

DOE-ID NEPA CX DETERMINATION

SECTION A. Project Title: Development of a Research and Education Facility for Evaluation of Environmental Degradation of Advanced Nuclear Materials in Simulated LWR Conditions – University of Idaho

SECTION B. Project Description

The University of Idaho proposes to a) upgrade the existing static autoclave system in order to simulate the light water reactor conditions without contaminating the high temperature waster with corrosion products; b) install a rotating a cylinder system in the autoclave to study the flow accelerated corrosion of nuclear components; c) carry out numerous corrosion tests on alloys and concrete samples under simulated LWR environments.

SECTION C. Environmental Aspects / Potential Sources of Impact

Chemical Use/Storage – It is a possibility that water chemistry may need to be changed during some experiments. Some common chemical used may be needed. There is established university rules/procedures on how to handle chemicals and their storage. Environmental Health and Safety of the University of Idaho oversees the process for compliance.

Chemical Waste Disposal – After the useful shelf-life of the chemicals, residual chemicals will be disposed of, however, the chemical waste will be stored properly until they are picked by the UI-EHS for proper disposal.

Discharge of Wastewater – It is highly likely that wastewater will be produced. After testing, the contaminated water will be securely stored in labelled containers until UI-EHS picks it up.

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 purchasing equipment and performing corrosion research for educational research purposes.

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

Approved by Jack Depperschmidt, DOE-ID NEPA Compliance Officer on 04/10/2015