

**CATEGORICAL EXCLUSION TO INSTALL EMSL SUPER-COMPUTER  
POWER INFRASTRUCTURE, PACIFIC NORTHWEST NATIONAL  
LABORATORY, RICHLAND, WASHINGTON**

**Proposed Action:**

The U.S. Department of Energy (DOE) Pacific Northwest Site Office (PNSO) proposes to provide enhanced electrical service to the Environmental Molecular Sciences Laboratory (EMSL) to provide an increased power capacity for future facility computational developments.

**Location of Action:**

The electrical service would be installed underground via excavation in the lawn and gravel area between EMSL, room 1145, west toward the northeast corner of the Biological Sciences Facility (BSF), in Richland, Washington. The excavation would also extend north-south for about 450 feet along the property line between EMSL and BSF. Please refer to Figure 1.

**Description of the Proposed Action:**

This project would be composed of two parts:

1. The scope would involve developing a Fee for Service agreement with the City of Richland to install a new transformer and high voltage switching yard from existing City electrical vaults capable of providing up to 20 MW of 480V power for EMSL. This would include 24 vaults, excavation in a new easement developed for this project, backfill and compaction to site grade elevations, and re-work of existing utilities and landscaping. Five MW of usable power would be installed for use in the near-term; the rest would be available for future needs. The City of Richland would install the additional transformers as needed.
2. To get the electrical service in usable form to EMSL, Pacific Northwest National Laboratory (PNNL) contractors would reconfigure EMSL room 1145, excavating and cutting the walls and floor as necessary to make connections and installing concrete pads for electrical ducts, switchboard cabinets and metering enclosures. Installation would also include the necessary lighting, grounding and heating/cooling equipment to support the electrical service.

In the future, the work scope might also include expansion of the EMSL computer rooms to a graveled area directly south of EMSL room 1145. Refer to the attached map. While this has not been scoped out or determined at this time, it is considered a foreseeable result when the EMSL super computer is upgraded in the future. It is likely that the small EMSL building extension would take the form of a brick façade expansion that matches the existing facility exterior.

This categorical exclusion (CX) would also include those actions foreseeably necessary to the proposal, such as awarding grants and contracts, working with the City of

Richland, providing for material and waste management, excavating and installing utility equipment, panels, receptacles, switchboards, meters, and electrical lines and conduits.

**Cultural Resources Review:**

In accordance with the National Historic Preservation Act, the Washington State Historic Preservation Office (SHPO) and regional tribes were notified on May 11, 2011, of the initiation of the cultural resource review and definition of the Area of Potential Effect. The SHPO concurrence was received on May 17, 2011. No other comments were received. On May 18, tribes were notified of a May 27, 2011 field site visit and invited to participate. To date there have been no responses of interest. The cultural resource report was completed and sent for a 30-day review by the SHPO and tribes on June 16, 2011. A concurrence from the SHPO was received on June 20, 2011. Because the EMSL facility is not eligible for historic status and the surrounding site has been extensively disturbed by utility placements and facility construction, it is not expected that work conducted under this CX would adversely affect sensitive cultural resources.

**Biological Resources Review:**

The EMSL site consists of lawn and other landscaping, and it is not expected that the proposed action would adversely affect native plant and animal species in the vicinity. The proposed activities would occur outside of the active bird nesting season. Please refer to the attached biological resource review for additional details.

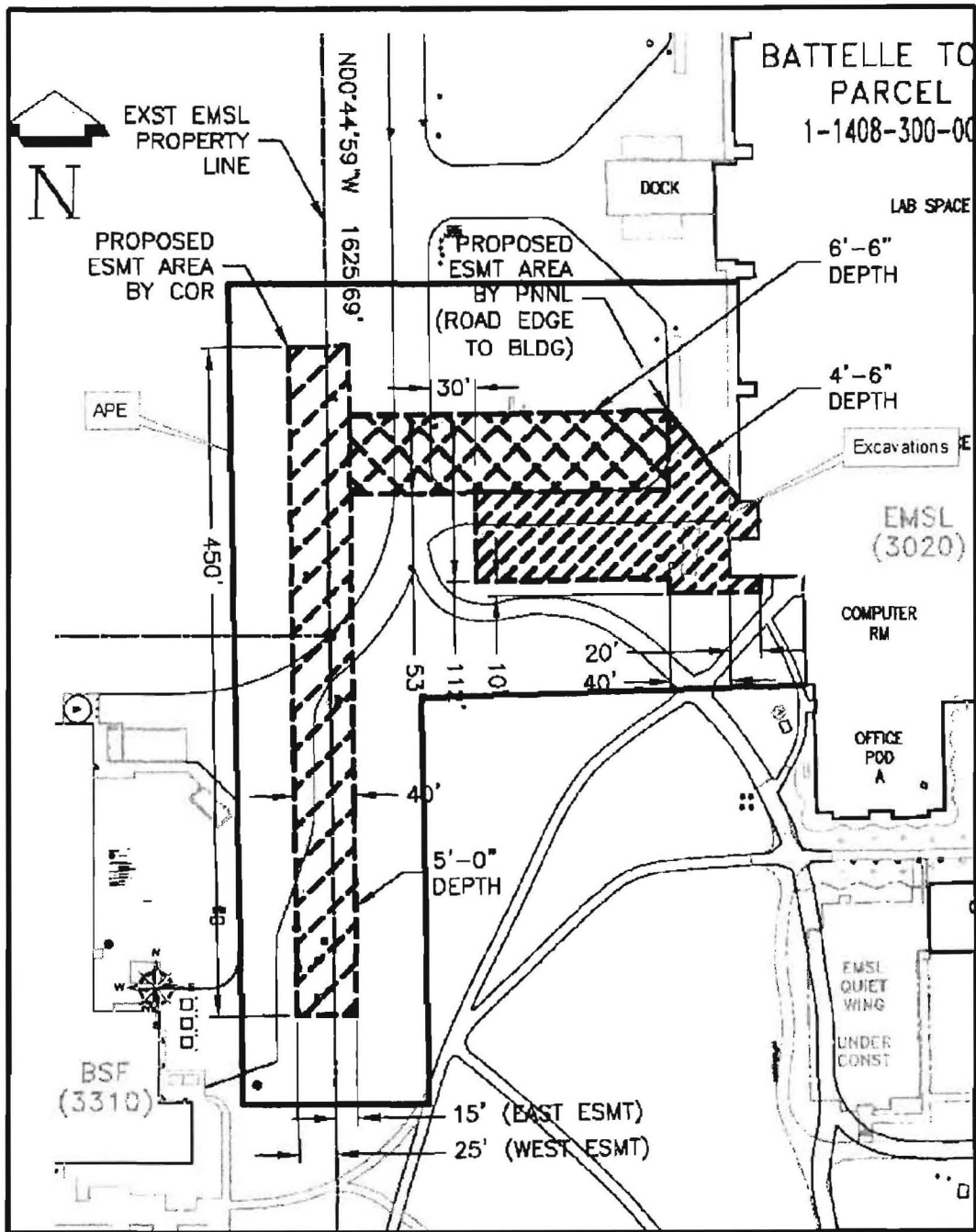
**Categorical Exclusion to Be Applied:**

Because the proposed action is to provide enhanced electrical service to EMSL, the following CX, as listed in the DOE National Environmental Policy Act (NEPA) implementing procedures, 10 CFR 1021, would apply:

- B1.7 Acquisition, installation, operation, and removal of communication systems, data processing equipment, and similar electronic equipment.

**Eligibility Criteria:**

The proposed activity meets the eligibility criteria of 10 CFR 1021.410(b) because the proposed action does not have any extraordinary circumstances that might affect the significance of the environmental effects, is not directly connected [40 CFR 1508.25(a)(1)] to other actions with potentially significant impacts, is not directly related to other proposed actions with cumulatively significant impacts [40 CFR 1508.25(a)(2)], and is not an interim action precluded by 10 CFR 1021.211.



**Figure 1.** Engineer's drawing of project area with proposed excavations illustrated in diagonal hatch-marks

The “Integral Elements” of 10 CFR 1021 are satisfied as discussed below:

<b>INTEGRAL ELEMENTS, 10 CFR 1021, SUBPART D, APPENDIX B (1)-(4)</b>	
<b>WOULD THE PROPOSED ACTION:</b>	<b>EVALUATION:</b>
Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health?	The proposed action would not threaten a violation of regulations or DOE or executive orders.
Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities?	No waste management facilities would be constructed under this CX. Any wastes would be managed in accordance with applicable regulations.
Disturb hazardous substances, pollutants, or contaminants that preexist in the environment such that there would be uncontrolled or unpermitted releases?	No preexisting hazardous substances, pollutants, or contaminants would be disturbed in a manner that results in uncontrolled or unpermitted releases.
Adversely affect environmentally sensitive resources, including, but not limited, to: <ul style="list-style-type: none"> <li>• protected historical/archaeological resources</li> <li>• protected biological resources and habitat</li> <li>• jurisdictional wetlands, 100-year floodplains</li> <li>• Federal- or state-designated parks, wilderness areas, wildlife refuges, or monuments.</li> </ul>	<p>The proposed action would not disturb environmentally sensitive resources. Refer to the “Description of the Proposed Action.”</p> <p>The proposed action would not adversely affect floodplains, wetlands regulated under the Clean Water Act, national monuments or other specially designated areas, prime agricultural lands, or special sources of water.</p>

**Checklist Summarizing Environmental Impacts:** The following checklist summarizes environmental impacts that were considered when preparing this CX determination. Answers to relevant questions are explained in detail in the text following the checklist.

<b>Would the proposed action:</b>		<b>YES</b>	<b>NO</b>
1	Result in more than minimal air impacts?		X
2	Increase offsite radiation dose measurably?		X
3	Require a radiological work permit?		X
4	Cause more than a minor or temporary increase in noise level?		X
5	Discharge any liquids to the environment?	X	
6	Require a Spill Prevention Control and Countermeasures plan?		X
7	Require an excavation permit (e.g., for test pits, wells, utility installation)?	X	
8	Disturb an undeveloped area?		X
9	Use carcinogens, hazardous, or toxic chemicals/materials?	X	
10	Involve hazardous, radioactive, polychlorinated biphenyl, or asbestos waste?	X	
11	Require environmental permits?		X

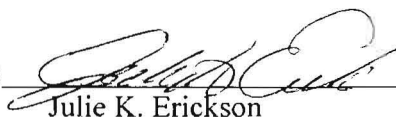
**Explanations:**

5. Excavation to install the new transformers and high voltage switching yard and to modify EMSL room 1145 might require application of water to control fugitive dust.
7. Excavation to install the new transformers and high voltage switching yard and to modify EMSL room 1145 would require an excavation permit. A PNNL excavation permit would be obtained to make sure that subsurface features are identified.
9. The proposed action would use materials such as wire, conduit, conductors and other potentially hazardous materials such as paints, solvents, sealants, etc. These materials would be used and managed appropriately.
10. Proposed construction activities would be expected to result in small quantities of hazardous wastes. If unrecyclable, such wastes would be characterized, handled, packaged, transported, stored, and/or disposed of in existing treatment, storage, and disposal facilities in accordance with applicable regulations.

**Compliance Action:**

I have determined that the proposed action satisfies the DOE NEPA eligibility criteria and integral elements, does not pose extraordinary circumstances, and meets the requirements for the CX referenced above. Therefore, using the authority delegated to me by DOE Order 451.1B, Change 1, I have determined that the proposed action may be categorically excluded from further NEPA review and documentation.

Signature: \_\_\_\_\_



Julie K. Erickson  
PNSO NEPA Compliance Officer

Date: 6-30-11

Attachment – Biological Review

cc: RS Weeks, PNNL