

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



**RECIPIENT:** Kawerak, Inc.

**STATE:** AK

**PROJECT TITLE :** Unaatuq Energy: Geothermal Technology for Pilgrim Hot Springs

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0002317	DE-IE0000164	GFO-0000164-001	GO164

**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:

- |  |  |
|--|--|
| <b>A9 Information gathering, analysis, and dissemination</b>   | 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.)   |
| <b>B3.1 Site characterization and environmental monitoring</b> | 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:

The U.S. Department of Energy (DOE) is proposing to provide funding to Kawerak, Inc. to build a 65kW Organic Rankine Cycle (ORC) binary small-scale power plant (closed loop with only water vapor emissions) from the geothermal resources at Pilgrim Hot Springs. The proposed system would provide electricity and heat to 18 existing buildings on site, reduce dependency on imported diesel fuel, and provide data on feasibility of small-scale geothermal energy for remote applications.

This award would be completed over six Tasks. This NEPA Determination (ND) applies to activities identified in all subtasks of Task 1, subtasks 2.1 and 2.3 of Task 2, and subtasks 6.1, 6.2, and 6.3 of Task 6. It does not apply to activities identified in subtasks 2.2, or 2.4 through 2.7 of Task 2, any subtasks in Task 3, Task 4, Task 5, or subtask 6.4 of Task 6. Information obtained from reviewed activities in Task 1 and Task 2 of the approved Statement of Project Objectives (SOPO) would inform the details and design of the remaining project activities. Currently there is not enough information to complete a review of subtasks 2.2, or 2.4 through 2.7 of Task 2, any subtasks of Task 3, Task 4, Task 5, or subtask 6.4 of Task 6. Once additional assessment and design activities are completed, another NEPA review will be required to assess potential impacts associated with the remaining project activities.

Task 1 includes coordination, administration tasks, kickoff meetings, executing contracts for well testing/ monitoring and project management. Pilgrim Hot Springs has six existing geothermal wells. Wells PS13-2 and PS13-3 would be

tested for injection potential (testing how much water can be pumped into the wells and how much energy is required to do so), while all other wells would be monitored for pressure and temperature data. Data collected would inform the production capability of the proposed production well, PS13-1.

Task 2, subtasks 2.1 and 2.3 activities include engineering design work, 95% design development, permitting, and site inspections/ visits with applicable entities and inspectors.

Task 6, subtasks 6.1 through 6.3 include grant management administration tasks, including reporting, conducting meetings and project reviews which would occur concurrently with all phases of the proposed project.

Air emissions may occur during well testing from the use of vehicles to access the site and potential use of generators used to power well testing equipment. These emissions would not significantly impact air quality as generator and vehicle use would be temporary and intermittent. Project activities would involve hazards associated with routine field work, working with electricity, fuels, and high temperatures. Kawerak, Inc. would observe all applicable health, safety, and environmental regulations. DOE does not anticipate any impacts to resources of concern due to the proposed activities of the project.

## NEPA PROVISION

DOE has made a conditional NEPA determination.

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

Task 1 (all subtasks)  
Task 2 (subtasks 2.1 and 2.3)  
Task 6 (subtasks 6.1, 6.2, and 6.3)

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

Task 2 (subtasks 2.2, 2.4, 2.5, 2.6, and 2.7)  
Task 3 (all subtasks)  
Task 4 (all subtasks)  
Task 5 (all subtasks)  
Task 6 (subtask 6.4)

Notes:

Office of Indian Energy Policy and Programs (OIE)  
NEPA review completed by Amy Lukens, 9/7/2022

## 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:  **Electronically Signed By: Casey Strickland** Date: 9/8/2022  
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