

**West Coast Diesel Emissions Reductions Collaborative
Federal Network for Sustainability**

Federal Agency Biodiesel Collaborative Project Proposal

Submitted by:

National Park Service, Alaska Region

Problem Statement:

Brooks Camp, a remote location in Katmai National Park, utilizes 30,000 gallons of diesel fuel per year for transportation and power generation. Brooks Camp includes a commercial hotel operation, campground, and transportation to the Valley of 10,000 Smokes. The area is accessible only by float plane or boat. All fuel is either brought up through the rapids of the Naknek River and across Naknek Lake and off-loaded, or flown in. The area is in a Class I air shed and response capabilities are severely reduced due to the logistics of the area.

Proposed Actions:

Evaluate the viability, both economically and logistically, of using biodiesel (B100) in lieu of conventional diesel fuel for all facets of Brooks Camp (vehicles, boats, generators) to reduce air emissions and, eliminate fossil fuel spills in a remote, pristine environment. Locally produced biodiesel is the preferred action, so testing biodiesel that has a locally produced ingredient – fish oil. The adjacent Bristol Bay area processes more fish than anywhere in the United States and fish oil is a byproduct of the processing. The initial action would be to field test a B100 biodiesel, preferably out of fish oil, in vehicles and generators. If this is successful, a longer term goal would be to assist in getting a local biodiesel facility in the Bristol Bay area so that the fuel does not have to be transported outside of Alaska for processing.

Partnering Agencies/Groups:

Alaska Energy Authority
Alaska Department of Environmental Conservation
Arctic Energy Technology Development Laboratory (AEDTL)
University of Alaska, Fairbanks

Benefits/Measurements of Success for the Project

O Potential Fossil Fuel Reductions (three years) Gallons: 90,000

- Brooks Camp, Katmai National Park, uses approximately 30,000 gallons of fuel per year for transportation and power generation. Using B100 would eliminate that much fossil fuel in a three year period.

O Potential for Market Transformation

- Demonstrate the use of a locally produced byproduct of the fishing industry (fish oil) into a viable product that can be used in the maritime regions of Alaska. Long-term production cost estimates are competitive with diesel fuel costs.

O Other Savings

- Clean up costs associated with potential fossil fuel spills.
- Long-term competitive prices.

Estimated Costs, with other Possible Funding Sources

- Short Term - \$75,000 for evaluating the results of the tests in various engines – both stationary and mobile.
- Short Term to Medium - \$105,000 per year for a cost differential in fuel costs. The differential cost between conventional diesel fuel and fish oil biodiesel is currently approximately \$3.50 per gallon. The cost should be reduced when a local processing facility is in place.
- Short Term - \$10,000 for a separate storage tank for biodiesel.
- Long Term - \$290,000 for the acquisition of a transportable biodiesel processing facility for the Bristol Bay area.
- Short Term - Approximately 1000 gallons of fish oil biodiesel is available for the project in Anchorage.
- Short Term – Support for some testing may be available from Alaska DEC.

What Is the Project Timeframe:

Short (September Announcement) : Testing of fish oil in generators at AEDTL and National Park Service facilities. The fish oil biodiesel is available for immediate testing in a limited quantity (approximately 1000 gallons has been manufactured and is in Alaska). Qualitative tests need to be accomplished on the performance of the fuel and the engines.

Medium (FY05): On-site testing of product in vehicles: Purchase of additional fish oil biodiesel and continued testing and monitoring in actual operating conditions.

Long-term (> FY05): Installation of a local biodiesel production facility and Implementation of B100 at Brooks Camp

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