



# Biodiesel Manufacturing: Rules for Operating in Texas

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## INTRODUCTION

If you produce biodiesel fuel, you may be subject to regulation by the Texas Commission on Environmental Quality. This publication will help you determine if you need any permits for your biodiesel facility. If you have questions or need further assistance after reading this publication, please see the last section titled “Need Additional Assistance?” to find information on more helpful resources. This publication is not a substitute for the actual rules. To obtain the most current, official copy of state rules, contact the Secretary of State’s office at 512-305-9623 or visit the Web page at <[info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac\\_view=2&ti=30](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=2&ti=30)>. Copies of the rules can also be downloaded from our Web page, at <[www.tceq.texas.gov/rules/indxpdf.html](http://www.tceq.texas.gov/rules/indxpdf.html)>.

## WHAT IS THE DIFFERENCE BETWEEN BIODIESEL AND BIOFUEL?

Biofuel is any fuel produced from renewable resources, especially plant biomass and treated municipal and industrial wastes. Ethanol and methanol are examples of biofuels.

Biodiesel is a type of biofuel that comprises a variety of ester-based oxygenated fuels derived from vegetable oils, animal fats, or both. Biodiesel can be used as a pure fuel or blended with petroleum products and meets the standards of the American Society for Testing and Materials D-6751 standard specification for biodiesel fuel blend stock (B100).

The North American Industry Classification System code for biodiesel production is 325199—*all other basic organic chemical manufacturing*. Ethanol and methanol production, on the other hand, has three possible codes, depending on its major components:

325193—ethanol, non-potable, manufacturing

325199—methyl alcohol (i.e., methanol), synthetic, manufacturing

325191—methyl alcohol, natural, manufacturing

The following sections discuss several types of permits your biodiesel facility may need to comply with state law.

## AIR EMISSION SOURCES

A biodiesel facility may consist of several types of equipment that are potential sources of air pollution. Typical equipment can be authorized using the permits by rule listed in the following table. Currently, a single PBR for biodiesel does not exist, so you may need to claim multiple sections to authorize your entire facility. Find instructions for registering your PBR claim at <[www.tceq.texas.gov/goto/claimpbr](http://www.tceq.texas.gov/goto/claimpbr)>.

Equipment	PBR Section	PBR Description
General PBR requirements	30 TAC 106.4 <sup>1</sup>	Requirements for permitting by rule
Boilers or process heaters	30 TAC 106.181	Used-oil combustion units
	30 TAC 106.183	Boilers, heaters, and other combustion devices
Cooling towers	30 TAC 106.371	Cooling-water units
Material storage tanks	30 TAC 106.472	Organic- and inorganic-liquid loading and unloading
	30 TAC 106.473	Organic-liquid loading and unloading
	30 TAC 106.476	Pressurized tanks or tanks vented to control
	30 TAC 106.478	Storage tank and change of service
Reactors, separators, evaporator units	30 TAC 106.261	Facilities (emission limitations)
	30 TAC 106.262	Facilities (emission and distance limitations)
Truck-loading racks and drum-filling operations	30 TAC 106.472	Organic- and inorganic-liquid Loading and Unloading
	30 TAC 106.473	Organic-liquid loading and unloading
<b>Flares</b>	30 TAC 106.492	Flares

Once you claim and register a PBR, you should:

- read the requirements of 30 TAC 106.8 concerning record keeping and maintain sufficient records to demonstrate compliance with the annual emissions limits; and
- refer to the applicable PBR checklist for records retention guidance and maintain sufficient records to demonstrate compliance with the emission limits and specific conditions of the PBR.

Some facilities cannot qualify for a PBR due to their location or air emissions. Other types of air authorizations you may need are summarized on the TCEQ website at <[www.tceq.texas.gov/goto/nsr-auth](http://www.tceq.texas.gov/goto/nsr-auth)>.

If you are already operating your business and discover that you need an air permit, you must still complete and submit any required applications. The TCEQ may cite you for operating without the required authorizations if you

<sup>1</sup> Short for 'Title 30, Texas Administrative Code, Section 106.4.'

do not file the appropriate paperwork. You may call the Air Permits Division at 512-239-1250 if you have any questions concerning how and where to apply.

## STORMWATER DISCHARGES

Depending on the size of the proposed facility, you may need a construction stormwater permit and pollution prevention plan. To determine if you will need this authorization, visit the TCEQ website at <[www.tceq.texas.gov/goto/construction](http://www.tceq.texas.gov/goto/construction)> or contact our Stormwater and Pretreatment Team at 512-239-2495.

Before you begin operating, your facility must obtain authorization from the TCEQ under the multi-sector general permit for industrial stormwater discharges, TXR050000. Biodiesel manufacturing facilities have the Standard Industrial Category code of 2869, which requires a stormwater permit for this industrial activity. See information about the industrial stormwater permit at <[www.tceq.texas.gov/goto/industrial-sw](http://www.tceq.texas.gov/goto/industrial-sw)>.

Find assistance tools including general stormwater information, worksheets and instructions for pollution prevention plans, and best management practices at <[www.tceq.state.tx.us/goto/sw-assist](http://www.tceq.state.tx.us/goto/sw-assist)>.

## WASTEWATER DISCHARGES

Discharges from process-wastewater, or water that comes in contact with any raw material, product, by-product, or waste during any production or industrial process of biodiesel manufacturing are regulated by both the TCEQ and local authorities. If you have city sewer service, please check with your local authority to ensure that your facility is allowed to discharge its wastewater to the sewer. You may need special approval from the city sewer system to discharge any type of wash-down water or process wastewater.

### IMPORTANT

*Biodiesel wastewater may be high in fatty acids and glycerin, which can have high biochemical oxygen demand. High BOD often impairs wastewater treatment plant operations, so it is important that you contact your sewer service about its requirements **before** discharging anything to the sewers.*

If the facility uses a septic system, you cannot put any type of process water into the system. Only domestic wastewater (sewage) is allowed to be discharged into an on-site wastewater facility unless the septic system operates under a permit. In this case, you may be required to have a Texas Pollutant Discharge Elimination System permit for industrial wastewater. Each TPDES permit contains specifics of monitoring and reporting requirements, sampling requirements, and limitations on discharge and effluent. Your facility may need to treat its wastewater discharge. You may contact the Wastewater Permitting Section at 512-239-4671 for specific information.

If you use a holding tank for process wastewater, and that wastewater contains oils, chemicals, or other pollutants, the TCEQ may require that you handle it as a hazardous waste. To better understand the regulations on industrial and hazardous waste, visit <[www.tceq.texas.gov/goto/iHWreg](http://www.tceq.texas.gov/goto/iHWreg)>. If the TCEQ determines that the waste is hazardous, you must contract an authorized hazardous-waste hauler to transport it to an authorized disposal facility. Contact the TCEQ Industrial and Hazardous Waste Permits Section at 512-239-2335 for more information.

## REGULATIONS ON INDUSTRIAL AND HAZARDOUS WASTE

Any waste material generated by a biodiesel producer must be identified as either industrial waste or hazardous waste by the biodiesel producer. This helps to identify any hazardous waste streams generated by the producer; determine how those materials are handled, transported, or processed; and where they eventually go for disposal or reclamation.

Biodiesel production typically results in glycerin as a byproduct. If there are no facilities willing to accept the glycerin produced by a facility, then the glycerin becomes a waste. Often there are residual levels of methanol in the waste glycerin. If this is the case, then the entire batch of glycerin-methanol may be considered hazardous, due to a low flash point, and require special handling. If there is too little methanol for the glycerin to be flammable (including pure glycerin), it is still a regulated industrial waste.

*Guidelines for the Classification and Coding of Industrial and Hazardous Waste* (TCEQ publication number RG-022) will help you identify and classify both your industrial and your hazardous waste. Order a copy through the TCEQ at <[www.tceq.texas.gov/publications/search\\_pubs.html](http://www.tceq.texas.gov/publications/search_pubs.html)>.

Once you determine your generator status—large quantity, small quantity, or conditionally exempt small quantity generator—the TCEQ may require that you register. Our publication *Do You Need Industrial or Hazardous Waste Registration Numbers?* (RG-222) can help you determine which forms, if any, you need. Record keeping for all waste streams is vital to maintaining compliance with TCEQ and EPA regulations. Keep your records on-site for review by TCEQ investigators. Records will help explain how each waste received a determination as hazardous or industrial-waste classification, as well as the disposal method the facility uses.

## **EPA RULE FOR SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLANS**

Storing oil and oil-containing products, including vegetable oils, has the potential to pollute both water and soil. Take extra care when storing these products. Any storage tanks, except 55-gallon containers or smaller, with a total capacity of more than 1,320 gallons must meet the federal requirements for spill prevention, control, and countermeasures. The SPCC rules include developing a plan of action to address any oil releases at the facility. It also includes a secondary containment requirement for oil and oil storage tanks. The EPA administers and enforces the SPCC regulations. For more information about developing an SPCC plan, visit the EPA's SPCC page at <[www.epa.gov/osweroe1/content/spcc/](http://www.epa.gov/osweroe1/content/spcc/)>.

## **EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT**

If you need information on the EPCRA, download the EPA's *List of Lists* at <[www.epa.gov/osweroe1/docs/chem/list\\_of\\_lists\\_revised\\_7\\_26\\_2011.pdf](http://www.epa.gov/osweroe1/docs/chem/list_of_lists_revised_7_26_2011.pdf)>.

In Texas, portions of the EPCRA are administered by different agencies:

- Tier II Reports—Department of State Health Services (800-452-2791, 512-834-6603)
- Toxics Release Inventory—TCEQ (512-239-4874)
- Section 112R—EPA (800-424-9346)

Please contact the appropriate agency for more complete guidance in its area of expertise.

### ***Toxic Chemical Release Inventory Reporting (EPCRA Section 313)***

Texas is required to maintain an inventory of emissions of certain chemicals from a variety of facilities. This is known as the Toxics Release Inventory. If a company manufactures or processes more than 25,000 pounds (cumulative total) in a year of any one TRI chemical, or otherwise uses (such as for cleaning machine parts) more than 10,000 pounds of any TRI chemical, then the company must report any on-site releases or off-site waste transfers of those chemicals (no minimum for releases or transfers). You can find a quick-reference table at <[www.tceq.texas.gov/goto/tierii](http://www.tceq.texas.gov/goto/tierii)>.

## **PUBLIC WATER SYSTEMS**

If your facility is not connected to city water service and you supply water to at least 25 people for at least 60 days per year for drinking, bathing, hand washing, dish washing, or cooking, your facility is subject to the rules for public water systems. The TCEQ Public Drinking Water Section can help answer your questions on everything from well requirements to chemical analysis of the water. For assistance, call 512-239-4691.

## **MANUFACTURER REGISTRATION FOR BIODIESEL**

You must register all fuels with the EPA before legally selling the fuel. The registration form (form 3520-12) is available at <[www.epa.gov/otaq/fuels/registrationfuels/registration.htm](http://www.epa.gov/otaq/fuels/registrationfuels/registration.htm)> under Reports. Additionally, the EPA requires you to report the types of raw materials used in your facility's process and supply:

- a process-flow diagram explaining each step of your facility's production processes
- written permission from the National Biodiesel Board if using any of its data about human health
- test reports proving compliance with the American Society for Testing and Materials specification for testing biodiesel (ASTM D 6751)

### ***Special Authorization for TxLED***

The sale and supply of biodiesel as fuel is not subject to Texas Low Emission Diesel regulations; however, any blend of biodiesel sold in certain counties of the state must be blended with a base diesel that meets the TxLED regulations. A map of these counties is available at [www.tceq.texas.gov/assets/public/implementation/air/sip/textled/TXLED\\_Map.pdf](http://www.tceq.texas.gov/assets/public/implementation/air/sip/textled/TXLED_Map.pdf).

For more information on the TxLED program, visit [www.tceq.texas.gov/goto/txled](http://www.tceq.texas.gov/goto/txled) or contact the Air Quality Planning Section at 512-239-1438.

## **SUPPLEMENTAL INFORMATION**

### ***Health Department Requirements***

If your facility plans to use recyclable cooking oils, you are required to apply for a rendering facility license with the Texas Department of State Health Services. Additionally, any transporter of the oil will need certification as a licensed, renderable-raw-material hauler (Texas Health and Safety Code 144.011, 144.013, and 144.072).

### ***Transportation Department Requirements***

You must register with the Texas Department of Transportation as a motor carrier if you operate a commercial motor vehicle (or combination of vehicles) with a gross weight, registered weight, or gross weight rating exceeding 26,000 pounds that is designed or used for transportation of cargo for any commercial enterprise.

## **NEED ADDITIONAL ASSISTANCE?**

### ***Resources***

EPA, Fuels and Fuel Additives Web page  
<[www.epa.gov/otaq/fuels/index.htm](http://www.epa.gov/otaq/fuels/index.htm)>

National Biodiesel Board  
<[www.biodiesel.org](http://www.biodiesel.org)>

Texas Department of State Health Services  
<[www.dshs.state.tx.us/tiertwo/default.shtm](http://www.dshs.state.tx.us/tiertwo/default.shtm)>

Small Business & Local Government Assistance Section      800-447-2827  
<[www.TexasEnviroHelp.org](http://www.TexasEnviroHelp.org)>

Industrial and Hazardous Waste Permits Section      512-239-2334

Toxics Release Inventory (TRI)      512-239-4874

Public Drinking Water Section      512-239-4691

TxLED—Air Quality Planning Section      512-239-1438

## **ABBREVIATIONS**

BOD	biochemical oxygen demand
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
NBB	National Biodiesel Board
NAICS	North American Industry Classification System
PBR	permit by rule
SPCC	spill-prevention control and countermeasures

<b>TPDES</b>	<b>Texas Pollutant Discharge Elimination System</b>
<b>TRI</b>	<b>Toxics Release Inventory</b>
<b>TxLED</b>	<b>Texas Low Emission Diesel</b>