

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



RECIPIENT: Via Separations

STATE: MA

PROJECT TITLE: IMPACT: Innovative Membranes for Precise Acid Concentration Treatment

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002804	DE-EE0010834	GFO-0010834-001	GO10834

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:

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Via Separations (Via) for the development of membrane materials for acid purification and concentration. Project tasks include research and development, design, testing, construction, and operation of an acid filtration pilot system. The proposed award would occur over three budget periods (BPs), with Go/No Go decision points between the BPs.

Proposed project activities that would occur at Via Headquarters (HQ) in Watertown, MA, include testing and casting of graphene oxide (GO) formulations into membranes, engineering, construction, and operation of sulfuric acid (H₂SO₄) filtration systems. Chemical modification of GO formulations would occur at Impact Nano in Devens, MA, and casting of membrane formulations onto polymer sheets would occur at the FlexCon Company in Spencer, MA. Additional activities would include membrane element rolling at Mann and Hummel in Goleta, CA, and setting up and operating the acid filtration pilot system at Veolia in Delaware City, DE.

Potential hazards include the use and handling of H₂SO₄, H₂SO₄ mixtures, metals, industrial solvents, and other hazardous materials. Additional hazards include the use of machinery and manufacturing processes at Mann and Hummel. Project activities involving hazardous materials pose no risk to the public. Hazardous materials would be utilized, managed, stored, and disposed of in accordance with applicable federal, state, and local environmental regulation. Existing health, safety, and environmental policies and procedures would be followed at each facility, including personnel training, proper personal protective equipment, engineering controls, monitoring, and internal assessments.

All project activities would be completed in existing, purpose-built facilities that are currently used for the type and scale of activities being proposed. Facility modifications at Via HQ would include installation of electrical supply and ventilation for equipment; ground disturbing activities would occur at Veolia, including installation of a new foundation and equipment for the pilot system. These activities would be within the boundaries of existing facilities; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed activities at any location. No changes in the use, mission, or operation of existing facilities would arise out of this effort. No additional permits or modification of Plug's existing operational permits would be required.

DOE has considered the scale, duration, and nature of the 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 which would be considered significant or require DOE to consult with other agencies or stakeholders.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Industrial Efficiency and Decarbonization Office (IEDO)
NEPA review completed by Brittany White, 6/6/2024

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, 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 10 CFR Part 1021, Subpart D, Appendix B; (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 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

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 (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 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:  _____ Date: 6/10/2024
NEPA Compliance Officer

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: _____ Date: _____
Field Office Manager