



Regulatory Requirements for Waste-Grease-Derived Biodiesel Facilities

**U.S. EPA Region 4
Biodiesel Workshop**

October 15, 2009

**Teresa Shiflett
Program Manager/Ombudsman
Georgia Small Business Environmental Assistance Program
Environmental Protection Division**

Georgia SBEAP



Teresa Shiflett

Program Manager/Ombudsman

Small Business Environmental Assistance Program

Environmental Protection Division

404.362.4842

Teresa.Shiflett@dnr.state.ga.us

Georgia SBEAP...mission



Helping small businesses...

... understand and voluntarily comply with environmental regulations.



Georgia SBEAP...Ombudsman



Advocate for small businesses during ...

- Rule development
- Permit fee determinations
- Enforcement process

Georgia SBEAP... assistance role



- Help facilities understand permitting & compliance requirements
- Prepare/review permit applications
- Perform compliance evaluations
- Develop targeted training programs



Georgia SBEAP... Compliance Advisory Panel



- **Industry panel**
- **Appointments**
 - Governor
 - State legislature
 - EPD Director
- **Duties**
 - Oversight of SBEAP services
 - Advocate to state legislature and the governor



Overview



- Georgia's approach to bioenergy
- Applicable environmental regulations for biodiesel facilities utilizing fats, oils & grease (FOG)

“Georgia is becoming a U.S. alternative fuel leader”



Gov. Sonny Perdue

- Strong agriculture and forest products industry
- Research and development support by UGA and Georgia Tech
- Available resources, business-friendly policies, and tax incentives to help start-up companies



State Resources for Biofuels Production



- Center of Innovation for Energy

<http://energy.georgiainnovation.org>

- Bioenergy One-Stop-Shop



Governor's Bioenergy Directive



Executive Order issued in 2006:

- Requires State-owned fueling facilities to use biofuel blends for use in state vehicles
- Requires Georgia to develop a strategy for increasing renewable energy resources





Governor's Bioenergy Directive



- Requires Georgia EPD to streamline its permitting process for proposed renewable energy facilities to ensure 90-day turnaround

Goal of increasing production and use of renewable energy and biofuels in Georgia



Governor's Energy Challenge Executive Order



Executive Order issued in 2008:

- GEFA ordered to collaborate with government and private sector to develop and launch the

“Governor’s Energy Challenge 2020”



Governor's Energy Challenge Executive Order



Executive Order issued in 2008:

5 Components

- State Energy Leadership Initiative
- Energy Education and Public Awareness Campaign
- Governor's Energy Challenge to Local Governments and School Systems
- Governor's Energy Challenge to Business
- The Center of Innovation for Energy



Governor's Energy Challenge Executive Order ... 2008



Local Governments and School Systems

- Reduction in energy usage by 15% by 2020 over 2007 existing energy use levels on a per SF basis through energy efficiency or through a combination with renewable energy while supporting economic growth





What environmental regulations apply to biodiesel facilities?

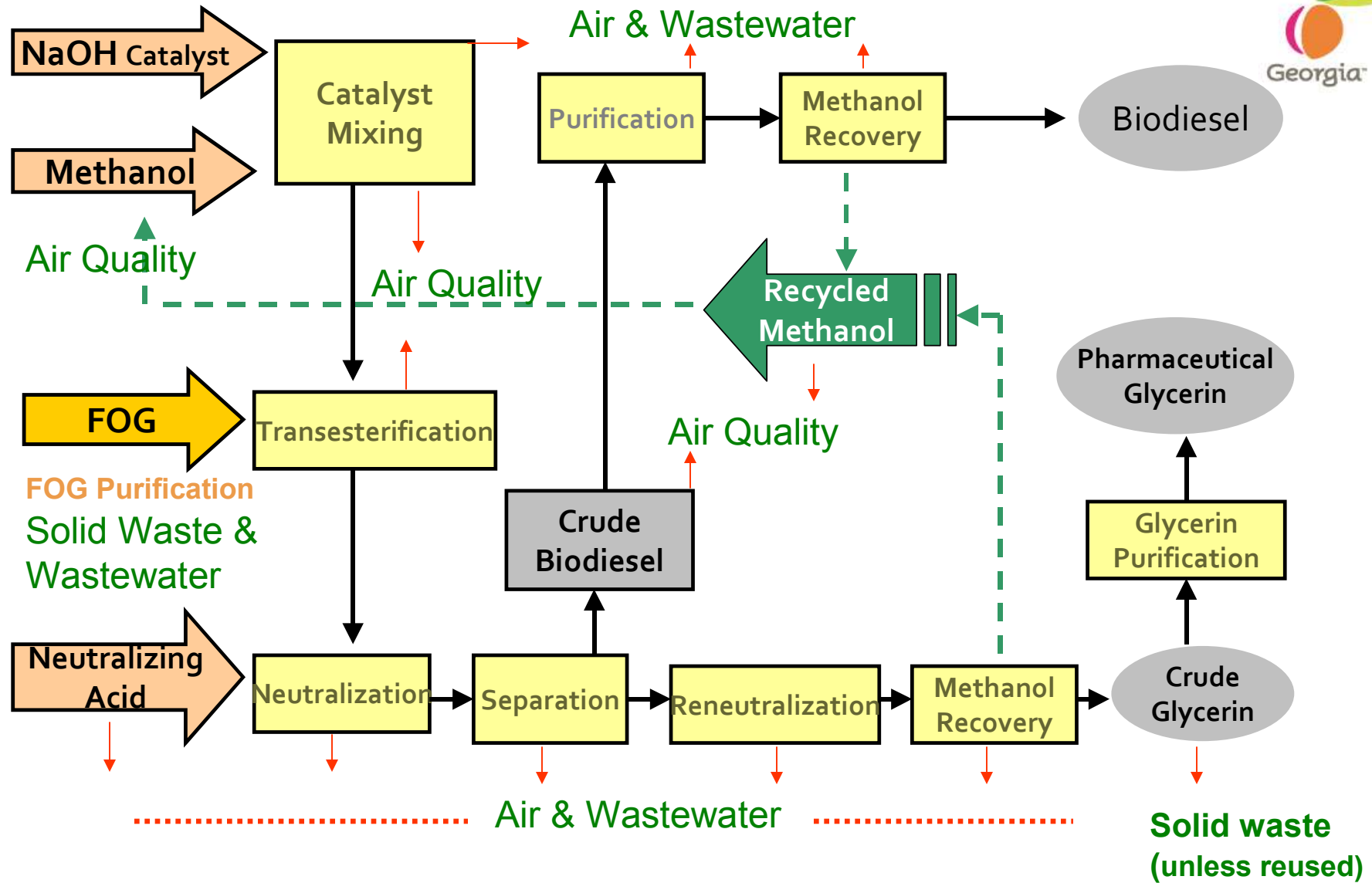


What environmental regulations apply?



- Clean Air Act
- Clean Water Act
- Safe Drinking Water Act
- Resource Conservation and Recovery Act
- Emergency Planning and Community Right-to-Know Act (EPCRA)
- Pollution Prevention Act (Federal)
- Toxic Substance Control Act (Federal)
- National Environmental Policy Act (Federal)

Overview of biodiesel production





Clean Air Act

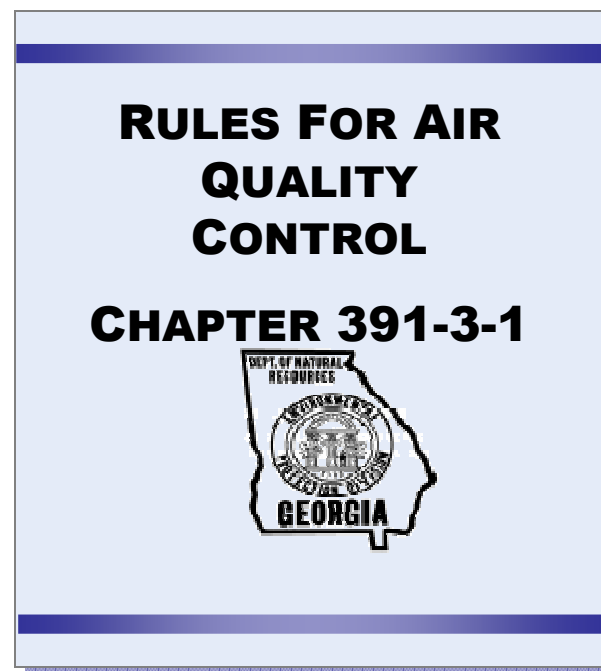


- **Environmental Rule: 391-3-1 Rules for Air Quality Control**
- **Authorizing Statute: OCGA 12-9-1 Georgia Air Quality Act**

What air pollutants are regulated from biodiesel production?



- Volatile organic compounds (VOC)
- Particulate matter (PM)
- Carbon monoxide
- NO_x
- SO₂
- Hazardous air pollutants (HAP) – methanol



What regulations are still being interpreted for biodiesel production facilities?



- **New Source Performance Standards (NSPS) required by 40 CFR 60 Subpart VV – control VOC equipment leaks**
 - **Submit Leak Detection and Repair (LDAR) Plan**
 - **Identify, monitor, and keep appropriate records of leaks**
 - **Repair or replace leaking equipment**
 - **Submit semi-annual report**

Do I need an air quality permit?



A permit is required if the biodiesel production rate is

Minor Source Permit Threshold (SIP Permit Application)

>7,000 gallons per day

>2.55 million gallons per year

Major Source Permit Threshold (Title V Permit Application)

>12.5 million gallons per year

How do you apply for a permit?



- **Complete a permit application**
- **No permit application fee**
- **Forms available from Georgia EPD's
Air Protection Branch website at:**

www.georgiaair.org/airpermit/html/sspp/sipapplic.htm

State of Georgia
Department of Natural Resources
Environmental Protection Division
Air Protection Branch



Stationary Source Permitting Program
4244 International Parkway, Suite 120
Atlanta, Georgia 30354
404/363-7000
Fax: 404/363-7100



SIP AIR PERMIT APPLICATION

EPD Use Only

Date Received: _____ Application No. 17339

FORM 1.00: GENERAL INFORMATION

RECEIVED

1. Facility Information

Facility Name: Bulldog BioDiesel Production Facility MAR 29 2007
AIRS No. (if known): 04-13- -
Facility Location: Street: 4334 Tanners Church Road AIR PROTECTION BRANCH
City: Ellenwood Georgia Zip: 30294 County: Clayton

2. Facility Coordinates

Latitude: 33° 38' 18" NORTH Longitude: 84° 18' 37" WEST
UTM Coordinates: 507065.9 EAST 9362770.8 NORTH ZONE 36

3. Facility Owner

Name of Owner: BullDog BioDiesel, LLC
Owner Address Street: 141 Blackberry Lane
City: Boalsburg State: PA Zip: 16827

4. Permitting Contact and Mailing Address

Contact Person: George Selembo Title: Partner
Telephone No.: 814-861-8100 Ext. 306 Fax No.: 814-861-8200
Email Address: gselembo@bbiod.com
Mailing Address: Same as: Facility Location: Owner Address: Other:
If Other: Street Address: 2590 Park Center Blvd, Suite 200
City: State College State: PA Zip: 16801

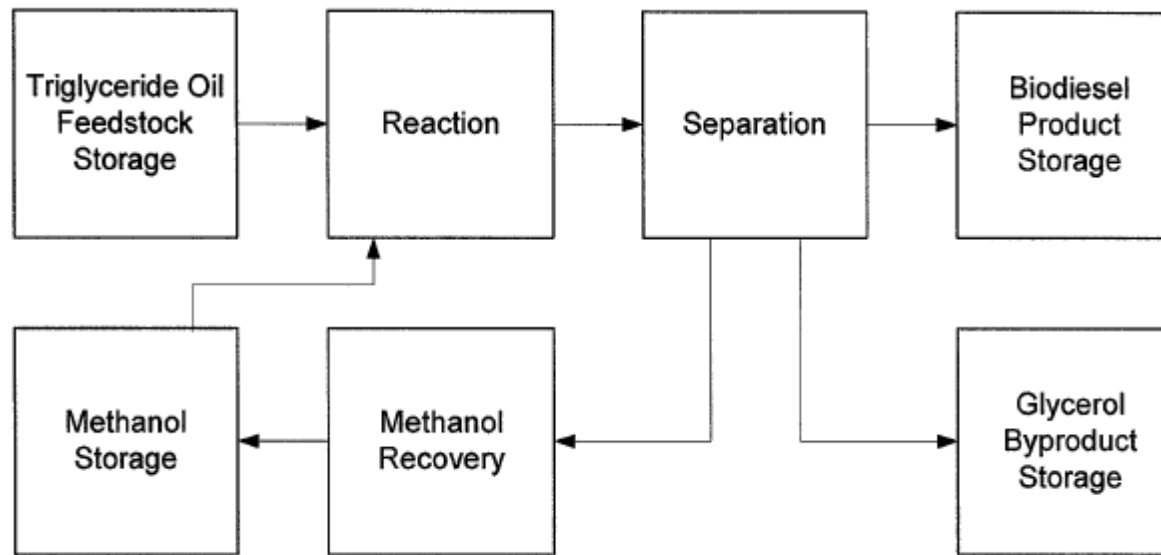
5. Authorized Official

Name: John R. McWhirter Title: President and CEO
Address of Official Street: 141 Blackberry Lane
City: Boalsburg State: PA Zip: 16827

Process Flow Diagram for permit application



Overall Process Schematic



Emissions Unit List



FORM 2.00 – EMISSION UNIT LIST			
Emission Unit ID	Name	Manufacturer and Model Number	Description
T-102	Feedstock Storage	Pittsburg Tank and Tower Co., Inc	Feedstock Oil Storage Tank
T-103	Feedstock Storage	Pittsburg Tank and Tower Co., Inc	Feedstock Oil Storage Tank
T-104	Feedstock Storage	Pittsburg Tank and Tower Co., Inc	Feedstock Oil Storage Tank
T-201	Methoxide Storage	Harrington Industrial Plastics, LLC	Sodium Methoxide Storage Tank
T-203	Methanol Storage	Harrington Industrial Plastics, LLC	Methanol Storage Tank
T-601	Fuel Oil Storage	Harrington Industrial Plastics, LLC	No. 2 Fuel Oil Storage Tank
T-626	Condensate Storage	Harrington Industrial Plastics, LLC	Condensate Storage Tank
T-635	Distillate Tank	Bowers Process Equipment, Inc.	Distillate Tank
T-650	Decolorization Feed	Harrington Industrial Plastics, LLC	Decolorization System Feed Tank
T-701	Diesel Fuel Storage	Tanks Direct	Diesel Fuel Storage Tank
T-703	Biodiesel Storage	Pittsburg Tank and Tower Co., Inc.	Biodiesel Storage Tank
T-704	Biodiesel Storage	Pittsburg Tank and Tower Co., Inc.	Biodiesel Storage Tank
T-705	Biodiesel Storage	Pittsburg Tank and Tower Co., Inc.	Biodiesel Storage Tank
T-706	Biodiesel Storage	Pittsburg Tank and Tower Co., Inc.	Biodiesel Storage Tank
E-627	Methanol Distillation	Bowers Process Equipment, Inc.	Methanol Recovery Distillation Column

Boilers & Fuel Burning Equipment



FORM 2.01 – BOILERS AND FUEL BURNING EQUIPMENT

Emission Unit ID	Type of Burner	Type of Draft ¹	Design Capacity of Unit (MMBtu/hr Input)	Percent Excess Air	Dates		Date & Description of Last Modification
					Construction	Installation	
H-603	Fuel Oil	Forced	9.99	30%	April 2007	June 2007	
H-604	Fuel Oil	Forced	9.99	30%	April 2007	June 2007	
H-605	Fuel Oil	Forced	9.99	30%	April 2007	June 2007	
H-606	Fuel Oil	Forced	4.00	30%	April 2007	June 2007	

¹ This column does not have to be completed for natural gas only fired equipment.

Organic Compound Storage Tank



FORM 2.02 – ORGANIC COMPOUND STORAGE TANK

Emission Unit ID	Emission Unit Name	Capacity (gal)	Material Stored	Maximum True Vapor Pressure (psi @ °F)	Storage Temp. (°F)	Filling Method	Construction/Modification Date	Roof Type	Seal Type
T-102	Feedstock Storage	100,000	Triglyceride Oil	0.09 @ 95	95	Truck	April 2007	Fixed	Welded
T-103	Feedstock Storage	100,000	Triglyceride Oil	0.09 @ 95	95	Truck	April 2007	Fixed	Welded
T-104	Feedstock Storage	100,000	Triglyceride Oil	0.09 @ 95	95	Truck	April 2007	Fixed	Welded
T-201	Methoxide	6,000	30 wt% NaOCH ₃ in Methanol Solution	0.653 @ 68	72	Truck	April 2007	Fixed	FRP
T-203	Methanol	33,000	Methanol	1.86 @ 68	72	Truck	April 2007	Fixed	FRP
T-601	Fuel Oil	15,000	No. 2 Fuel Oil	0.009 @ 70	72	Truck	April 2007	Fixed	Welded
T-626	Condensate	15,000	Methanol/Water	5.1 @ 104	104	Pipe	April 2007	Fixed	Welded
T-650	Decolor Feed	33,000	Biodiesel	0.65 @ 158	158	Pipe	April 2007	Fixed	FRP
T-701	Diesel Storage	1,000	Diesel Fuel	0.009 @ 70	72	Truck	April 2007	Fixed	Welded
T-703	Biodiesel Storage	50,000	Biodiesel	0.08 @ 72	72	Pipe	April 2007	Fixed	Welded
T-704	Biodiesel Storage	50,000	Biodiesel	0.08 @ 72	72	Pipe	April 2007	Fixed	Welded
T-705	Biodiesel Storage	50,000	Biodiesel	0.08 @ 72	72	Pipe	April 2007	Fixed	Welded
T-706	Biodiesel Storage	50,000	Biodiesel	0.08 @ 72	72	Pipe	April 2007	Fixed	Welded
T-801	Glycerol Storage	33,000	Glycerol	0.00005 @ 68	72	Pipe	April 2007	Fixed	FRP

Manufacturing Data – Production Input



FORM 2.06 – MANUFACTURING AND OPERATIONAL DATA

Normal Operating Schedule: 24 hours/day 7 days/week 50 weeks/yr

Additional Data Attached? - No - Yes, please include the attachment in list on Form 1.00, Item 16.

Seasonal and/or Peak Operating Periods: none

Dates of Annually Occurring Shutdowns: Last 2 weeks of December

PRODUCTION INPUT FACTORS

Emission Unit ID	Emission Unit Name	Const. Date	Input Raw Material(s)	Annual Input	Hourly Process Input Rate		
					Design	Normal	Maximum
T-102, 103, 104	Feedstock Storage	April '07	Triglyceride Oil	15,000,000 gal	600 gal	600 gal	48,000 gal
T-201	Methoxide Storage	April '07	30 wt% Sodium Methoxide in Methanol	311,500 gal	37 gal	37 gal	1,200 gal
T-203	Methanol Storage	April '07	Methanol	1,785,000 gal	213 gal	213 gal	21,000 gal
T-303	Sulfuric Acid Storage	April '07	Sulfuric Acid	154,000 gal	18 gal	18 gal	300 gal
T-323	NaOH Storage	April '07	50 wt% NaOH in water	105,000 gal	12.5 gal	12.5 gal	600 gal

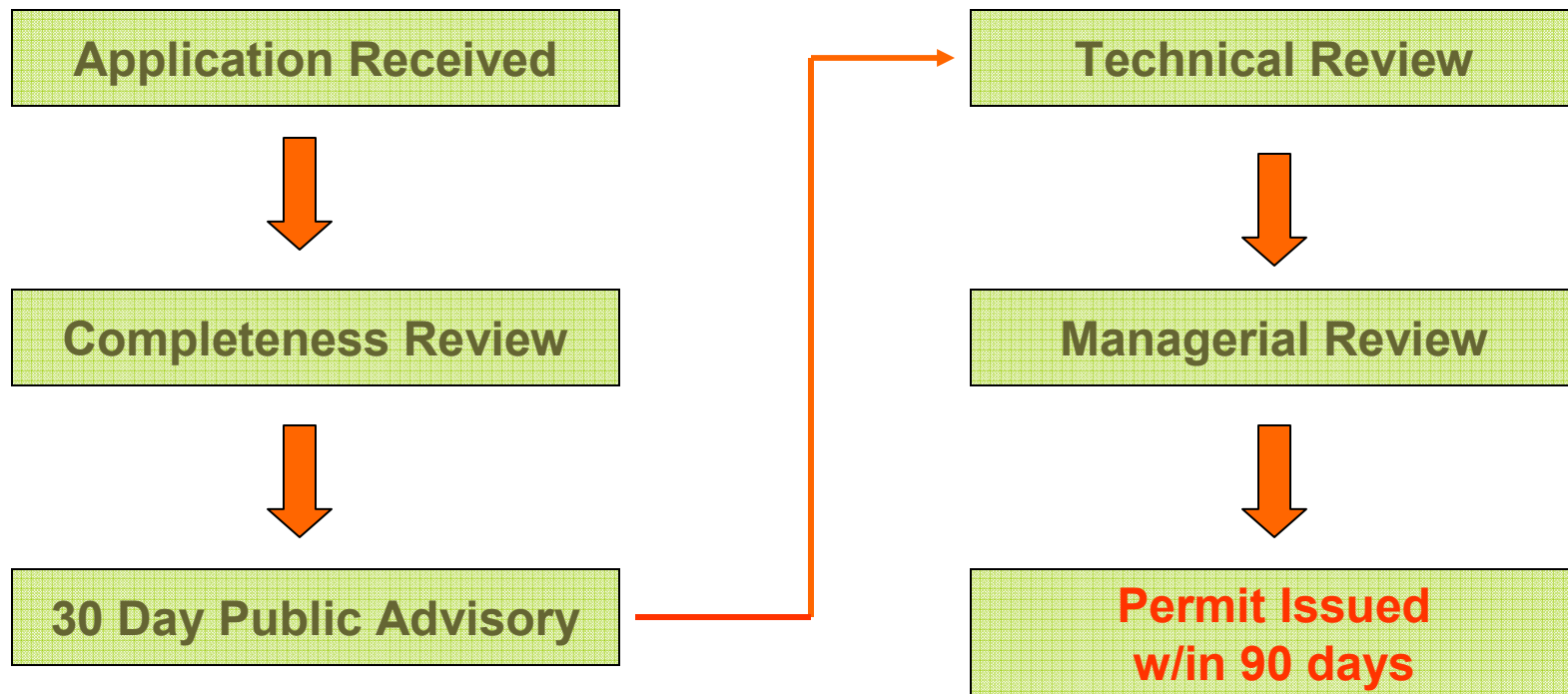
Manufacturing Data – Products



PRODUCTS OF MANUFACTURING

Emission Unit ID	Description of Product	Production Schedule		Hourly Production Rate (Give units: e.g. lb/hr, ton/hr)			
		Tons/yr	Hr/yr	Design	Normal	Maximum	Units
T-703,704, 705,706	Biodiesel Storage	14,000	8,400	3,350	3,350	3,600	lb/hr
T-801	Glycerol	4,800	8,400	1,140	1,140	1,350	lb/hr



Georgia's Air Permitting Process



Air Quality Permit



- Establishes allowable emissions limits
- Controls fugitive emissions from dust, raw material stockpiles
- Monitoring and performance testing
- Notification, reporting & recordkeeping

 **State of Georgia**
Department of Natural Resources
Environmental Protection Division
Air Protection Branch 

AIR QUALITY PERMIT

Permit No. 2869-063-0121-8-01-0 Effective Date **JUN 18 2007**

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name: **Bulldog Biodiesel**

Mailing Address: 2290 Park Center Blvd, Suite 200
State College, GA 30081

is issued a Permit for the following:


Construction and operation of a biodiesel fuel manufacturing facility (Process Line PR01).
This Permit is issued for the purpose of establishing practically enforceable emission limitations such that the facility will not be considered a major source with respect to Title V of the Clean Air Act Amendments of 1990.

Facility Location: 4334 Tanners Church Road
Ellenwood, Georgia 30294 (Clayton County)

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 17319 dated March 29, 2007; any other applications upon which this Permit is based; supporting data entered thereto or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 7 pages.


Director
Environmental Protection Division

Compliance Assistance Tools

Air Quality Compliance Timeline



AIR QUALITY COMPLIANCE TIMELINE FOR GEORGIA BIOENERGY-TO-FUEL FACILITIES

A Compliance Tool for Biodiesel Production Facilities

Now that you have obtained an air quality permit from the Georgia Environmental Protection Division (EPD), it is important to understand the requirements for maintaining permit compliance. The purpose of this guide is to assist new biodiesel production facilities with important information needed to stay in compliance with Georgia EPD air quality regulations and the specific requirements of your facility's air quality permit.

This guide contains the following information to help you understand your permit requirements:

- **Facility Start Up Requirements – Table 1**, is a checklist of important notification, emissions testing, leak detection and repair (LDAR) requirements, and reporting deadlines based on your air quality permit.
- **Required Operational Records and Reporting – Table 2**, outlines required monitoring, record keeping, preventative maintenance, and reporting activities that are necessary to stay in compliance with your facility's permit.
- **Additional Record Keeping Requirements – Table 3**, lists additional record keeping requirements that are non-schedule sensitive, but necessary for continued compliance.
- **Helpful information** is included to assist you in getting the answers you need concerning air quality compliance.

Air Quality Compliance Timeline



TABLE 1: Facility Start Up Requirements				
	Deadline	Action	Air Permit Reference	Date Completed
<i>Days Before Startup</i>				
<input type="checkbox"/>	15 Days	Notify EPD of facility start up	Section 7	
<i>Days After Startup</i>				
<input type="checkbox"/>	120 Days	Submit LDAR Plan to EPD	Section 7	
<input type="checkbox"/>	30 Days After Plan Approval	Implement LDAR Plan 30 days after EPD approval	Section 7	
<input type="checkbox"/>	150 Days	Schedule Performance Tests <i>(testing should be completed within 180 days after facility start up)</i>	Section 6	
<input type="checkbox"/>	30 Days Prior to Testing	Notify EPD in writing 30 days prior to conducting Performance Tests	Section 6	
<input type="checkbox"/>	60 Days after Maximum Production or no later than 180 days	Conduct Performance Tests for HAPs (methanol) and VOCs	Section 6	
<input type="checkbox"/>				
<input type="checkbox"/>	60 Days After Testing	Submit testing results to EPD within 60 days after testing	Section 6	
<input type="checkbox"/>	6 Months	Submit Semiannual LDAR Report to EPD	Section 7	

Reviewed By: _____ Title _____ Date: _____

Approved By: _____ Title _____ Date: _____

Air Quality Compliance Timeline



Table 2: Required Operational Records and Reporting		
Frequency	Action	Air Permit Reference
Once/Month	Record production quantities for the following: <ul style="list-style-type: none"> Biodiesel fuel produced each month (in gallons) Biodiesel fuel produced during any 12 consecutive months (in gallons) 	Section 7
Once/Month	Calculate and record the quantity of air emissions produced for the following: <ul style="list-style-type: none"> Methanol emissions each month (in tons per year) Methanol emissions during the past 12 consecutive months (in tons per year) VOC emissions each month (in tons per year) VOC emissions during the past 12 consecutive months (in tons per year) 	Section 7
Once/6 Months	Submit LDAR Report to EPD	Section 7
Notification if Emission Limits are Exceeded	Submit written report to EPD by the 15 th day of the following month if HAP (methanol) or VOC emissions, either individual or total, exceed allowable amounts	Section 7
Additional Notification for Process Equipment Breakdown	Submit written report to EPD within 7 days of any malfunction or breakdown of process equipment lasting 4 hours or more	Section 7

Compliance Assistance Tools



- Template for creating a Leak Detection and Repair (LDAR) plan
- CD of permitting resources and helpful information for One-Stop-Shop participants
 - Environmental permitting forms and guidance
 - Info on Georgia gasoline marketing and distribution requirements





Clean Water Act

- **Environmental Rule: 391-3-6 Rules for Water Quality Control**
- **Authorizing Statute: OCGA 12-5-20 Georgia Water Quality Act**



What environmental regulations apply under the Clean Water Act?



- Wastewater discharge permits
- Construction and industrial storm water permits
- Spill prevention, control and counter measure regulations
- Reporting oil discharges

What NPDES permits may be required for biodiesel facilities?



Three types of NPDES permits may be required:

- Construction Storm Water General Permit
- Industrial Storm Water General Permit
- Wastewater discharge permit

What is Storm Water Pollution?



- Storm water pollution from point and nonpoint sources
- Debris, mud, pesticides, fertilizers, heavy metals, toxic chemicals, oil, organics, bacteria, etc. that enter streams through storm water runoff
- Storm water pollution is the leading cause of water quality problems in the Nation's rivers, streams, and lakes

What are potential storm water pollutants at a biodiesel plant?



- Spilled oils and grease
- Glycerin
- Soap stock
- Mud and sediment

NPDES: Construction Storm Water Permit



When would I need a Construction Storm Water Permit?



- For construction activities resulting in land disturbance of 1 acre or more; applies to:
 - new plant construction
 - additions to an existing plant
- For construction activities of <1 acre in a larger common development (e.g., industrial park, subdivision, etc.)

How do I obtain permit coverage?



- General permits are issued by State or Federal agency
- Submit Notice of Intent (NOI) form to permitting authority
- New construction sites must submit a NOI at least 14 days prior to commencement of construction activities [in Georgia]
- Check with Local Issuing Authority (LIA) to see if a local permit is required [in Georgia]

What are the typical requirements of Construction Storm Water Permits?



- Erosion, Sedimentation & Pollution Control (ES&PC) Plan
- Site inspections
- Water sampling
- Recordkeeping
- Reporting



NPDES: Industrial Storm Water Regulations



When would a biodiesel plant need an NPDES Industrial Storm Water General Permit?



- ALL biodiesel plants that discharge storm water associated with industrial activities need a permit unless ...
 - Plant qualifies for the **Industrial No Exposure Exclusion** (check with your permitting authority)
 - Plant has zero discharge

What are the requirements of the industrial storm water permit?



- Submit the NOI form
- Storm Water Pollution Prevention Plan
- Site inspections
- Monitoring of storm water discharges
- Recordkeeping & Reporting



Storm Water Pollution Prevention Plans must:



- Identify potential storm water pollution sources
- Establish BMPs to control storm water pollution
- Outline quarterly site inspection/sampling protocols and schedule



NPDES: Wastewater Regulations



What are some potential wastewater sources at a biodiesel plant?



- FOG purification process
- Crude biodiesel separation phase
- Acid Neutralization process
- Methanol Recovery
- Equipment wash out
- Cooling water and boiler blowdown

What is an NPDES wastewater discharge permit?



- Is required for any point source discharge of wastewater to Federal or State waters
 - **No permit needed if all wastewater generated on site is contained and/or recycled (zero discharge)**
- Establishes site specific treatment criteria and general management practices for wastewater discharged

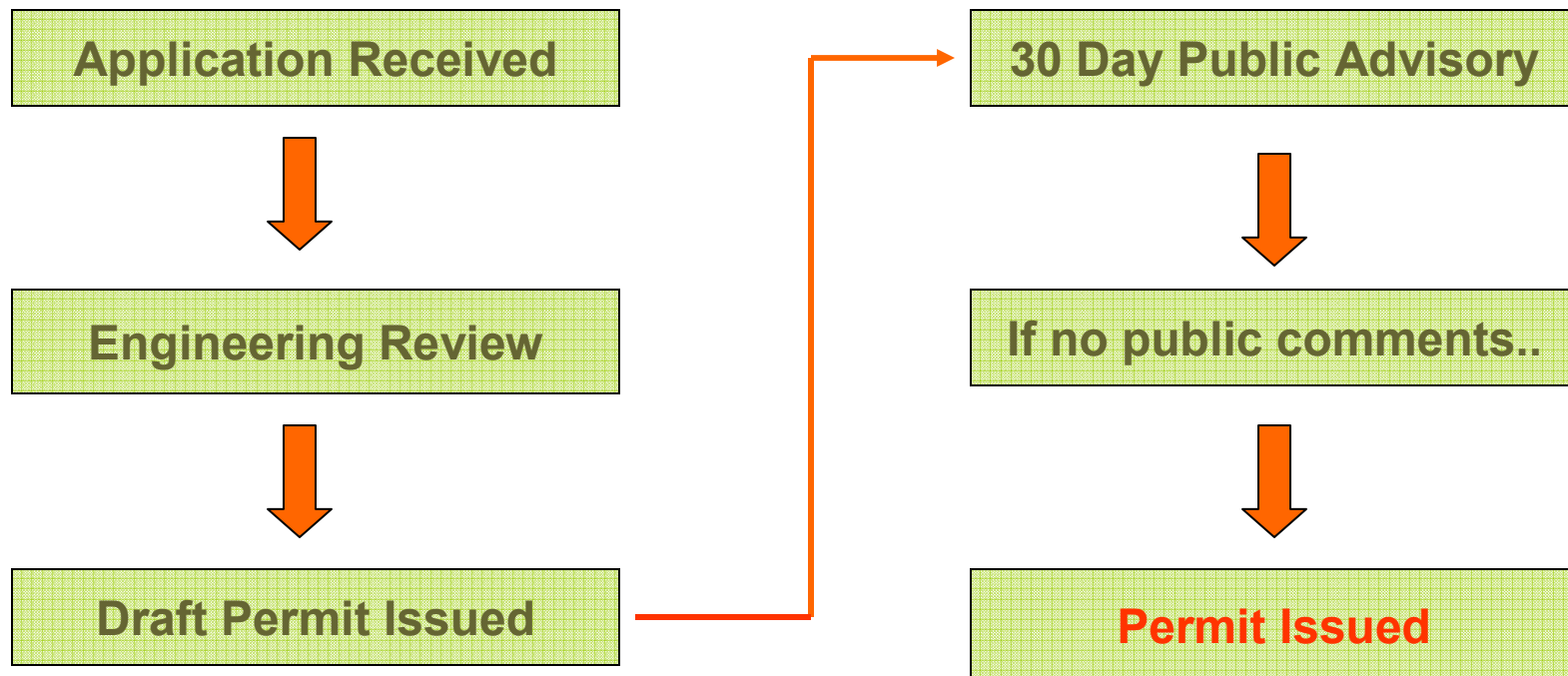
What are the options/permits for managing wastewater at my plant?



- Discharge through municipal sanitary sewer system (local government... may require an industrial pretreatment permit)
- Discharge directly to water body (NPDES)
- Land application (LAS)
- On-site wastewater recycling and reuse systems [no permit required]



Georgia's NPDES Wastewater Permitting Process



What are the permit requirements for an industrial wastewater permit?



- Establish effluent limits for wastewater parameters (including total suspended solids, oil & grease, pH)
- Maintain wastewater treatment system
- Routine collection/analysis of wastewater samples
- Notification, recordkeeping and reporting requirements





Safe Drinking Water Act



- Environmental Rule: 391-3-5 Rules for Safe Drinking Water
- Authorizing Statute: OCGA 12-5-170 Georgia Safe Drinking Water Act of 1977
- Authorizing Statute: OCGA 12-5-470 Georgia Water Supply Act
- Authorizing Statute: OCGA 12-5-120 Georgia Water Well Standards Act



Does the Safe Water Drinking Act apply to me?



- Applies to industries that operate a Public Water System which:
 - Supplies drinking water to 25 or more people at least 60 days per year
- Permits are issued by the State
- Requires a certified operator
- Periodic testing is required

Do I need a water withdrawal permit?



- Required for plants that withdraw more than 100,000 gallons per day from ground or surface water
- Permits are issued by Georgia EPD's Water Withdrawal Unit
- Requires water conservation plan
- Annual reports
- Five year progress reports

Do I need an underground injection control permit permit?



- Required for biofuel plants which:
 - Dispose of wastewater, cooling water, or other industrial process water into the subsurface
 - Operate an on-site non-domestic septic tank
 - Inject water into subsurface wells as part of a remediation project
- Permits are issued by EPD's Underground Injection Control Unit



Hazardous Waste Management Regulations

- Environmental Rule: 391-3-11 Rules for Hazardous Waste Management
- Authorizing Statute: OCGA 12-8-60 Georgia Hazardous Waste Management Act



What are some potential hazardous wastes generated from biodiesel production?



- Crude glycerin (methanol and acids or bases not recovered)
- Strong acids or bases (NaOH, sulfuric acid)
- Spent Filter Media
- Methanol-contaminated waste



Methanol recovery process



- Typically consists of boiler, distillation column, and condenser.
- Aids in preventing hazardous glycerin byproduct
- Can be economically feasible



What are some potential hazardous wastes generated from biodiesel production?



- Contaminated wash water not managed in a treatment system
- Secondary materials from transesterification process
e.g., sulfuric acid



Who will determine whether or not my waste is hazardous?



YOU WILL!

The generator determines whether or not the waste that they have generated is hazardous.

<http://www.epa.gov/waste/hazard/index.htm>

What procedures do I need to follow if I have hazardous wastes?



- Storage
- Labeling
- Reporting
- Training
- Transportation



<http://www.epa.gov/waste/hazard/generation/summary.htm>



Emergency Planning & Community Right-to-Know Act

What is EPCRA?



- Federal program that establishes emergency planning and reporting requirements for facilities using hazardous and toxic chemicals
- Community Right-to-Know allows for public awareness and access to information regarding chemicals used on site and any chemical releases to the environment



Who Regulates EPCRA in Georgia?



- Georgia EPD is designated to fulfill state reporting and public availability requirements
- U.S. Environmental Protection Agency (EPA) has primary regulatory authority under Superfund Amendments and Reauthorization Act of 1986, also called SARA Title III



Solid Waste Management Regulations



- Environmental Rule: 391-3-4 Rules for Solid Waste Management
- Authorizing Statute: OCGA 12-8-20 Georgia Comprehensive Solid Waste Management Act of 1990



What is Solid Waste?

- Any garbage or refuse
- Discarded material from industrial, commercial, mining, agricultural and community activities
- Sludge from wastewater treatment plants, drinking water supply facilities and air pollution control equipment

What materials are excluded from solid waste regulations?



- Recovered materials
- Domestic sewage
- Permitted wastewater and air discharges
- Irrigation return flows
- Radioactive waste

What are some potential solid wastes generated at biodiesel facilities?



- Used chemicals, sludge from process tank clean-outs and other production wastes
- Used engine oil, antifreeze, batteries and similar waste generated from fork lifts, cars and trucks.
- E-waste (computers, printers, copy machines, appliances).
- Packaging such as foam, strapping and lumber.
- Wastes associated with heating and air conditioning systems and building maintenance.

When will I need a solid waste permit?



- Store and process used cooking oil (vegetable oil), yellow grease, brown grease, or tallow
- Landfill solid waste on-site
- Spread solid waste on the land or compost
- Store waste in surface impoundments
- Store waste in piles or in tanks



What is a recovered material?



- Materials which have a known use, reuse or recycling potential
- Materials which can be feasibly used, reused or recycled
- Materials which have been diverted or removed from the solid waste stream for sale, use, reuse or recycling

NOTE: Does not include materials which are
“accumulated speculatively”

What is the 60/90 rule?



Recovered materials are not considered to have been **“accumulated speculatively”** if ...

- There is a known use, reuse or recycling potential for the material
- The material can be feasibly be sold, used, reused or recycled
- At least 60% of the material received during the preceding 90 days is sold, recycled, used or reused



Underground Storage Tank Regulation

- Environmental Rule: 391-3-15 Rules for Underground Storage Tank Management
- Authorizing Statute: OCGA 12-13-1 Georgia Underground Storage Tank Management Act



What is an underground storage tank (UST)?



An UST is defined as:

Any one or a combination of tanks, including underground pipes connected thereto, used to contain an accumulation of regulated substances, and the volume (including pipe volume), is 10 percent or more beneath the surface of the ground.

Notes from UST Program



- **100% biodiesel is NOT regulated**; if tank contains any other substance, it is considered diesel and is regulated
- Component compatibility needs to be considered
- Any water in the mixture will promote microbial activity causing corrosion

What are the UST regulatory requirements?



- Registration & notification
- Financial assurance
- Release detection and spill prevention
- Spill response
- Tank closure
- Recordkeeping





Spill Prevention, Control & Countermeasure Regulation

How do SPCC regulations apply to biodiesel facilities?



- Federal regulation (40 CFR 112) for the purpose of preventing oil discharges to navigable waters.
- Requires measure to prevent spills, and planning and response in the event of an oil spill to minimize environmental impacts

When do SPCC regulations apply to biodiesel facilities?



- Non-transportation related
- Total above ground oil storage capacity greater than 1320 gallons or a completely buried oil storage capacity greater than 42,000 gallons
- Reasonable expectation of an oil discharge into or upon navigable waters of the US or adjoining shorelines

WRAP - UP



- Regulatory process is very complex
 - Hire an experienced consultant
 - Talk to all of your regulators (federal, state, local)
 - Take advantage of the resources available
- If you are going to do this ... do it right!
- Produce a high quality product
 - **“One bad batch can put your business in the tank”**

For more information ...



**Georgia Small Business
Environmental Assistance Program
(SBEAP)**

**404.362.4842
877.427.6255**

www.gasmallbiz.org

Serving Small Businesses and the Environment