/or Four Rivers Nuclear Partnership, LLC, would be responsible for finding a location to relocate the spoil. The drainage from the secondary containment basin and the substation cable ditch will be routed to a DOE Kentucky Pollutant Discharge</p>			





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Elimination System-permitted outfall. The storm-water secondary containment basin will prevent any oil(s) from reaching the waterways and other environmental media. An equipment staging area will be located east of the proposed substation location on the south side of McCaw Road. Gravel will be brought in to develop this area for temporary use before and during construction. This development is within the boundary of the transmission lines corridor and will not disturb any sensitive areas.

TVA and contractor construction activities shall be performed by methods that will prevent spills of solid matter, contaminants, debris and other pollutants and wastes into the Little Bayou creek. TVA best management practices (BMPs) will be used to minimize disturbances from construction activities of the substation and transmission lines, and also to minimize surface water runoff from construction activities.

There are three small areas of floodplain within the proposed project access road boundary area. However, the access roads will not be constructed or improved within the floodplains. Therefore, no impacts to floodplains are anticipated.

Approximately 0.345 acres of jurisdictional wetland will be cleared and converted to emergent/scrub-shrub wetland habitat and maintained as such long-term. Structure placement would be required within two jurisdictional wetland areas (0.007 acres combined). Fill required for structure placement is considered minimal and covered under the U.S. Army Corps of Engineers (USACE) Nationwide Permit 12, for which TVA submitted a Pre-Construction Notification to USACE. USACE's authorization to use Nationwide Permit 12 requires compliance with the Kentucky Department for Environmental Protection (KDEP) Section 401 Water Quality Certification (WQC) conditions in *General Certification—Nationwide Permit #12, Utility Line Backfill and Bedding*, dated March 19, 2017 (Attachment 2). TVA's BMPs will be used to meet the requirements of the USACE Nationwide Permit 12 and Kentucky WQC conditions. To compensate for loss of wetland function, TVA will purchase wetland mitigation credits from the West Kentucky Wetwoods Mitigation Bank 2 in compliance with the authorization to use Nationwide Permit 12 from the USACE Louisville District. TVA will also minimize temporary wetland disturbance to these wetlands via no-mechanized clearing in wetlands, use of low ground pressure equipment, or use of mats during clearing and construction activities to minimize rutting to <12" and reduce soil compaction. TVA's best management practices would be adhered to for any and all other work necessary within the delineated wetland boundaries. Therefore, with avoidance, minimization, compliance, and mitigation efforts in place, no significant wetland impacts are anticipated to result from the proposed project. However, because of the proposed action within the wetlands, DOE has prepared a wetland assessment for compliance with 10 CFR 1022 and will issue a notice of proposed wetland action to appropriate government agencies and the public for a 15-day comment period.

Groundwater underlying the project area has likely been impacted by past activity at the PGDP. The proposed project location is in area of potential groundwater contamination of trichloroethene (TCE) and Technetium-99. Project activity could potentially encounter contaminated groundwater, if drilling into the subsurface or cause erosion of sediment into the groundwater infiltration zones. Radiological monitoring of the drill site will be conducted. Any contaminated environmental media will be containerized to reduce contact with contaminated environmental media and dispositioned. BMPs will be used to avoid contamination of groundwater by project activities and, therefore, potential impacts to groundwater are expected to be insignificant.

An environmental survey was completed as part of this project by TVA, which concluded that no listed or protected species would be affected by this project.

An archeological and historical survey for the project was conducted in accordance with Section 106 of the National Historic Preservation Act. Because the construction of the new substation and transmission lines furthers the historic use of the PGDP by supplying it with reliable power to support ongoing deactivation and remediation activities, and the new line and substation are adjacent to and in keeping with the industrial nature of the PGDP, TVA concluded that there will be no adverse effect to the potential historic district of properties eligible for listing in the National Register of Historic Places within the PGDP. The Kentucky State Historic Preservation Office concurred with TVA's determination (Attachment 3).

No known extraordinary circumstances would be associated with these actions that might affect the significance or the environmental effects of the proposed action based on past similar actions. These actions would not be connected to other actions with potentially significant impacts or related to other proposed actions with cumulatively significant impacts; they would 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.

See the Attachment 1 for further description on substation planning and environmental resource mitigation techniques that will be used.





## National Environmental Policy Act (NEPA) Checklist

Questions to answer: *A checklist is required to be submitted, evaluated, and approved for all proposed non-CERCLA actions so that a NEPA review may be performed.	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 checked="" type="checkbox"/>	<input 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 shut-down 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, archeological or architectural historic properties, threatened or endangered species, and/or their habitat, special water sources (e.g. aquifer)?	<input checked="" type="checkbox"/>	<input 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>*Note:</b> - If any answers to these questions are unknown, call the contractor Project Environmental Coordinator Manager, PPPO Project Manager, or PPPO NCO for consultation. - If any are marked "Yes", complete rest of NEPA Checklist.		
<b>Environmental Impacts Evaluation</b> (Note: If any are "Yes", provide specifics/supplemental information.)		
<b>Air:</b>		
• 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"/>
<b>Surface Water:</b>		
• Will there be a liquid release to streams, 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"/>
<b>Groundwater:</b>		
• 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"/>
<b>Safety:</b>		
• 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Natural/Cultural Resources:</b>		
• Is there a potential for impacts on wetlands, streams, ponds, floodplains (or floodways), or special sources of water such as sole-source aquifers?	<input checked="" type="checkbox"/>	<input 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, state or federally-listed rare, threatened, or endangered) or their habitat?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Will this involve/effect any genetically engineered organism, synthetic biology, governmentally-designated noxious weeds or invasive species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Is there a potential for impacting archaeological or architectural historic properties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Does this action require an excavation permit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Potential Cumulative Effects/Components for Larger Line Item Project:</b>		
• 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:		

For Contractor Project Management Use Only		
<b>Contractor Project Contact Printed Name and Signature:</b>	<b>Contractor Company Name:</b>	<b>Telephone Number:</b>
Cheryl L. Baker/ <i>Cheryl Baker</i>	Four Rivers Nuclear Partnership, LLC	(270) 441-6008

For DOE PPPO NEPA Compliance Officer Use Only (NEPA recommendation)
<input checked="" type="checkbox"/> CX applied for by DOE Project Coordinator (Must meet all requirements of 10 CFR 1021.410(b) (Provide CX applicable number(s) below)
_____ B4.11 _____ B4.12 _____ B4.10 _____
_____



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<input type="checkbox"/> Covered by previous NEPA documentation (CX, EA, EIS): _____ (Write in document title or reference number(s))	
<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	
PPPO Project Manager Printed Name and Signature: <i>James O. Johnson</i>	Date NEPA Checklist Completed: <i>6/5/2019</i>
For DOE PPPO NEPA Compliance Officer Use Only (NEPA determination) Based upon my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits the specific class of actions, the other regulatory requirements set forth above are met, and the proposed actions are hereby categorically excluded for further NEPA review.	
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved – with comments <input type="checkbox"/> NOT approved – alternate NEPA action required	
DOE PPPO NEPA Compliance Office Signature: <i>Cynthia Zvonar</i>	Date of Signature: <i>6-5-2019</i>