

SECTION A. Project Title: Nuclear Fabrication Consortium**SECTION B. Project Description**

The mission of the NFC will be accomplished through both public and private funding. The list below outlines the programs that have identified for initiation under the initial DOE funding. Additional programs are envisioned and will be proposed, subject to any applicable budget constraints, to DOE-NE as they become known to EWI, the NFC, and DOE.

1. Automation of Advanced Non-Destructive Evaluation (NDE) Technologies

The objective of the first phase of this project is to improve the reliability of NDE methods by increasing the automation content.

2. Advanced Laser Technology

The objective is to identify laser applications that offer significant productivity gains over the current processes being used, and create laser demonstration pieces that illustrate the suitability of laser's for nuclear construction applications.

3. State-of-the-Art Fabrication Technology Survey

The object is to provide the nuclear industry with the understanding required to select new joining processes to validate and codify for nuclear construction applications.

4. NFC Operations and Management

The objective of this program is to oversee and manage all NFC activities, including but not limited to center start-up, rapid response technical issues, industry outreach, develop new initiatives for NFC members, support DOE-NE meetings, etc.

5. Nuclear Supplier Development

The objective is to develop and deploy a workshop series that will enable the nuclear industry to better understand what is required to be a nuclear supplier.

6. Gen IV Fabrication Centric Roadmap

The objective of this program is to develop a succinct document that will allow current manufacturers to position themselves for Gen III(+) fabrication using current and near term fabrication technologies and simultaneously keeping their eyes focused on what will be required for Gen VI facilities.

7. Regulatory Review

The objective is to work with industry to create a global review and data dissemination program that will result in a series of white papers for submission to NRC for Regulatory Guideline improvements and abandonment.

8. Real Time Weld Quality Monitoring

The objective is to work with existing technologies to advance weld quality monitoring and closed loop feedback for welding systems and techniques typically used in the nuclear industry.

9. Stress Corrosion Cracking (SCC) Mitigation and Monitoring

The objective is to develop a new approach for understanding and monitoring the fundamental mechanisms that cause SCC.

10. Fabricated Forgings

The objective of this program is to map out the current landscape and what options/implications would enable or prohibit fabricated heads.

11. Techniques for Modularization from other Industries

The objective of this program is to work with EWI members and review existing public domain literature to baseline the availability of existing modularization technologies for potential deployment in the nuclear industry with the focus on not repeating the mistakes already experienced in other industries.

12. ASME RT vs UT in codes and Standards

The objective of this program is to develop a process by which ASME and industry both agree on that will help lessen the discrepancies currently existing between ASME Sections III, IIX and XI.

SECTION C. Environmental Aspects / Potential Sources of Impact

As a research facility dedicated to welding and joining, we do perform welding work. Welding fumes can be considered harmful. EWI has both fixed and portable welding fume extraction systems in place for controlling the air pollutants.

Small quantities of chemicals are used in support of laboratory work (etching metallographic samples, adhesives, etc). All laboratory personnel are trained in the handling of toxic materials. Materials to be disposed are stored separately and labeled. EWI regularly works with the local solid waste authority and licensed contractors to dispose of any toxic wastes that may be generated through the normal course of business. EWI complies with all Federal, State, and Local occupational, safety, health and environmental requirements.

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: Categorical Exclusions: A9 Information Gathering..., A11 Technical advise and planning to international, national, state, and local organizations, and B3.6 Siting/construction/operation/decommissioning of facilities for bench scale research...

Justification: Items 2, 8, 10, and 11 in the project description are bench scale research. The remainder of the items pertain to gathering information and advising.

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 April 16, 2010