

**DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING AND COMPLIANCE DIVISION**

**PROGRAMMATIC ANALYSIS OF THE LICENSING OF SMALL BIODIESEL OPERATIONS
FOR THE JUSTIFICATION OF A CATEGORICAL EXCLUSION
PURSUANT TO ARM 17.4.607**

WASTE AND UNDERGROUND TANK MANAGEMENT BUREAU – SOLID WASTE PROGRAM

JUSTIFICATION FOR A CATEGORICAL EXCLUSION

The preparation of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS), pursuant to the Montana Environmental Policy Act (MEPA), is not required for the actions that qualify for a “categorical exclusion”. The phrase “categorical exclusion” refers to a type of action which does not individually, collectively, or cumulatively require an EA or an EIS, as justified by a programmatic review.

The following programmatic review describes actions that seldom, if ever, cause significant impact. The programmatic review also identifies the circumstances that could cause an otherwise excluded action to potentially have significant environmental impacts and provides the procedure whereby these situations would be discovered and appropriately analyzed.

The Department believes a categorical exclusion from preparation of an EA or EIS for the licensure of Small Biodiesel Operations is justified by the following programmatic review.

DESCRIPTION OF PROJECT – SUMMARY OF PROGRAMMATIC ANALYSIS

Section 75-10-221 Montana Code Annotated (MCA) requires that all solid waste management systems operating in the State of Montana obtain a license from the Department of Environmental Quality (Department). Since the technology is new and the demand to this point has been low, Small Biodiesel Operations in the State of Montana have not previously been licensed with the Department. The Department is in the process of adopting rules that require the licensure of Small Biodiesel Operations and specify the operational requirements applicable to those operations that meet the definition of a small biodiesel producer. Biodiesel is defined in MCA 15-70-301 as:

“a fuel produced from monoalkyl esters of long-chain fatty acids derived from vegetable oils, renewable lipids, animal fats, or any combination of those ingredients. The fuel must meet the requirements of ASTM D6751.”

Furthermore, a Small Biodiesel Operation is defined as:

“an operation that recovers waste greases and oils for the production of a maximum of 2500 gallons of biodiesel per year for personal use and not for sale;

The licensing of Small Biodiesel Operations will occur for the tracking of current biodiesel producers and maintaining information on materials processed and produced. Only Small Biodiesel Operations that use waste oils and produce a limited volume of product, based on the criteria above, will be licensed by the Department under this categorical exclusion. Biodiesel Operations that recover waste greases and/or oils for the production of more than 2500-gallons per year, or that produce biodiesel for sale or distribution, will be licensed using the Department’s normal procedures for licensure of a solid waste management system.

The waste materials used by Small Biodiesel Operations are limited to waste oils and greases generated by private residences and commercial facilities. Since Small Biodiesel Operations process limited amounts of material, they have less potential for adverse environmental impacts. The application and licensing process is easier for these small producers and encourages resource recovery. However, the information required still allows the Department to properly evaluate the environmental impacts of these facilities to identify whether circumstances warrant a more comprehensive environmental analysis.

The Small Biodiesel Operation license application form is included in the Appendix. This form provides an outline of the specific information about the applicant, the site and the materials being processed, and the specific plan of operations. If the Department concludes the completed application meets the criteria set out in this programmatic analysis, no further analysis under MEPA is required.

BENEFITS AND PURPOSE OF PROJECT: The benefits and purpose of the project are to provide for clear and consistent regulation of Small Biodiesel Operations while maintaining protection of human health and the environment and facilitating reuse and waste reduction. The Department has a standardized plan for the submittal of information to facilitate the review and licensing of Small Biodiesel Operations to maximize the efficiency of the decision-making and licensing process for the applicant. This documentation provides a categorical exclusion from the more detailed application process and environmental analysis required for large biodiesel facility operations. The proposed rules more efficiently allocate Department solid waste staff and resources towards licensing and compliance activities associated with larger, more complex solid waste management facilities. There are no licensing fees assessed for Small Biodiesel Operations.

AGENCY ROLES AND RESPONSIBILITIES: The Department is responsible for ensuring activities proposed under the Solid Waste Management Act are in compliance with the Act and with other State and Federal regulations (see Appendix). Licenses issued pursuant to these regulations do not confer any property rights to a licensee. Each licensee is responsible for obtaining any special use permits and complying with other applicable agency, county, and local/city restrictions and requirements.

ALTERNATIVES CONSIDERED

In addition to the proposed licensing action, the Department considered the “no-action” alternative. The “no-action” alternative would be to require the licensure of Small Biodiesel Operations using the normal licensing process of the Department requirement of an EA and public notice.

NO-ACTION: Under the No-Action Alternative, the Department would not require each applicant to license their Small Biodiesel Operation with the Department using the current Small Biodiesel License Application Form. However, the “no-action” alternative would not accomplish the intended goal of increasing the effective use of Department staff and resources. The “no-action” alternative would not facilitate any means to measure compliance with the proposed biodiesel production rules from waste products nor determine compliance with the operational standards.

PROPOSED ALTERNATIVE: Under this alternative, the Department would use a standardized approach to process the Small Biodiesel Operation license application. Applicants will submit a completed Small Biodiesel Operation Application Form. An annual license is required and operators will be required to supply the Department information relative to the production of biodiesel on an annual basis. Upon receipt of a complete new Small Biodiesel Operation license application, the Department will review the application and a final decision will be made as to whether the project will be licensed or denied, or if additional information is required in order to process the application.

The appendix contains the small biodiesel license application form. The form outlines and defines the information required to process the license application, including the Small Biodiesel Facility Operations and Maintenance Plan submittal requirements. The proposed rules will include new licensing and reporting requirements.

IMPACTS AND AFFECTED ENVIRONMENTS

The level of impacts to the physical, biological, social, and economic environments have been reviewed and are presented in Tables 1 and 2. The proposed rules would include requirements limiting biodiesel operations to levels that are protective of human health and the environment. Department staff would enforce the proposed rules by inspecting these facilities periodically, as well as reviewing the information each facility will be required to submit on an annual basis.

TABLE 1 - PREDICTED IMPACTS OF THE PROPOSED PROJECT ON THE PHYSICAL & BIOLOGICAL ENVIRONMENTS

RESOURCE	LEVEL OF IMPACT ¹					
	Major	Moderate	Minor	None	Unknown	Appendix
1. Terrestrial and Aquatic Life and Habitat				✓		
2. Water Quality, Quantity, and Distribution				✓		
3. Geology and Soil Quality, Stability and Moisture				✓		
4. Vegetation Cover, Quantity and Quality				✓		
5. Aesthetics				✓		
6. Air Quality				✓		
7. Unique, Endangered, Fragile or Limited Environmental Resources				✓		
8. Demands on Environmental Resources of Water, Air, and Energy				✓		
9. Historical and Archaeological Sites				✓		

¹ CUMULATIVE IMPACTS: No impacts are anticipated as the Department limits the type and amount of material used and the maximum volume of fuel produced for small biodiesel producing operations. Small Biodiesel licenses will be issued after the submittal of a complete application and the Department's review and approval of the application and the site operation and maintenance plan.

TABLE 2 - PREDICTED IMPACTS OF THE PROPOSED PROJECT ON THE SOCIAL & ECONOMIC ENVIRONMENTS

RESOURCE	LEVEL OF IMPACT ¹					
	Major	Moderate	Minor	None	Unknown	Appendix
1. Social Structure and Mores				✓		
2. Cultural Uniqueness and Diversity				✓		
3. Local and State Tax Base and Tax Revenue				✓		
4. Agricultural or Industrial Production				✓		
5. Human Health				✓		
6. Access to and Quality of Recreational and Wilderness Activities				✓		
7. Quantity and Distribution of Employment				✓		
8. Distribution of Population				✓		
9. Demands for Government Services				✓		
10. Industrial and Commercial Activity				✓		
11. Locally Adopted Environmental Plans and Goals				✓		

¹ CUMULATIVE IMPACTS: No impacts are anticipated as the Department limits the type and amount of material used and the maximum volume of fuel produced for small biodiesel producing operations. Small Biodiesel licenses will be issued after the submittal of a complete application and the Department's review and approval of the application and the site operation and maintenance plan.

PREFERRED ALTERNATIVE

The Department's preferred alternative is to adopt the general Small Biodiesel Operation License rules and application requirements described in this programmatic analysis without modifications.

RECOMMENDATIONS FOR FURTHER ENVIRONMENTAL ANALYSIS

EIS More Detailed EA No Further Action

Rationale for recommendation: The process of making biodiesel from waste oil is relatively simple but involves the use of several chemicals that are potentially harmful. To make biodiesel, waste oil is obtained from a producer. The oil is titrated with lye (sodium or potassium hydroxide) to neutralize the free fatty acids. After this has been accomplished, the oil is mixed in the appropriate proportions with a catalyst (usually sodium or potassium hydroxide) and an alcohol (methanol or ethanol). The most common process uses methanol and sodium hydroxide, since these are common industrial products and readily available to the public. After the reactants have been mixed, the solution is allowed to settle and two layers separate out – the alkyl ester (biodiesel) on top and the glycerol and related byproducts on the bottom. After these layers are separated, the biodiesel is washed with water and is ready for use.

This licensing process for Small Biodiesel Operations would be a more efficient way for an applicant to apply for a license and for the Department to review the application. Because the Department restricts the type and volume of materials used, and the maximum volume of biodiesel produced, there would be no impact to the existing environments. The Small Biodiesel Operation license will be issued after the complete application, including the O&M Plan, has been reviewed and approved by the Department. The production of biodiesel from the waste grease and oil is considered a beneficial reuse of a waste product.

APPENDIX
SMALL BIODIESEL OPERATION
LICENSE APPLICATION FORM

**DEPARTMENT OF ENVIRONMENTAL QUALITY
 PERMITTING AND COMPLIANCE DIVISION
 WASTE AND UNDERGROUND TANK MANAGEMENT BUREAU
 SOLID WASTE PROGRAM
 P.O. Box 200901
 HELENA, MT 59620-0901
 PHONE: 406-444-5300
 FAX: 406-444-1374**

SMALL BIODIESEL FACILITY LICENSE APPLICATION

<i>Section 1 – General Information</i>	
<i>Applicant Name:</i> _____ <i>Business Name:</i> _____ <i>Applicant Title:</i> _____	<i>Business Mailing Address:</i> _____ <i>City:</i> _____ <i>Zip:</i> _____ <i>Phone:</i> _____ <i>Fax:</i> _____ <i>Email:</i> _____
<i>Section 2 – Site Location Information</i>	
<i>Proposed Site Location/Physical Address:</i> _____ <i>Site Legal Description (Location):</i> (Section, Township, and Range [to nearest ¼ Section]) <i>Latitude/Longitude:</i> _____ <i>Is applicant listed above the owner of the facility property:</i> <input type="checkbox"/> YES <input type="checkbox"/> NO (Attach proof of ownership. If applicant is not the legal landowner, provide current landowner information below)	
<i>Landowner Name:</i> _____ <i>Landowner Mailing Address:</i> _____ <i>City:</i> _____ <i>State:</i> _____ <i>Zip:</i> _____ <i>Landowner Phone Number:</i> _____	

Section 3 – Attachments

Small Biodiesel Facility Operation and Maintenance Plan (required)

An operation and maintenance plan MUST BE INCLUDED that provides provisions for EACH of the following items:

- (a) Schedule of Operation
- (b) Site access controls;
- (c) Types and sources of waste materials to be processed, including a description of the source, quality, and quantity of the feedstock;
- (d) Daily procedures for waste oil collection, transportation, unloading, and storage;
- (e) List of equipment available for use;
- (f) Description of the ultimate use for the biodiesel;
- (g) Description of method of biodiesel production;
- (h) Procedures followed for production;
- (i) Description of storage for reaction chemicals;
- (j) Description of storage of biodiesel;
- (k) Description of storage of glycerol;
- (l) Description of method of disposal for glycerol;
- (m) Description of method of disposal for waste filtrate, excess alcohol, and wastewater;
- (n) Description of personnel required and their responsibilities;
- (o) Description of any monitoring that will occur involving the transesterification process or the site;
- (p) A contingency plan that outlines steps taken in the event (i) waste oils are unusable, (ii) diesel spill, (iii) glycerol spill, (iv) alcohol spill (v) waste oil spill, (vi) groundwater contamination is identified, or (vii) other undesirable conditions are noted;
- (q) Emergency Plan;
- (r) Permit and registration for underground storage tanks if additives that are regulated hazardous substances to fuel are used or if tank will contain a regulated substance;
- (s) Registration with the Montana Department of Transportation for fuel tax;
- (t) License for septic pumping if waste oil is being pumped from grease traps.

MAPS (required)

The following maps MUST BE INCLUDED that provide the following information:

- (a) A site map that delineates the boundary lines of:
 - (i) Biodiesel production area in relation to property boundary;
 - (ii) Location of access roads and on-site roads;
 - (iii) Location of property boundaries and names/addresses of all contiguous landowners;
 - (iv) Location of water supply wells, buildings, residences, surface water bodies, and drainage swales within 1,000-feet of the site; and,
 - (v) Identification of all current and future facility buildings.

Section 4 – Certifications

APPLICANT CERTIFICATION – OWNER SIGNATURE

I am the party responsible for operation of this proposed facility. I certify that the above described solid waste management system will be constructed and operated in accordance with Sections 75-10-201 through 75-10-233, Montana Code Annotated (MCA), the rules adopted pursuant thereto, and in accordance with conditions which have or may be imposed in the license. I have personally examined and am familiar with the information in this application and all attached documents. To the best of my knowledge, information, and belief, the submitted information is accurate and complete.

Applicant printed name

Applicant Signature

Date

LOCAL PLANNING AND ZONING CERTIFICATION

(To be signed by appropriate local government official having knowledge of local zoning ordinances)

I hereby certify that the site of the planned solid waste management system is in accordance with local governmental zoning and ordinances.

(Printed name of local official)

(Title)

(Signature of local official)

(Date)