DOE-ID NEPA CX DETERMINATION

CX Posting No.: DOE-ID-17-030

SECTION A. Project Title: Ultrasonic Sensors for TREAT Fuel Condition Measurement and Monitoring – Pacific Northwest National Laboratory

SECTION B. Project Description

Pacific Northwest National Laboratory (PNNL), in collaboration with Idaho National Laboratory, proposes to design an ultrasonic sensor and associated instrumentation for irradiation testing and deployment at the Transient Reactor Test Facility (TREAT) in support of transient testing of fresh and pre-irradiated nuclear fuel samples. The ultrasonic sensor will provide a new measurement capability for use in the TREAT facility for in-situ characterization of fuel pin deformation.

SECTION C. Environmental Aspects / Potential Sources of Impact

PNNL and INL have procedures in place to handle any waste that will be generated through this project. The action would not create additional environmental impacts above those already permitted at the facilities.

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 design and construction of a sensor to address research limitations of current dimensional measurements in transient tests through an ultrasonic sensor.

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 06/29/2017