

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: The University of Tulsa

STATE: OK

PROJECT TITLE : FY26 Congressionally Directed Spending Project: Extreme Material Advancements

Notice of Funding Opportunity Number
DE-EE0012086

Procurement Instrument Number
DE-EE0012086

NEPA Control Number
GFO-0012086-001

CID Number

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

CX, EA, EIS APPENDIX AND NUMBER:

Description:

B1.31 Installation or relocation of machinery and equipment

Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to administer Congressionally Directed Spending to the University of Tulsa (UT) for the advancement of advancement of extreme-environment materials for energy and aerospace applications. The project would include the synthesis of laboratory-scale materials, processing, coating deposition, thermal/mechanical testing of extreme-environment composite materials, and cryogenic testing of composite pressure vessels.

Project tasks, including composite fabrication, channel architecture development, chemical vapor infiltration densification, environmental barrier coating, atomic layer deposition (ALD) and transient liquid phase surface treatments, environmental durability and thermal performance testing, petroleum coke calcination and graphitization, composite fabrication, model and database development, high-heat flux installation and operation, establishing an atmosphere test platform, as well as manufacturing readiness analysis and technoeconomic assessment, all of which would occur at the University of Tulsa in Tulsa, OK. Design efforts, filament-winding fabrication, cryogenic qualification testing, vacuum-jacketed cryogenic test stand construction and commissioning, non-destructive inspections and technical collaboration with the prime recipient would occur at Infinite Technologies in Tulsa, OK.

Project-related hazards would include the potential for thermal burns, laser exposure, inhalation or dermal exposure to fine particulates and precursor chemicals, pressurized-gas hazards, cryogenic burns/frostbite, asphyxiation risk from displaced oxygen in enclosed spaces, and pressure-vessel failure during proto-qualification cycling. All such activities would occur within existing, dedicated/purpose-built laboratories/facilities and would pose no risk to the public. Hazardous materials would be managed in accordance with federal, state, and local environmental regulations and all existing environmental, health, and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and internal assessments. Additional policies and procedures would be implemented as necessary as new health and safety risks are identified.

No ground disturbances activities, outdoor testing or installations, and no changes to the mission at the existing laboratories/facilities would occur as part of this project. The high heat-flux test platform, furnaces, ALD system, vacuum-jacketed cryogenic test stand, filament-winding manufacturing equipment, and all other purchased project equipment would be installed and operated entirely indoors, within existing, purpose-built laboratories and

facilities. Any and all permits required for the execution of the project at the above-referenced locations would be the responsibility of the recipient.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources that would be considered significant or require DOE to consult with other agencies or stakeholders.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Advanced Materials & Manufacturing Technologies Office
NEPA review completed by Chris Akios, 07/31/2026

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the 'Rationale for Determination' above) fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures.

To fit within the classes of actions listed in Appendix B to 10 CFR Part 1021 or Appendix B of DOE's NEPA Implementing Procedures, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B (4) of Appendix B to 10 CFR Part 1021; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B (5) of Appendix B to 10 CFR Part 1021.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts, is not related to other actions with individually insignificant but cumulatively significant impacts and is not precluded by applicable regulations or procedures concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically
Signed By: Kristin Kerwin
NEPA Compliance Officer

Date: 8/3/2026

FIELD OFFICE MANAGER DETERMINATION

- ☒ Field Office Manager review not required
☐ Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____