



U.S. Department of Energy Categorical Exclusion Determination Form

<u>Proposed Action Title</u>: Y12-NEPA-004-R&D, Rev 0, Analytical Laboratory and Research and Development (R&D) Activities Conducted by the Analytical Chemistry and Y-12 Development Organization, CY 2022 to CY 2024.

<u>Program or Field Office</u>: NNSA Production Office - Y-12 National Security Complex (Y-12) and other NNSA-owned and contractor operated facilities and ancillary areas associated with Y-12, but does not apply to the Pantex Plant

<u>Location(s)</u> (City/County/State): Oak Ridge / Anderson and Roane Counties / Tennessee

Proposed Action Description:

National Nuclear Security Administration's proposed action is to perform the necessary and routine analytical laboratory operation, research and development (R&D) activities, and pilot scale demonstration actions to meet NNSA's missions at the Y-12 National Security Complex (Y-12). This Umbrella Categorical Exclusion Determination (UCXD) comprises the **recurring**, **routine**, **and necessary** analytical services and research and development (R&D) activities conducted by the Analytical Chemistry and Y-12 Development Organization. Additional details are documented in NEPA Review Form "Y12-NEPA-0621-004, Rev 0". The proposed action covers activities and actions performed at Y-12, 113-C Union Valley Rd, 103 Palladium Way, and 350 Centrifuge Drive for calendar year (CY) 2022 thru CY 2024. **Proposed actions NOT covered under this UCXD** include, capital asset projects conducted under DOE O 413.3b, *Programs and Project Management for the Acquisition of Capital Assets*. This single categorical exclusion determination (i.e. UCXD) has considered the aggregate impacts of the proposed action, as authorized by §1021.410(f), and documented in the associated NEPA Review form.

The scope of this UCXD include general laboratory and R&D operations, as well as routine, corrective, preventive, and predictive maintenance activities on laboratory equipment, instrumentation, and R&D facility components (e.g. electrical and HVAC) and prototype (pilot scale) equipment, such as presses, rolling mills, tanks, ultrasonic cleaners, furnaces, humidifiers, extruders, grinders, dust collectors, pumps, etc.. Such actions are performed by the Analytical Chemistry and Y-12 Development Organization, and not maintained by the Y-12 Infrastructure Organization. Such activities would include the fabrication, modification, installation, repair, replacement, test and checkout, and operation of:

- Building equipment: electrical system utilities, hoist, lifts, cranes, tanks, water and instrument air system utilities, security systems, and Heating, Ventilating, and Air-conditioning (HVAC) systems (including lab hoods, gloveboxes, and exhaust systems);
- Analytical instrumentation, analytical and sample preparation equipment, material processing equipment (pulverizers, blenders, baths) bench-top equipment, ovens and furnaces, temperature/humidity control equipment, and refrigerators/freezers;
- Fabricating equipment: mills, grinders, dust collectors, polishers, saws, shears, shredders, lathes, presses, and wire drawing:
- R&D production prototype equipment (e.g. ovens, furnaces, extruders, molders, wire drawing, lathes, mills, presses, etc.):
- Other tooling or machining equipment, welding, and brazing;
- Minor building modification of interior surfaces (e.g. walls, windows, doors, ceiling, etc.).

These activities would be performed in accordance with applicable laws, regulations, permits, and stipulations and controls as stated in Y12-NEPA-0621-004, Rev 0. Documentation of NEPA reviews for individual projects/programs/activities will provide greater detail, state the applied control/stipulation, and will be tiered from the appropriate Categorical Exclusion Determination.

Any proposed maintenance action must be considered: 1) routine in nature; 2) preventive, predictive, or corrective maintenance to preserve infrastructure, including roads, right-of-ways, vehicles, building structures, and equipment; 3) a custodial service to preserve facilities appearance, working conditions, and sanitation; 4) an action to maintain the structure/infrastructure/equipment in a condition suitable for a facility to be used for its intended purpose; and 5) an in kind replacement, such that it is a "like for like replacement" and is not considered a substantial upgrade or improvement, but replaces outmoded components.

Various types of wastes would be generated as a result of performing the above-listed actions due to the missions of the organization; however, these wastes are typically generated and disposed of in existing facilities according to established regulations and procedures.

Submit by E-mail



U.S. Department of Energy Categorical Exclusion Determination Form

Solid and liquid waste of any type generated during analytical and R&D operations would require a Waste Management Plan and be disposed according to well-defined and established procedures addressing each characteristic waste stream (See Y12-NEPA--006, rev 0, Waste Management, Waste Minimization, Energy Conservation, Sustainability, and Pollution Prevention Activities).

The proposed analytical services and development support actions that would take place on the Oak Ridge Reservation (ORR) have been reviewed in accordance with the Cultural Resource Management Plan (CRMP) or applicable sections in a Programmatic Agreement and would not result in an adverse effect to historic properties included or eligible for inclusion in the National Register of Historic Places (National Register). If the proposed ORR actions would have an adverse effect on properties included or eligible for inclusion in the National Register, DOE would consult with the State Historic Preservation Officer (SHPO) and initiate actions specified in procedures set forth in the Advisory Council's regulations in 36 CFR Part 800.

To ensure that sensitive resources are protected, existing maps and surveys/studies on threatened and endangered species, wetlands and floodplains, and historically sensitive areas would be used to locate these areas. In addition, personnel responsible for identifying these resources would be consulted and, if warranted, additional surveys and walkovers would be conducted to confirm or update available information.

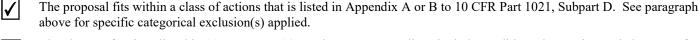
Although an action might fall under the category of "analytical services and development support actions," a separate NEPA review would be performed and documented should the action or aggregate impacts of the action have the potential to result in an unusual or significant impact to the environment.

Categorical Exclusion(s) Applied:

- B3.6, Small-scale research and development, laboratory operations, and pilot projects
- **B1.3,** Routine maintenance
- **B1.4,** Air conditioning systems for existing equipment
- **B1.7**, Electronic equipment
- **B1.16**, Asbestos removal
- B1.17, Polychlorinated biphenyl (PCB) removal
- **B1.27,** Disconnection of utilities
- **B1.28**, Placing a facility in an environmentally safe condition
- **B1.31**, Installation or relocation of machinery and equipment
- **B2.1**, Workplace enhancements
- **B2.2**, Building and equipment instrumentation
- **B2.5**, Facility safety and environmental improvement
- B2.3, Personnel safety and health equipment
- **B4.10,** Removal of electrical transmissions facilities
- **B4.11**, Electric power substation and interconnection facilities
- **B5.4**, Repair or replacement of pipelines
- **B5.2**, Modifications to pumps and piping

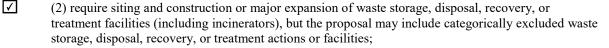
For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of <u>10 CFR Part 1021</u>.

Regulatory Requirements in 10 CFR 1021.410(b):



The classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B include conditions that are integral elements of the class of actions which must be satisfied in order to determine that a proposal is categorically excluded under Appendix B. Specifically, a proposal must be one that would not:

| \checkmark | (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, |
|--------------|---|
| | safety, and health, or similar requirements of DOE or Executive Orders: |





 $\overline{\mathsf{V}}$

 \checkmark

U.S. Department of Energy

| | _ | _ | - |
|-------------|-----------|---------------|------|
| Categorical | Exclusion | Determination | Form |

| ✓ | (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: | | | | |
| | 7 | architectural significance recognized Indian tribe, | es, buildings, structures, and ob e designated by a Federal, state or Native Hawaiian organizati e National Register of Historic | e, or local government, Feder on, or property determined to | ally |
| | ✓ | habitat) or Federally-pro state-listed or state-prop protected marine mamm Magnuson-Stevens Fish | ntened or endangered species of oposed or candidate species or osed endangered or threatened als and Essential Fish Habitatery Conservation and Manager as the Bald and Golden Eagle I | their habitat (Endangered Spo species or their habitat; Fede (Marine Mammal Protection ment Act); and otherwise Fed | ecies Act); erally- Act; lerally- |
| | V | | tlands (as defined in 10 CFR 10 ental Review Requirements: De | | odplain |
| | ✓ | areas, national parks, nat | al designation such as Federall ional monuments, national nate e refuges, scenic areas (such as and marine sanctuaries; | ural landmarks, wild and scen | nic rivers, |
| | V | | land, or other farmland of state and Protection Policy Act: Defi | | defined at |
| | \checkmark | | vater (such as sole-source aquit that are vital in a region); and | - | is, and |
| | / | (vii) Tundra, coral reefs, | or rain forests; or | | |
| ✓ | weeds design accord | , or invasive species, unless ed and operated to prevent | organisms, synthetic biology, is the proposed activity would be unauthorized release into the or rements, such as the Departme nal Institute of Health. | be contained or confined in a environment and conducted in | manner n |
| environmenta proposals, ind | al effects cluding, ects or e | s of the proposal. Extraord but not limited to, scientifi ffects involving unique or u | d to the proposal that may affect inary circumstances are unique c controversy about the enviro unknown risks; and unresolved | e situations presented by spec nmental effects of the propos | sal; |
| a proposal is scope of a pro connected to with individu | broken oposal mother achaily insi | down into small parts in ord nust include the considerati- tions with potentially signi- gnificant but cumulatively | e definition of a categorical ex der to avoid the appearance of on of connected and cumulative ficant impacts (40 CFR 1508.2 significant impacts (40 CFR 1 ning limitations on actions dur | significance of the total action reactions, that is, the proposa (25(a)(1)), is not related to oth 508.27(b)(7)), and is not predict that is the proposal state of the control of the cont | n. The al is not er actions |
| Environmental Policy | Act Co gulatory | mpliance Program), I have | ompliance Officer (as authoriz determined that the proposed a ve are met, and the proposed a | action fits within the specifie | d class(es) |
| NEPA Compliance O | | | | Date Determined: | 1 |
| Chloe L. | XΗ | Digitally signed by Chloe L. Hutchison | | 3/22/22 | |
| Hutchison | | Date: 2022.03.22 10:46:04 04'00' | | | J |