

Federal Environmental Laws

Biodiesel and Ethanol Production Facilities

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Overview

- Constructing and Operating - Biodiesel and Ethanol Plants
 - National Environmental Policy Act (NEPA)
 - Clean Water Act
 - Safe Drinking Water Act
 - Clean Air Act
 - Resource Conservation and Recovery Act
 - Pollution Prevention Act
 - Toxic Substance Control Act
 - Emergency Planning and Community Right-to-Know Act

Biofuels



National Environmental Policy Act

- Requires federal agencies to incorporate environmental considerations in their planning and decision-making
- Lead agency prepares a detailed statement assessing the environmental impact of activities and alternatives that significantly affect the environment
- Applies if federal money to construct a biodiesel plant or any associated facility
 - Access road or water supply

Clean Water Act

- **Dredge and Fill**

- Addresses discharges of dredged or fill material into waters of the US
- Permits are issued by the US Army Corps of Engineers
- Regulates
 - Water resource projects (e.g., dams, impoundments and levees)
 - Infrastructure development (e.g., highways and railways)
 - Altering or dredging water of the US
- General or Individual Permits
- Contact your local COE office for more information

Clean Water Act

- **Storm Water Construction Permit**
 - Addresses land disturbances caused by construction
 - Clearing, grading and excavating
 - Must be obtained for any discharges to waters of the US from construction activities that disturb one acre or more of land
 - Permits are issued by the State's National Pollutant Discharge Elimination Permitting Program

Safe Drinking Water Act

- Applies to industrial facilities that have their own source of water, such as a well or a stream, and provide drinking water to workers, visitors, etc.
- Permits are issued by the State
- Periodic testing is required
- Must have a trained and qualified operator

Safe Drinking Water Act

- **Underground Injection Control**

- Regulates wells where various municipal, industrial, agricultural and commercial users that inject fluids underground for disposal, hydrocarbon production and storage, or mineral recovery
- Purpose is to protect underground sources of drinking water
- Applies to a biofuel plant if
 - It is disposing storm water, cooling water or industrial process water into the subsurface via an injection well,
 - It has an on-site sanitary waste disposal system receiving other than solely sanitary wastewater,
 - It has an on-site sanitary disposal system (e.g., septic system) for more than 19 people, or
 - It is undergoing a remediation process where fluids are being injected to facilitate or enhance the cleanup.
- Permits are issued by the State

Clean Air Act

- Sets regulations for six principal pollutants
 - Particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, lead and ozone
- **Air Construction Permits**
 - The type of permit depends on the facility's potential to emit pollutants and the location

Air Permits

- **Major Source Permits**

- Prevention of Significant Deterioration permits
 - Requires
 - » Installation of the best available control technology
 - » An air quality analysis
 - » An impact analysis
 - » Protection of Class I areas
 - » Public involvement

Major Air Permits

- **Nonattainment New Source Review Permits**
 - Applies to new sources or major modifications at existing major sources for pollutants where the source is in an area that is not in attainment with the national ambient air quality standards (i.e., nonattainment area)
 - Requires
 - installation of the lowest achievable emission rate
 - emission offsets, and
 - opportunity for public involvement

Minor Air Permits

- Often contain permit conditions that will limit the source's emissions to avoid becoming subject to the PSD or nonattainment new source review regs
- Permit conditions generally involve enforceable emission and/or operating limits that will ensure protection of air quality

Resource Conservation and Recovery Act

- Regulates facilities that treat, store or dispose of hazardous waste
- Provides exemptions for facilities to treat hazardous waste in limited circumstances and accumulate hazardous wastes for specific reasonable periods prior to shipping offsite to a permitted treatment, storage and disposal facility
- Requires an ID if generating more than 100 kg in any calendar month

Pollution Prevention (P2) Act

- P2 involves:
 - Modifying production processes
 - Promoting the use of non-toxic or less-toxic substances
 - Implementing conservation techniques
 - Re-using materials rather than putting them into the waste stream
- EPA has a Pollution Prevention website
 - www.epa.gov/p2/

Toxic Substance Control Act (TSCA)

- Gives EPA broad authority to identify and control chemical substances that may pose a threat to human health or the environment
- Biodiesel plants might use intergeneric microbes which would make them subject to TSCA

Operating

- **CWA**

- Surface Water Discharge Permit
- Indirect Discharge Permit
- Land Application of Wastewater Permit
- Storm Water Permit

- **SDWA**

- Water Use Permit

Operating

- **Renewable Fuel Standard Program**
 - Applies if your facility produces 10,000 gallons or more of renewable fuel per year
 - Requires registration, ID number, blending requirements, exporting requirements, recordkeeping, etc
 - www.epa.gov/otaq/regs/fuels/

Operating

- **Clean Air Act**

- Major Source Title V Air Permit

- Potential-to-emit quantities greater than 100 tons per year of any criteria pollutant or
 - A major source of hazardous air pollutants

- Minor Source Air Permit

Operating

- **Emergency Planning and Community Right-to-Know Act**
 - Requires facilities with regulated chemicals above threshold planning quantities to notify the state emergency response commission and the local emergency planning commission within 60 days after they receive a shipment or produce the substance on-site
 - Report Releases or Spills
 - Report Hazardous Chemical Storage-Tier II Reporting
 - Annual Report to EPA- Form R

Thank You!

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