

# DOE-ID NEPA CX DETERMINATION

**SECTION A. Project Title: Toward a Longer-Life Core: Thermal Hydraulic CFD Simulations and Experimental Investigation of Deformed Fuel Assemblies – AREVA Federal Services**

**SECTION B. Project Description**

AREVA will produce detailed experimental data sets and numerical benchmark calculations for a beginning-of-life (non-deformed) and end-of-life (deformed) wire-wrapped fuel assembly for use in validating CFD modeling techniques. This will entail constructing two 61 pin wire-wrapped test assemblies and testing them in existing facilities as well as computer modeling work.

**SECTION C. Environmental Aspects / Potential Sources of Impact**

The project will not generate radiological or chemical wastes. The action will not create additional environmental impacts above those already occurring 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 R&D to construct and test wire-wrapped fuel assemblies at existing facilities as well as computer simulations.

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 11/10/2014