DOE-ID NEPA CX DETERMINATION

CX Posting No.: DOE-ID-14-067

SECTION A. Project Title: Functionally Gradient Transition Joint for Dissimilar Metal Welding using Plasma Arc Lamps–MesoCoat, Inc.

SECTION B. Project Description

MesoCoat, Inc. will conduct research on an advanced joining technique (plasma arc lamp process) to improve properties at the joint, such as strength, irradiation resistance, corrosion resistance, and creep as well as to control and understand residual stress, heat affected zones, and/or phase stability during joining.

SECTION C. Environmental Aspects / Potential Sources of Impact

MesoCoats, Inc will use small quantities of chemicals. All chemicals will be stored in appropriate acid storage cabinets and will be used in fume hoods with an average face velocity of 100 ft/min per OSHA CFR Part 1910.1450 or in appropriate engineered areas. Wastes will be disposed of using an EPA certified waste disposal collector (MesoCoat uses ENVIROSERV).

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 R&D using the plasma arc lamp process to develop an advanced jointing technique.

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 08/28/2014