U.S. Department of Energy
Categorical Exclusion Determination Form

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Proposed Action Title: (0470-1517) Donald Danforth Plant Science Center - Center for Enahnced Camelina Oil

Program or Field Office: Advanced Research Projects Agency - Energy

Location(s) (City/County/State): Michigan, Missouri, Montana, Nebraska, New Mexico

Proposed Action Description:
Funding will support development of genetically modified (GM) camelina that grows at an increased yield and produces more seed oil than wild-type camelina for use as a biofuel feedstock.

Proposed work will consist of (1) genetically modifying camelina to improve carbon capture/ assimilation and light utilization, and to redirect carbon flux towards seed oil synthesis, including synthesis of oleic acid; (2) fabricating and testing phenomics chambers used to analyze plant metabolism under varying conditions (e.g. humidity, temperature); (3) growing selected lines of non-GM, wild-type camelina in contained agricultural research fields for baseline analysis ; (4) analyzing the GM camelina plants produced using the phenomics chambers to determine if the genetic modifications were successful; and (5) analyzing GM camelina plants produced using standard laboratory techniques to determine if they meet target milestones for biomass accumulation and seed oil content. This project will not involve field testing with GM plants.

Proposed work involving GM camelina will take place at dedicated indoor laboratory and greenhouse facilities at Donald Danforth Plant Science Center (St. Louis, MO), the U.S. Department of Agriculture's Agricultural Research Service (St. Louis, MO), University of Nebraska - Lincoln (Lincoln, NE), Michigan State University (East Lansing, MI), New Mexico Consortium (Los Alamos, NM), and Montana State University (Bozeman, MT). Confined field testing of non-GM, wild-type camelina will occur at Montana State University (Bozeman, MT). All organizations handling recombinant DNA will receive approval from their Institutional Biosafety Committees prior to beginning work with recombinant DNA molecules.

Categorical Exclusion(s) Applied:

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

B3.8 - Outdoor terrestrial ecological and environmental research

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: Matt Dunne

Date Determined: 12/02/2011