PMC-EF2a
(2.04.02)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: Delphi Automotive Systems, LLC **STATE:** NY

PROJECT TITLE : High Metal Removal Rate Process for Machining Difficult Materials

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-SOL-0000560	DE-EE0005752	GFO-0005752-001	EE5752

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:
Description:

A9 Information gathering, analysis, and dissemination	Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
B3.6 Small-scale research and development, laboratory operations, and pilot projects	Siting, construction, modification, operation, and decommissioning of facilities for smallscale 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 deployment.

Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Delphi Automotive Systems, LLC to perform laboratory research and development activities to advance the existing laser machining technology for difficult geometries.

Delphi would design and develop a laser-based manufacturing process for gasoline direct injection fuel injector orifices. Delphi would develop hardware that integrates the faster laser and would apply it to production line systems, which will reduce manufacturing cycle times and energy consumption. DOE funding would be used for design and build of an ultra-fast laser, the design and fabrication of a laser scanning head, the configuration of an existing work station, precision work and automation, development of a laser chassis and performance validation testing.

Work would be performed at the following locations:

Arnprior Rapid Manufacturing Solutions:
Development laboratory work would take place at Arnprior, which is located at 2400 Mt. Read Blvd, Rochester, New York 14615. This is a large industrial complex and is in a heavily developed area. Development work would be done using Class IV laser systems that operate at a wave length of 1550 nanometers. Laser systems would be registered with the New York State Department of Health.

Arnprior has completed an R&D questionnaire addressing the protocols for laboratory safety, risk management, chemical handling and waste disposal. The laboratory would comply with standard safety procedures and all processes and procedures are monitored by Arnprior personnel. All handling and disposal of gases and chemicals would be executed by Arnprior personnel who comply with appropriate regulations of OSHA. Refrigerated nitrogen gas would be stored in returnable welded stainless steel canisters. Stoddard solvent M52625 would be used for injector calibration and measurement and would be stored in designated areas labeled hazardous waste and disposed of through a certified third party. Arnprior has the appropriate permits in place including Air Facility Registration ID#8-2614-00840/00001, and would not need to acquire additional permits.

Delphi Automotive Systems:

Test support would take place at Delphi Automotive Systems, located at 5500 West Henrietta Road, West Henrietta, New York 14586 (43.0425 Lat,-77.653889 Long). This is a medium sized facility located in a commercial and

residential area.

Delphi completed an R&D questionnaire addressing the protocols for laboratory safety, risk management, chemical handling and waste disposal. Delphi would comply with standard laboratory safety procedures and all processes and procedures are monitored by Delphi Environmental Health and Safety (EHS) personnel. All handling and disposal of gases and chemicals would be executed by EHS personnel who comply with appropriate regulations of OSHA. The laboratory general safety procedures would be followed. Delphi has the appropriate permits in place including State Facility Air Permit #8-2632-00138/00006, and no additional permits would be required.

Microlution:

Development laboratory work with the laser would take place at Microlution, located at 6620 W. Dakin St, Chicago, Illinois 60634. This 11,000 sq. ft. facility is located on a commercial block within a residential area.
Microlution completed an R&D questionnaire addressing the protocols for laboratory safety, risk management, chemical handling and waste disposal. Microlution would comply with standard laboratory safety procedures and all processes and procedures are monitored by Microlution personnel. All handling and disposal of gases and chemicals would be executed by Microlution personnel who comply with appropriate regulations of OSHA. The laboratory safety procedures would be followed. Current permits for air, water and waste are in place and no additional permits would be required.

Raydiance:

Laboratory work would be completed at Raydiance, Inc. located at 1450 N. McDowell Blvd., Petaluma, California. This 42,000 sq. ft. facility is located in a commercialized area.

Raydiance completed an R&D questionnaire addressing the protocols for laboratory safety, risk management, chemical handling and waste disposal. Raydiance would comply with standard laboratory safety procedures and all processes and procedures are monitored by Raydiance personnel. All handling and disposal of gases and chemicals would be executed by Raydiance personnel who comply with appropriate regulations of OSHA. The laboratory safety procedures would be followed. The recipient would obtain a permit for inert gas storage as the number of cylinders required is expected to increase.

Based on review of proposed project information and the above analysis, DOE has determined the research would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with the actions contained in DOE categorical exclusion A9 "Information gathering, analysis, and dissemination," and B3.6 "small-scale research and development," and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Kelly Daigle 8.24.2012

DOE Share: $3,700,000
Cost Share: $925,000
Total Project Cost: $ 4,625,000

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By Lori Gray /Lori Gray/ Date: 8/27/2012
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required