

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



RECIPIENT: Ash Grove Cement Company

STATE: KS

PROJECT TITLE : Repurposing Dredged Sediments as an SCM for Producing Low Clinker Factor Cement & Concrete (ReDreSS)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002997	DE-EE0011219	GFO-0011219-001	

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 Ash Grove Cement Company (Ash Grove) to research the potential to repurpose dredged sediments as a supplemental cementitious material (SCM) for low clinker factor cement and concrete production.

The project would aim to treat and use abundantly available dredged clayey sediments, from six confined disposal facilities (CDFs) managed by the US Army Corps of Engineers as a SCM or as a component of ternary blend cements. Ash Grove would utilize and treat sediment for incorporation into cement manufacturing or as a standalone SCM for ready-mix concrete operations.

Dredged material calcination and chemical composition analysis would occur at Ash Grove's Solutions Laboratory in Overland Park, Kansas and at Arizona State University (ASU) Laboratories in Tempe, Arizona. Material calcination and integration into cement products would occur at Ash Grove's Louisville Facility in Louisville, Kentucky. While the CDF locations where the dredged sediment would be drawn from are currently unknown, the material would come from facilities within the upper Mississippi River. These CDFs are within the geographic purview of the US Army Corps of Engineers Omaha and St. Paul District's Civil Works programs. The project would occur over the course of three Budget Periods (BPs), spanning three years.

During BP1, and under Task 2 of the project award, dredged material from the six US Army Corps of Engineers-managed CDFs would be evaluated and compared at the three project study locations to understand chemical and mineral compositions, organic contaminant levels and data accuracy between the industry and university laboratories. Since the six CDFs have not been identified at this time, BP1, Task 2 and all subsequent project tasks would require further NEPA review once the location becomes identified. Therefore, BP1 Tasks 2 through 5; BP2, Task 6 through 7; and BP3, Tasks 9 through 10 are not included in this NEPA Determination. This NEPA Determination only applies to BP1, Task1 (Subtasks 1.1 and 1.2), which includes Diversity, Equity, Inclusion and Accessibility training and recruitment of early-career researchers and student interns.

The project would involve the field testing and analysis of the dredged materials, which pose a contaminant exposure risk to project staff and facility workers. Internal training and knowledge transfer activities would be employed to minimize hazardous material risks to project-related staff. Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, and

internal assessments. All hazardous materials would be managed in accordance with federal, state, and local environmental regulations.

The transportation of the dredged material associated with this project would contribute to transportation end-use sector emissions. Ash Grove would strive to limit these greenhouse gas emissions by moving dredged materials effectively and efficiently. Budget period one and two testing and evaluation of dredged sediment material occurring at the Ash Grove Overland Park location would proceed under strict laboratory controls and procedures. Emissions associated with the sediment testing would be expected to be at de minimis levels and well within baseline laboratory levels. Should laboratory results suggest otherwise, Ash Grove would take steps to ensure emissions remain within permitted levels.

Ground disturbing activities would include the removal of dredged material from six CDFs along the Upper Mississippi River. There would be no ground disturbance activities expected at the three project facilities.

All required operating permits (including Title V, water use, and sewer discharge) would be obtained and verified on site by DOE's Independent Engineer. 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 within the scope of this current NEPA Determination that would be considered significant or require DOE to consult with other agencies or stakeholders.

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

## NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

- BP1, Task 1, Subtasks 1.1 and 1.2

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

- BP1, Task 2, Subtasks 2.1 through 2.3; Task 3, Subtasks 3.1; Task 4 (no Subtasks); and Task 5, Subtasks 5.1 and 5.2

- BP2, Task 6, Subtasks 6.1 through 6.5; Task 7 (no Subtasks); and Task 8 (no Subtasks)

- BP3, Task 9 (no Subtasks) and Task 10, Subtasks 10.1 and 10.2

Include the following condition in the financial assistance agreement:

Any and all permits required for the execution of the project at the above-referenced locations would be the responsibility of the recipient and must be attained before the permit-pertinent work can commence.

The recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding with the permit-pertinent efforts. The recipient must receive notification of approval from the DOE. If the recipient moves forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of acquisition of any required permits, the recipient is doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Notes:

Industrial Efficiency & Decarbonization Office

This NEPA Determination requires legal review of the tailored NEPA provision.

NEPA review completed by Chris Akios, 09/30/2024

## 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.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:  \_\_\_\_\_ Date: 10/1/2024  
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