

DOE-ID NEPA CX DETERMINATION

SECTION A. Project Title: The eVINCI Micro Reactor Risk Reduction Project

SECTION B. Project Description

The Westinghouse Electric Company, in collaboration with the Idaho National Laboratory, Texas A&M University, waste and Los Alamos National Laboratory, proposes to conduct research and development activities to support conceptual design for a micro reactor.

This development program will be carried out as a joint effort between Westinghouse, INL and LANL. Westinghouse will manufacture hydride and hydride container materials. Westinghouse will also conduct hydrogen diffusion testing of the container materials. LANL will conduct hydrogen diffusion testing of container materials and cross lab comparisons between Westinghouse and LANL will accelerate development timelines. INL will be responsible for irradiated materials testing at the Advanced Test Reactor (ATR) or at the Massachusetts Institute of Technology (MIT).

SECTION C. Environmental Aspects / Potential Sources of Impact

Westinghouse has adequate storage, handling, and disposal plans in place to manage hazardous, universal, and non-hazardous waste.

SECTION D. Determine the Level of Environmental Review (or Documentation) and Reference(s): Identify the applicable categorical exclusion from 10 CFR 1021, Appendix B, give the appropriate justification, and the approval date.

Note: For Categorical Exclusions (CXs) the proposed action must not: 1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, including requirements of DOE orders; 2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities; 3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; 4) adversely affect environmentally sensitive resources. In addition, no extraordinary circumstances related to the proposal exist which would affect the significance of the action, and the action is not "connected" nor "related" (40 CFR 1508.25(a)(1) and (2), respectively) to other actions with potentially or cumulatively significant impacts.

References: B3.6 Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial development.

Justification: The activity consists of research and development activities to support an advanced nuclear reactor design.

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) Yes No

Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on 2/11/2021