

**U.S. Department of Energy
Naval Reactors Laboratory Field Office**

Knolls Laboratory

National Environmental Policy Act (NEPA) Categorical Exclusion (CX)
Determination Summary Form

KNOLLS LABORATORY STEAM AND CONDENSATE UPGRADE PROJECT

REFERENCE

10 CFR Part 1021, Department of Energy National Environmental Policy Act
Implementing Procedures, Subpart D, Typical Classes of Actions, Appendix B

PROJECT SCOPE DISCUSSION

The purpose of the Knolls Laboratory Steam and Condensate Upgrade Project (Project) is to replace significant portions of the existing steam and condensate distribution system that are beyond their useful service life, vulnerable to service disruptions and in many cases located in inaccessible areas that are difficult to repair. While constructing the new system, the existing system will be decommissioned as necessary and removed where accessible. The scope of work also replaces many of the aged pressure reduction valve stations and condensate return pump units.

The new steam distribution system will be constructed of steel piping with an asbestos-free insulation jacket and will be supported with new steel stanchions as well as trestles for road crossings and rooftop supports for roof routings. The new distribution routing will also require ancillary relocations of some electric and communication cabling due to expected interferences in some locations.

As commonly present in older heating systems, asbestos containing material is known to be present in portions of the existing insulation, gasketing and pipe thread sealants. In addition, some sections of the distribution system are coated with paints that were formulated with lead and polychlorinated biphenyls. These areas will be remediated and/or removed where accessible and will be disposed of in accordance with applicable New York State and Federal regulations.

The scope of work also includes construction of a new roadway between the upper and lower levels of the Site. In addition to increasing efficiency for personnel to traverse between the two levels, the new steam distribution system will be routed along the roadway to facilitate initial construction and improve access for future inspections and maintenance. New grading profiles will be established on either side of the road to maintain appropriate ground sloping, including infrastructure (swales, drains, catch

basins and retention pond) to maintain compliance with stormwater management and discharge requirements.

The project does not violate applicable regulatory requirements, require construction or major expansion of waste handling facilities, result in unpermitted releases of hazardous substances, or adversely affect environmentally sensitive resources, including wetlands. The project does not involve genetically engineered organisms or species. There are no extraordinary circumstances related to the proposed action. The project has not been segmented to meet the definition of a categorical exclusion and is not connected to other actions with potentially significant and/or cumulative impacts.

CONCLUSION

The Knolls Laboratory Steam and Condensate Upgrade Project is categorically excluded from additional NEPA documentation under 10 CFR Part 1021, Subpart D, Appendix B, B1.3, B1.6, B1.13, B1.15, B1.16, B1.17, B1.27, B1.33, B1.34, B3.1, B5.2, B5.4, and B5.5. Specifically, the categorical exclusions that apply are the following:

B1.3 Routine maintenance

Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures (including, but not limited to, pathways, roads, and railroads), vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed, provided that the activities would be conducted in a manner in accordance with applicable requirements. Custodial services are activities to preserve facility appearance, working conditions, and sanitation (such as cleaning, window washing, lawn mowing, trash collection, painting, and snow removal). Routine maintenance activities, corrective (that is, repair), preventive, and predictive, are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Such maintenance may occur as a result of severe weather (such as hurricanes, floods, and tornados), wildfires, and other such events. Routine maintenance may result in replacement to the extent that replacement is in-kind and is not a substantial upgrade or improvement. In-kind replacement includes installation of new components to replace outmoded components, provided that the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility (for example, it does not include the replacement of a reactor vessel near the end of its useful life). Routine maintenance activities include, but are not limited to:

- (a) Repair or replacement of facility equipment, such as lathes, mills, pumps, and presses;
- (b) Door and window repair or replacement;
- (c) Wall, ceiling, or floor repair or replacement;

- (d) Reroofing;
- (e) Plumbing, electrical utility, lighting, and telephone service repair or replacement;
- (f) Routine replacement of high-efficiency particulate air filters;
- (g) Inspection and/or treatment of currently installed utility poles;
- (h) Repair of road embankments;
- (i) Repair or replacement of fire protection sprinkler systems;
- (j) Road and parking area resurfacing, including construction of temporary access to facilitate resurfacing, and scraping and grading of unpaved surfaces;
- (k) Erosion control and soil stabilization measures (such as reseeding, gabions, grading, and revegetation);
- (l) Surveillance and maintenance of surplus facilities in accordance with DOE Order 435.1, "Radioactive Waste Management", or its successor;
- (m) Repair and maintenance of transmission facilities, such as replacement of conductors of the same nominal voltage, poles, circuit breakers, transformers, capacitors, crossarms, insulators, and downed powerlines, in accordance, where appropriate, with 40 CFR part 761 (Polychlorinated Biphenyls Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions) or its successor;
- (n) Routine testing and calibration of facility components, subsystems, or portable equipment (such as control valves, in-core monitoring devices, transformers, capacitors, monitoring wells, lysimeters, weather stations, and flumes);
- (o) Routine decontamination of the surfaces of equipment, rooms, hot cells, or other interior surfaces of buildings (by such activities as wiping with rags, using strippable latex, and minor vacuuming), and removal of contaminated intact equipment and other material (not including spent nuclear fuel or special nuclear material in nuclear reactors); and
- (p) Removal of debris.

B1.6 *Tanks and equipment to control runoff and spills*

Installation or modification of retention tanks or small (normally under one acre) basins and associated piping and pumps for existing operations to control runoff or spills (such as under 40 CFR part 112). Modifications include, but are not limited to, installing liners or covers. (See also B1.33 of this appendix)

B1.13 *Pathways, short access roads, and rail lines*

Construction, acquisition, and relocation, consistent with applicable right-of-way conditions and approved land use or transportation improvement plans, of pedestrian walkways and trails, bicycle paths, small outdoor fitness areas, and short access roads and rail lines (such as branch and spur lines).

B1.15 Support buildings

Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities, such as activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.4, B6.5, B6.6, and B6.10 of this appendix.

B1.16 Asbestos removal

Removal of asbestos-containing materials from buildings in accordance with applicable requirements (such as 40 CFR part 61, "National Emission Standards for Hazardous Air Pollutants"; 40 CFR part 763, "Asbestos"; 29 CFR part 1910, subpart I, "Personal Protective Equipment"; and 29 CFR part 1926, "Safety and Health Regulations for Construction"; and appropriate state and local requirements, including certification of removal contractors and technicians).

B1.17 Polychlorinated biphenyl removal

Removal of polychlorinated biphenyl (PCB)-containing items (including, but not limited to, transformers and capacitors), PCB-containing oils flushed from transformers, PCB-flushing solutions, and PCB-containing spill materials from buildings or other aboveground locations in accordance with applicable requirements (such as 40 CFR part 761).

B1.27 Disconnection of utilities

Activities that are required for the disconnection of utility services (including, but not limited to, water, steam, telecommunications, and electrical power) after it has been determined that the continued operation of these systems is not needed for safety.

B1.33 Stormwater runoff control

Design, construction, and operation of control practices to reduce stormwater runoff and maintain natural hydrology. Activities include, but are not limited to, those that reduce impervious surfaces (such as vegetative practices and use of porous pavements), best management practices (such as silt fences, straw

wattles, and fiber rolls), and use of green infrastructure or other low impact development practices (such as cisterns and green roofs).

B1.34 Lead-based paint containment, removal, and disposal

Containment, removal, and disposal of lead-based paint in accordance with applicable requirements (such as provisions relating to the certification of removal contractors and technicians at 40 CFR part 745, "Lead-Based Paint Poisoning Prevention In Certain Residential Structures").

B3.1 Site characterization and environmental monitoring

Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to:

- (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing;
- (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools);
- (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells;
- (d) Aquifer and underground reservoir response testing;
- (e) Installation and operation of ambient air monitoring equipment;
- (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes);
- (g) Sampling and characterization of water effluents, air emissions, or solid waste streams;
- (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources);
- (i) Sampling of flora or fauna; and

- (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

B5.2 *Modifications to pumps and piping*

Modifications to existing pump and piping configurations (including, but not limited to, manifolds, metering systems, and other instrumentation on such configurations conveying materials such as air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water). Covered modifications would not have the potential to cause significant changes to design process flow rates or permitted air emissions.


B5.4 *Repair or replacement of pipelines*

Repair, replacement, upgrading, rebuilding, or minor relocation of pipelines within existing rights-of-way, provided that the actions are in accordance with applicable requirements (such as Army Corps of Engineers permits under section 404 of the Clean Water Act). Pipelines may convey materials including, but not limited to, air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water.

B5.5 *Short pipeline segments*

Construction and subsequent operation of short (generally less than 20 miles in length) pipeline segments conveying materials (such as air, brine, carbon dioxide, geothermal system fluids, hydrogen gas, natural gas, nitrogen gas, oil, produced water, steam, and water) between existing source facilities and existing receiving facilities (such as facilities for use, reuse, transportation, storage, and refining), provided that the pipeline segments are within previously disturbed or developed rights-of-way.

NRLFO
Approval:

 for

D. A. Delwiche

Date: April 20, 2022

CX Determination Date