



National Environmental Policy Act (NEPA) Determination

Categorical Exclusion

Recipient: Brimstone Energy Inc (Brimstone)

State: TBD (site selection pending)

Project Title: The Deeply Decarbonized Cement Project – Phase 1

Funding Opportunity Announcement Number: DE-FOA-0002936

Award Number: DE-CD0000079

OCED NEPA Control Number: OCED-000079-001-CX

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:

CATEGORICAL EXCLUSION APPENDIX, NUMBER, AND 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.)

B3.1 Site characterization and environmental monitoring: Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to: (a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing; (b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools); (c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone,

well logging, and installation of water-level recording devices in wells; (d) Aquifer and underground reservoir response testing; (e) Installation and operation of ambient air monitoring equipment; (f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes); (g) Sampling and characterization of water effluents, air emissions, or solid waste streams; (h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); (i) Sampling of flora or fauna; and (j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7.

Rationale for Determination:

DOE's Office of Clean Energy Demonstrations (OCED) is proposing to provide funding to Brimstone Energy Inc (Brimstone) in support of their project to construct the first commercial demonstration-scale plant (Commercial Demo) deploying a deeply decarbonized process for producing ordinary portland cement (OPC) and co-products, including supplementary cementitious materials (SCM).

At this time, DOE is proposing to provide funding in support of Brimstone's planning and design and site characterization activities only; those activities are described below. The activities completed in this phase would inform additional DOE NEPA review and a go/no-go decision prior to authorizing federal funding in support of subsequent project phases.

Brimstone Phase 1 activities would include the following:

- Project management and budget related tasks;
- Permitting and NEPA documentation;
- Desktop-based studies, such as developing a 30% front-end engineering design (FEED) study;
- Perform geotechnical work, by drilling using truck- or mobile scale equipment, to sample and characterize potential feedstock to finalize site selection and engineering studies;
- Conduct soil characterization and land surveys to develop civil engineering estimates for the FEED study;
- Complete applicable environmental surveys including but not limited to hydrology (including wetlands), threatened and endangered species, cultural and historic resources, and Phase 1 and 2 site assessments.
- Complete community benefits activities.

DOE would be required to have the proposed site locations for the geotechnical, soil characterization, and survey work prior to beginning. Groundwork, including geotechnical activities and cultural resource surveys, could only occur after OCED's completion of the Section 106 NHPA consultation process. DOE does not anticipate adverse impacts to sensitive resources as a result of the proposed activities.

Consultations (Section 106 NHPA, Section 7 ESA, etc.): All cultural resource identification activities (e.g., archaeological, historic above ground, historic visual assessments) must be completed in accordance with applicable guidelines and standards provided by the State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office (THPO) and the Secretary of the Interior's Identification Standards. Coordination with DOE is required to establish an Area of Potential Effects (APE) and scope of effort (i.e., research design) prior to geotechnical surveys and cultural resource field investigations. DOE will initiate Section 106 consultation prior to geotechnical surveys and cultural resource field investigations in order to support coordination with SHPO/THPO, Tribes, and other Section 106 consulting parties.

☒ 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 1501.9(e)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.1(g)(3)) 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.

☐ DOE has determined that work to be carried out outside of the United States, its territories and possessions is exempt from further review pursuant to Section 5.1.1 of the DOE Final Guidelines for Implementation of Executive Order 12114; "Environmental Effects Abroad of Major Federal Actions."

☒ The proposed action is categorically excluded from further NEPA review.

☐ A portion of the proposed action is categorically excluded from further NEPA review.

Notes: This categorical exclusion applies to those activities listed above. Any changes to the project activities or location are subject to additional NEPA review by DOE and are not authorized for federal funding unless and until the Contracting Officer provides written authorization on those additions or modifications.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

OCED NEPA Compliance Officer Signature:

Date: