



U.S. Department of Energy

Categorical Exclusion Determination Form

Submit by E-mail

Proposed Action Title: University of Alaska Fairbanks -- Assessments of Geochemistry, Concentration, and Scalability of REEs Recovery from Seaweeds

Program or Field Office: Advanced Research Projects Agency - Energy

Location(s) (City/County/State): Anchorage, Juneau, and Prince of Wales, Alaska; Santa Barbara, California; Golden, Colorado

Proposed Action Description:

Funding will support small-scale research of the accumulation of potential of rare earth elements in hyperaccumulating native seaweed species. Specifically, the project team will 1) conduct a survey to understand how erosion transports rare earth elements to ocean; 2) collect native seaweed species and conduct biomass tissue chemical composition and polymer analysis; 3) create maps of coastal sites rich in rare earth elements; and 4) develop cultivation guidelines to harvest optimal mineral concentrations. If successful, this project will identify the selection of seaweed species and farm designs for large-scale cultivation and inform the maximum scalability of seaweed farming operations designed to harvest rare earth elements without the environmental impacts of traditional mining operations.

Project activities will be conducted at existing facilities at University of Alaska, Fairbanks (Juneau, AK and Prince of Wales, AK), University of Alaska, Anchorage (Anchorage, AK and Prince of Wales, AK), Seagrove Kelp (Prince of Wales, AK), Alaska Fisheries Development Foundation (Prince of Wales, AK), Ocean Rainforest (Prince of Wales, AK and Santa Barbara, CA) and National Renewable Energy Laboratory (Golden, CO) designed for the applicable activities. Project tasks will be conducted in accordance with established safety and materials/waste management protocols and pursuant to applicable Federal, State, and local regulatory requirements. University of Alaska, Fairbanks has not obtained all necessary permits and approvals applicable to the proposed actions and is prohibited from commencing project work at Milestone 1.2.1 and subsequent milestones until such permits are obtained. Per the terms of the award, a permits certification and, if necessary, an amended NEPA Determination, are required prior to the conduct of applicable project work.

Categorical Exclusion(s) Applied:

A9 - Information gathering, analysis, and dissemination

B3.6 - Small-scale research and development, laboratory operations, and pilot projects

B3.16 - Research activities in aquatic environments

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal 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 proposal that may affect the significance of the environmental effects of the proposal.

The proposal 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.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer: **GEOFFREY GOODE** Digitally signed by GEOFFREY GOODE
Date: 2024.02.28 09:47:37 -05'00'

Date Determined: