

# RECOMMENDATIONS FOR REGULATING FAT, OIL AND GREASE PROCESSING AND BIOFUEL PRODUCTION FACILITIES IN FLORIDA

Revision 1.0  
March 15, 2013

Prepared by:

Florida Department of Environmental Protection  
Regulatory Programs



## **INTRODUCTION**

The Department of Environmental Protection (Department) has recently received questions about the regulatory requirements for fat, oil and grease (FOG) processing facilities and biofuel production facilities that are proposed or operating in Florida. Since the number of these facilities appears to be growing rapidly, a consistent statewide approach to regulation is needed. This document provides guidance to the Department's regulatory staff to promote consistent implementation of Department requirements as they apply to these facilities and to answer inquiries from permit holders and potential applicants.

As these industries grow and more is learned about their operations, the guidance may be revised. Also, please note that this guidance document does not relieve the owners or operators of these facilities from the responsibility for complying with state or local laws, ordinances, rules, regulations, or orders, as applicable, nor does it relieve them of the obligation to secure any required permits or other authorizations not discussed in this general guidance.

## **BACKGROUND**

The reader should be aware that the descriptions contained in this section are general and representative in nature. They are not intended to cover every possible variation these industries may have today or develop in the future.

### Fat, Oil and Grease (FOG) Processing Facilities

Liquid wastes, mostly from restaurants and food service businesses, containing FOGs can become a significant problem for wastewater collection and treatment systems if they are disposed directly in the sewer. Once in the collection system, FOGs coat and accumulate in pipes and on equipment causing backups and overflows. As a result, many local governments have implemented pretreatment programs, passed sewer use ordinances or imposed best management practices on owners of generating facilities to minimize the discharge of FOGs directly into wastewater collection systems. Typically, FOGs are collected separately by the generators or separated from the liquid waste stream using grease traps. Once collected, this material must be properly managed. FOG processing facilities that do, in fact, discharge to wastewater collection systems and treatment plants may be required to obtain an industrial pretreatment permit from the local government. This issue is further discussed later in the guidance.

In some areas of the state, FOG collection has prompted the need for more FOG recycling facilities. Some domestic wastewater treatment facilities have modified their operations to include FOG treatment facilities. Where this has occurred, these FOG facilities are normally addressed in the permits issued by the Department's Domestic Wastewater Program. In other cases, FOG treatment facilities have been co-located at solid waste management facilities. For example, Pinellas County Utilities obtained a solid waste permit from the Department in 2002 to operate a FOG dewatering facility on

the County's landfill property. While beginning at a lower flow rate, this facility is planned to process up to 160,000 gallons per day of FOGs collected from generators in the County. The separated liquids are discharged to a wastewater treatment plant and the solids are used in a digester to produce methane for fuel. In addition, there are other smaller stand-alone facilities in Florida collecting FOGs and processing them in enclosed tanks. The liquid wastes are discharged to permitted wastewater facilities and the solid wastes are disposed of in permitted Class I landfills. Usually these smaller, stand-alone facilities have not been required to have solid waste processing facility permits.

There are also at least two large rendering facilities in the state that have been operating for many decades without Department solid waste permits. These facilities collect FOGs from restaurants and animal byproducts from slaughterhouses, packing plants, butcher shops and supermarkets throughout the state. These materials are typically purchased from the generator as a product or are collected for recycling at no charge. FOGs are pumped into trucks at the generating facility and then transferred into tanks at the rendering plants. In some cases, they are pumped into larger trucks at company-owned transfer stations before arriving at the rendering plants. Animal byproducts are collected by trucks and unloaded into processing vats where they are then fed into the cooking equipment at the rendering facilities. These materials are processed into fatty acids and tallows that are used to produce a variety of products such as animal feed, pet food ingredients, organic fertilizers, soaps, paints, rubber and cosmetics. The fatty acids can also be used to produce biodiesel, but the two rendering plants in Florida do not do so.

Typically these rendering facilities are operated under roof with all the material being processed in enclosed vessels or tanks. No FOGs or animal byproducts are placed directly on the ground. While there may have been some odor complaints from time to time, it is the Department's experience that these facilities have been operating for many years without causing solid waste or hazardous waste problems.

### Biofuel Production Facilities

Biofuel facilities generally refer to companies that produce either fuel additives, such as biodiesel or ethanol, or produce electricity from burning biomass. Biodiesel can be produced from feedstocks such as vegetable oils and animal fats and is growing in popularity as another option for managing FOGs. Biodiesel is produced by reacting an alcohol, such as methanol, with triglyceride molecules in the FOG, typically in the presence of an alkaline catalyst such as sodium or potassium hydroxide (lye). This "trans-esterification" reaction produces an ester, which is the biodiesel, and glycerol (also called glycerin) as a co-product. The glycerol must then be separated from the biodiesel. While there are several larger commercial biodiesel facilities either operating or planned for construction in Florida, there also appear to be many "home biodiesel" facilities being established around the state. The total number of these facilities is unknown.

Ethanol is made by fermenting renewable resources such as corn and bagasse. When the ethanol concentration nears approximately 12 percent in the fermentation process, the microbial activity is inhibited. The fermentation broth must then be concentrated by distillation and dehydrated to produce fuel grade ethanol. The Florida Legislature has appropriated grant funding for Renewable Energy Technology Grants by the Energy and Climate Commission and Farm to Fuel Grants by the Department of Agriculture and Consumer Services. These grants may be accelerating the development of biodiesel and ethanol facilities in Florida.

Wood waste and other vegetative wastes are burned as fuels at biomass facilities to produce electricity. While these materials are usually stored on the ground prior to being fed into the facilities, they are often treated as products since they are used as a fuel and have already been source separated before arriving at their facilities. As a result, these facilities usually have air permits but do not have solid waste processing facility permits unless other solid wastes, such as waste tires, are associated with their operations.

The Department has limited experience with biodiesel and ethanol facilities. However, it appears that some owner/operators of biodiesel facilities may not be conducting proper hazardous waste determinations of their wastes or byproducts. In other cases, the owner/operators may not be providing adequate secondary containment or properly labeling their containers of wastes or byproduct materials. Spills have also been reported at some of these facilities.

In addition to waste management considerations, air construction and operation permits are generally required for ethanol, biomass and biosolids facilities, and other federal or state air requirements may also apply. Specific guidance on air program requirements is included in a separate section below.

FOG processing and biofuel facilities, like facilities of various sorts, may also require other authorizations from the Department, such as an Environmental Resource Permit (ERP) under Part IV of Chapter 373, Florida Statutes (F.S.), a stormwater discharge permit under Chapter 62-25, Florida Administrative Code (F.A.C.), an industrial wastewater permit under section 403.087, F.S, or a National Pollutant Discharge Elimination System (NPDES) stormwater permit under section 403.0885, F.S. More information on these programs is included below.

## **CONSIDERATIONS AND RECOMMENDATIONS**

### Managing Spills

The Department's Office of General Counsel recently evaluated how spills of biodiesel or materials used to produce biodiesel should be addressed. Based upon that evaluation, the following general criteria apply to spills of FOGs and biofuels.

- Spills of petroleum products or hazardous substances must be addressed under

Chapter 62-770 or 62-780, F.A.C. This could include biodiesel or ethanol mixed with petroleum products; methanol; sodium hydroxide; or any other materials that are regulated as hazardous wastes. It is the generator's responsibility to characterize the spilled material and determine whether Chapter 62-770, F.A.C., or Chapter 62-780, F.A.C., applies.

- Spills of feedstock materials, including most FOGs, as well as spills of biodiesel products not mixed with petroleum, are not regulated as hazardous substances and are not directly regulated by Chapter 62-770, F.A.C., or Chapter 62-780, F.A.C. However, if these materials are disposed of (disposal is defined to include discharge, deposit, injection, dumping, spilling, leaking, or placing), the Department requires that the spill be cleaned up and the collected material sent to a permitted solid waste management facility.
- Spills of hazardous wastes must be addressed under Chapter 62-730, F.A.C. Hazardous wastes can include unused methanol as well as other chemicals or byproducts that are characteristic or listed hazardous wastes. Chapter 62-730, F.A.C., generally incorporates the cleanup criteria of Chapter 62-780, F.A.C., but there may be additional requirements for management of the cleanup residuals.

### Solid Waste Considerations

1. Solid waste permits will not be required for FOG processing facilities co-located at permitted wastewater treatment plants, permitted used oil processors or permitted solid waste management facilities. Construction or operation of these facilities will normally be addressed in their existing permits. If the operation of the FOG processing facility impacts the operation of the solid waste management facility, a modification of that facility's solid waste permit may be required.
2. Solid waste permits will not be required for "home biodiesel" facilities. This term will include any person who makes biodiesel solely for his or her own use.
3. Solid waste permits will not be required for any FOG processing facilities, biodiesel production facilities, or ethanol production facilities provided their feedstocks, products, and byproducts are managed in tanks or containers, or are managed entirely within a building, and the materials are not placed directly on the ground or allowed to leak onto the ground. This applies whether the feedstocks are generated on site or collected from off site. While it is not currently required by rule, the Department strongly recommends that facilities storing biodiesel or ethanol in tanks follow the requirements in Chapters 62-761 and 62-762, F.A.C., for the construction and use of storage tank systems. (However, once the biodiesel or ethanol is mixed with petroleum derived fuels, the mixture is regulated as a petroleum product. For such mixtures the requirements in Chapters 62-761, 62-762 and 62-770, F.A.C., expressly apply.)

4. If an owner/operator desires to land apply as a beneficial use, rather than dispose of, byproducts generated from the operation of FOG processing facilities, biodiesel production facilities, or ethanol production facilities, this land application will not require a solid waste permit or approval by the Department provided it meets the statutory industrial byproducts exemption in section 403.7045(1)(f), F.S. The language for this statutory provision reads as follow.

(1) The following wastes or activities shall not be regulated pursuant to this act.

(f) Industrial byproducts, if:

1. A majority of the industrial byproducts are demonstrated to be sold, used, or reused within one year;
2. The industrial byproducts are not discharged, deposited, injected, dumped, spilled, leaked, or placed into or upon any land or water so that such industrial byproducts or any constituent thereof may enter other lands or be emitted into the air or discharged into any waters, including ground water, or otherwise enter the environment such that a threat of contamination in excess of water quality standards and criteria or air quality standards is caused, or a significant threat to public health is caused; and,
3. The industrial byproducts are not hazardous wastes as defined under s. 403.703 and rules adopted under this section.

Land applying the byproducts in a manner that does not meet the statutory industrial byproducts exemption above will require a permit or approval by the Department. The owner/operator will be responsible for any threat to water quality or significant threat to human health caused by the land application of the byproducts.

5. Permitting requirements of facilities that operate in ways other than described here can be determined on a case-by-case basis. Districts may issue solid waste processing facility permits if requested by the owner/operators of commercial facilities.
6. Facilities burning biomass as fuel will be regulated in the same manner as other incinerators. Rule 62-701.320(14)(a), F.A.C., provides that incinerators operating in accordance with Department air regulations will not need a solid waste permit, but that if solid waste is stored or disposed of on site and such storage or disposal is not addressed in the air permit, then a separate solid waste permit will be required. Source separated, processed woody or vegetative wastes at biomass facilities are generally treated as products rather than wastes, and no permit is required to address storage. If the facility accepts unprocessed woody or vegetative waste and processes it into a fuel, or if the facility disposes of waste at the site, then a separate solid waste permit or registration would be required.

7. Spills or releases of feedstocks, products or byproducts used or produced at any FOG production facilities or biodiesel or ethanol production facilities should be cleaned up appropriately as a spill of either a hazardous waste or a solid waste. Enforcement discretion should be exercised when distinguishing solid waste spills or releases that could cause pollution from minor spills relating to poor housekeeping procedures.

### Hazardous Waste Considerations for Biodiesel

The raw products or materials (including FOGs collected from restaurants) generally used in the manufacture of biodiesel do not fall under the purview of hazardous waste regulation unless they are spilled or otherwise disposed of, and if they meet the definition of hazardous waste pursuant to 40 Code of Federal Regulations (CFR) 261. For example, methanol is almost universally used in the biodiesel production process. A spill of **unused methanol** could trigger hazardous waste cleanup requirements because discarded (spilled) **unused methanol** is a listed hazardous waste (U154 pursuant to 40 CFR 261.33), as are cleanup residues associated with it if they exhibit the characteristic of ignitability.

In addition, some of the **wastes or byproducts** generated during the production of biodiesel (such as glycerin produced by phase separation from raw methyl ester product, glycerin/methanol centrifugation residues, and methyl ester wash water) have the potential to be characteristic hazardous wastes. This is because methanol has a flash point less than 60°C (140°F), which is the definition of ignitable in 40 CFR 261.21. Lye, in the form of sodium hydroxide or potassium hydroxide, is generally used as a catalyst in the production of biodiesel. Lye is corrosive as defined by 40 CFR 261.22. Therefore, it is essential that all biodiesel production facilities make the appropriate waste determinations pursuant to 40 CFR 262.11 on their own waste streams, especially waste streams that have the potential to contain residual methanol or lye, and that they manage any hazardous waste in accordance with Chapter 62-730, F.A.C. A spill of methanol or lye, whether unused product or used material, that is a characteristic hazardous waste (per 40 CFR 261.21 through 24) will constitute disposal of hazardous waste unless an immediate response to completely clean up the spill is taken.

Any facility raising a claim that its byproduct streams are not solid wastes, or that their waste streams are hazardous as defined in 40 CFR 261 but qualify for an exemption from regulation as hazardous wastes, must document such claim pursuant to 40 CFR 261.2(f). The attachment to this document provides a list of general information that at a minimum should be kept on file for biodiesel production facilities to help document the status of chemicals or wastes they manage on site.

A facility that generates more than 100 kilograms (220 pounds) of hazardous waste in any month must notify the Department using Form 8700-12FL, 62-730.900(1)(b). (All relevant sections of 40 CFR have been adopted by reference in Chapter 62-730, F.A.C.)

## Air Considerations

1. Air construction and operation permits are required for ethanol production facilities. Prevention of Significant Deterioration (PSD) is triggered if a proposed ethanol facility has the potential to emit more than 100 tons per year of any PSD pollutant.
2. Biomass and biosolids facilities require air construction and operation permits. Depending upon the size of the facility, a PSD permit may be required.
3. Unless a proposed biodiesel facility is extremely small, it will be subject to federal requirements and, thus, also to state construction and operation permit requirements. At the end of this section are rough estimates to help determine federal rule applicability for batch and continuous processes.
4. A biodiesel facility that has the potential to emit 10 tons per year of an individual hazardous air pollutant (HAP) or 25 tons per year of all HAP combined is considered a major source of HAP. A facility is also considered major if it is co-located at a major source of HAP. If a facility is a major source of HAP it is subject to Maximum Achievable Control Technology (MACT) 40 CFR 63, Subpart FFFF, which is called the MON rule for Miscellaneous Organic Chemical Production Processes.
5. When storing methanol under pressure or when using methanol under pressure in production processes, a facility may be subject to Risk Management Program (RMP) regulations promulgated in 112(r) due to the Boiling Liquid Vapor Explosion requirement.

### *Batch Processes*

For biodiesel facilities utilizing a batch process only Subpart VV (Leaks) of the Synthetic Organic Chemical Manufacturing Industry (SOCMI) regulations may apply. Subpart VV will apply only when the production of SOCMI listed organic chemicals, i.e., glycerin, is equal to or greater than 1.0 gigagram per year (1,102.3 tons per year). Consequently, for Subpart VV to apply:

- Assume, specific gravity of biodiesel = 0.86, density of glycerin = 10.52 lbs/gal and glycerin production = 10% of biodiesel;
- Density of biodiesel =  $0.86 \times 8.34$  lbs/gal (density of water) = 7.17 lbs/gal;
- 1 million gallons biodiesel  $\times 7.17$  lbs biodiesel/gal  $\times 1$  ton/2,000 pounds = 3,585 tons biodiesel;
- 3,585 tons biodiesel  $\times 0.10$  tons glycerin/tons biodiesel = 358.5 tons glycerin per million gallons of biodiesel; and,
- $1,102.3$  tons glycerin / 358.5 tons glycerin/million gallons of biodiesel = 3.074 million gallons of biodiesel.

Thus, given these assumptions, approximately 3.0 million gallons of biodiesel must be produced in a batch process before Subpart VV of SOCMI regulations



comes into force. If less than 3 million gallons of biodiesel is produced, Subpart VV would not apply (Subparts NNN and RRR do not apply to batch processes). However, recordkeeping and inspection requirements under SOCMI regulations would still be required.

### *Continuous Processes*

As with batch processes, the production exemption level with regard to Subparts VV, NNN and RRR is 1 gigagram per year. However, in continuous processes, the 1 gigagram threshold with regard to Subparts NNN and RRR applies to all chemicals produced by the process. Accordingly, both biodiesel and glycerin production levels must be applied against the 1 gigagram threshold with respect to Subparts NNN and RRR. With the same assumptions used previously, the production threshold for Subparts NNN and RRR is:

- $X \text{ tons biodiesel/yr} + 0.1 X \text{ tons glycerin/yr} = 1,102.3 \text{ tons all chemical produced/yr};$
- $X = 1,102.3/1.1 = 1,002.1 \text{ tons biodiesel/yr};$  and,
- $1,002.1 \text{ tons biodiesel/yr} \times 2,000 \text{ lbs/ton} / 7.17 \text{ lbs biodiesel/gal} = 279,523 \text{ gallons biodiesel per year.}$

Approximately 280,000 gallons of biodiesel must be produced per year for Subparts NNN and RRR of SOCMI regulations to apply to continuous production processes. As before, approximately 3 million gallons per year of biodiesel must be produced for Subpart VV to apply to continuous processes. If the lower production threshold is not exceeded, only recordkeeping and inspection requirements would apply.

### Wastewater, Pretreatment and NPDES Stormwater Considerations

#### *Wastewater*

Unless exempted by rule or statute, any facility or activity that discharges wastes, including wastewater, into waters of the State, or which is reasonably expected to be a source of water pollution, must obtain a Department permit. Wastewater permits are required for operation and certain construction activities associated with industrial wastewater facilities or activities.

Certain discharges to ground water may qualify for exemption from permitting under rule 62-4.040, F.A.C., based on a site-specific determination by the Department. All discharges to surface waters require a National Pollutant Discharge Elimination System (NPDES) permit under the federal Clean Water Act (CWA), which the Department is authorized to issue.

The Department does not have specific industrial wastewater permitting rules or guidance for biofuels (or FOG) facilities. Useful guidance for the biofuel industry is

available from EPA's memorandum, "Applicability of Effluent Guidelines and Categorical Pretreatment Standards to Biodiesel Manufacturing," dated August 11, 2008, which provides a broad overview of the regulatory requirements for wastewater treatment, effluent limitation guidelines, pretreatment standards (see below), and NPDES stormwater permitting (see below). The document is available at: [http://www.epa.gov/npdes/pubs/memo\\_biodieselpretreatment\\_aug08.pdf](http://www.epa.gov/npdes/pubs/memo_biodieselpretreatment_aug08.pdf). As the industry matures, the Department may develop specific wastewater rules.

For questions about siting a specific facility, industrial wastewater permitting staff in the each Department district office will be prepared to offer guidance. Staff contact information is available at <http://www.dep.state.fl.us/water/wastewater/contacts.htm>. More information on industrial wastewater permitting requirements, including links to the most relevant program rules, chapters 62-620 and 62-4, F.A.C., is available at <http://www.dep.state.fl.us/water/wastewater/iw/index.htm>.

### *Pretreatment*

As noted previously in this paper, biodiesel and FOG processing facilities that discharge industrial wastewater to wastewater treatment plants may be required to obtain an industrial pretreatment permit from the municipality that receives the discharge, in accordance with Chapter 62-625, F.A.C. Such indirect dischargers must contact the wastewater facility prior to discharging to determine whether an industrial pretreatment permit will be required. See <http://www.dep.state.fl.us/water/wastewater/dom/pretreat.htm> for more information.

### *NPDES Stormwater*

Florida's NPDES Stormwater Program regulates industrial activities that meet both of the following criteria:

- Result in a discharge of stormwater to surface waters of the State or into a municipal separate storm sewer system (MS4); and
- Fall under any one of the 11 categories of industrial activities identified in 40 CFR 122.26(b)(14).

The 11 categories are defined using narrative descriptions and Standard Industrial Classification (SIC) codes. Biodiesel manufacturing facilities are typically classified by SIC Code 2869 "Industrial Organic Chemicals, Not Elsewhere Classified." Biodiesel manufacturing may also fall under other SIC codes, including but not limited to 204X "Grain Mill Products" and 207x "Fats and Oils." Regulated industrial activities are subject to NPDES stormwater permitting if they have the potential to discharge stormwater to a surface water body or MS4 during any type of rain event. (Residential biodiesel manufacturers are not currently regulated by the NPDES Stormwater Program but are encouraged to employ appropriate stormwater controls and best management practices.)

FOG facilities do not fit into a discrete SIC code. As noted in the previous section on wastewater, however, FOG facilities may be regulated based on the industrial activities conducted at the facility. Contacting the industrial wastewater staff at the local Department district office is the surest way to determine whether a permit is required.

Regulated industrial facilities must obtain NPDES stormwater permit coverage and implement appropriate pollution prevention techniques to reduce contamination from stormwater runoff. Most facilities are eligible for coverage under the Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity (MSGP) in accordance with rule 62-621.300(5), F.A.C. Some facilities may meet the criteria for the conditional no exposure exclusion outlined in rule 62-620.100(2)(o), F.A.C.

In addition, the construction of biofuel and FOG facilities is regulated by the NPDES Stormwater Program if:

- Construction contributes stormwater discharges to surface waters of the State or an MS4, and
- Construction disturbs (clearing, grading, excavating) one or more acres of land, or less than one acre of land if the activity is part of a larger common plan of development or sale that will meet or exceed the one-acre threshold.

The operator of a regulated construction site must obtain an NPDES stormwater permit and implement appropriate pollution prevention techniques to minimize erosion and sedimentation and properly manage stormwater. The permit required under the Department's NPDES Stormwater Program, because it is issued under an authorization from EPA, is separate from the Environmental Resource Permit (ERP) required under Part IV, Chapter 373, F.S., or any local government stormwater discharge permit for construction activity.

Additional information on NPDES stormwater permitting requirements can be found at:

<http://www.dep.state.fl.us/water/stormwater/npdes/index.htm>.

### Other Environmental Permits

In addition to the waste, air, wastewater, and stormwater permits discussed above, other federal, state or local environmental permits may be required for FOG and biofuel facilities.

### **CAVEAT**

This guidance document does not constitute a rule of the Department. It is intended solely as internal guidance to District staff and does not create additional requirements for the regulated community or affect the rights of substantially affected

parties to any agency decision. Please do not cite any part of this memorandum as though it were a standard, rule, or requirement.

## ATTACHMENT

Facilities producing biodiesel should have the following general information available, as appropriate, to help evaluate the hazardous waste status of chemicals or wastes they manage on site.

1. Glycerin byproduct produced by phase separation from raw methyl ester product.
  - a. Information on the methanol content, flash point, water content and corrosivity of this process byproduct. Provide information on whether or not the byproduct is a hazardous material under Department of Transportation regulations at the time of separation, before methanol recovery. If you claim that the material is not flammable because it will not sustain combustion, provide the results of tests conducted in accordance with Appendix H of 49 CFR Part 173.
  - b. Information on the amount of this material stored at your facility.
  - c. Information about any spills. For example: How much was spilled? Where? What cleanup actions taken? Copies of waste profiles, waste analyses, disposal manifests, shipping papers and/or tipping receipts should be kept. Analyses of samples collected to confirm cleanup standards must also be submitted.
  - d. Information regarding your current and planned methanol recovery operations. Identify how methanol recovery operations will affect the analytical characteristics and Department of Transportation classification identified above. (Any process changes that affect air emissions should be discussed with the Department's Air Program prior to construction.)
  - e. Information that there is a market for your byproduct in the event your methanol recovery operation is not successful. Identify any facilities that have agreed to accept your byproduct for recycling. Or, have information on how you intend to dispose of the material.
2. Glycerin/methanol centrifugation residues stored in containers.
  - a. Information on the methanol content, flash point, water content and corrosivity of the process byproducts stored in intermediate bulk containers outside in the vicinity of your loading dock. For materials with multiple phases, provide information on each phase. Provide information on whether or not the byproduct is a hazardous material under Department of Transportation regulations as currently stored. If you claim that the material is not flammable because it will not sustain

combustion, provide the results of tests conducted in accordance with Appendix H of 49 CFR Part 173.

- b. Information on the amount of this material stored at your facility.
  - c. Information regarding your plans to process these materials to recover usable product. (Any process changes that affect air emissions should be discussed with the Department's Air Program prior to construction.)
  - d. Information that there is a disposition for these byproducts in the event your recovery operation is not successful. Identify any facilities that have agreed to accept these materials for recycling. Or, have information on how you intend to dispose of the material.
3. Methyl Ester Wash Water.
- a. Information on the methanol content, flash point, water content and corrosivity of this wash water. Provide information on whether or not the byproduct is a hazardous material under Department of Transportation regulations (49 CFR 173.120) at the time it is separated from your methyl ester product. If you claim that the material is not flammable because it will not sustain combustion, provide the results of tests conducted in accordance with Appendix H of 49 CFR Part 173.
  - b. Information on the amount of this material stored at your facility. Information on the amount of wash water and other waste water produced per ton of biodiesel produced. Information on whether any of this material has been shipped off site or disposed of to a sewer system since the date you began operations.
  - c. Information regarding any current and planned recycling process for this material. Identify how recovery operations will affect the analytical characteristics and Department of Transportation classification identified above. Identify how you will manage any process residuals from recycling or treatment activities, and have the names of any facilities that have agreed to accept process residuals or waste water. (Any process changes that affect air emissions should be discussed with the Department's Air Program prior to construction.)
  - d. If you intend to provide the wash water to a third party reclamation facility, have documentation that the facility has agreed to reclaim material you provide. Identify any facilities that have agreed to accept this material for recycling. Or, have information on how you intend to dispose of the material.

Please be advised that byproducts which exhibit hazardous waste characteristics

(40 CFR 261.21 through 24) are hazardous waste when discarded or accumulated speculatively in lieu of disposal. Please see 40 CFR 261.1(c)(8) for the definition of speculative accumulation, and 40 CFR 261.2 for the federal regulations applicable to spent materials and byproducts that are recycled.