

DOE-ID NEPA CX DETERMINATION

SECTION A. Project Title: Novel Dissimilar Joints Between Alloy 800H and 2.25%Cr and 1%Mo Steel – The Pennsylvania State University

SECTION B. Project Description

The Pennsylvania State University proposes to undertake an integrated experimental and theoretical research program to develop, fabricate, and test highly engineered dissimilar metal weld joints between 2.25Cr-1 Mo ferritic steels and an 800-H nickel base alloys. The projects will also generate, evaluate, and document data on welding procedures, joint structure and properties that will be helpful for the initiation of the ASME code case for the eventual code qualification of the AM fabricated dissimilar metal joints.

SECTION C. Environmental Aspects / Potential Sources of Impact

The action will not create additional environmental impacts above those already occurring at the university. The University has all the necessary processes and procedures in place to manage and dispose of all waste streams.

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 university scale research aimed at investigating the performance of dissimilar metal joints.

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 09/10/2014