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Waste Tips for Biodiesel Fuel Plants

This guidance document has been produced by the Nebraska Department of Water, Energy, and Environment (DWEE) to aid operators of biodiesel fuel plants in the State of Nebraska with recognizing potentially hazardous waste streams generated by their activities. All waste generators are required to determine if their waste streams are a hazardous waste. See Nebraska [Title 128 – Hazardous Waste Regulations](#), Chapter 4 and the DWEE Guidance Document titled “Waste Determinations & Hazardous Waste Testing” for further information.

Consideration should be given not only to streams of generated waste, but also to the storage of both wastes and products. A storage capacity of over 1,320 gallons of oils subjects the facility to the Federal Oil Pollution Act – Spill Prevention Control & Countermeasure Planning (SPCCP) as per 40 CFR Part 112.

The following are waste streams that should be considered potentially hazardous wastes and require a hazardous waste determination per Title 128, Chapter 4, §002.

- Raw glycerin production with a significant amount of methanol and the glycerin not being reclaimed (Title 128, Chapter 2, §003.03C).
 - Raw glycerin is usually found to exhibit the hazardous waste characteristic of ignitability (flash point < 60°C or 140°F).
 - If considered a characteristic by-product going off for reclamation, it is not a solid waste under Nebraska’s hazardous waste regulations. Characteristic hazardous wastes include those that are ignitable, corrosive, reactive, or toxic.
 - If raw glycerin exhibits the ignitability characteristic but is recycled as a by-product, it would not be subject to Nebraska hazardous waste regulations (Title 128, Chapter 2, Table 1). If it is not recycled as a by-product and sent for disposal, it would be considered a hazardous waste.
 - A by-product burned for energy recovery is still a solid waste under Nebraska hazardous waste regulations (Title 128, Chapter 2, Table 1).
- Strong acids or bases (unused excess, off-specification material, secondary materials such as by-products or spent materials from process activities). Actual co-products are not considered to be solid wastes.

- Water–Wash wastes not managed in a Clean Water Act system.
- Methanol waste that:
 - Does not meet the comparable/syngas fuel exclusion (Title 128, Chapter 3, §018)
 - Is not a byproduct exhibiting a hazardous waste characteristic being reclaimed (Title 128, Chapter 2, §003.03C)
 - Is not a co-product
- Spent Filter Media that is not dry can be a hazardous waste as it can contain biodiesel, glycerin and/or methanol. Saturated filter media is capable of spontaneous combustion, and it burns vigorously and consistently when lit.
- Secondary materials from transesterification process (e.g., sulfuric acid)
- Fluorescent light tubes
- Sludges from floor drains, sand pits, oil/water separators, etc.
- High Intensity Discharge lamps
- Parts washer solvent, sludges, or filters
- Empty or unusable aerosol cans
- Paint wastes including spent paint solvents
- Plant maintenance
- Adsorbents
- Rags and wipers not managed under a rag laundering contract
- Batteries
- Computer monitors
- Cleaning products
- Wastewater treatment sludges
- Spent oils not managed as used oil as provided for under Title 128, Chapter 7
- Line and vessel cleaning wastes

This is not an all-inclusive list, keep an open mind and open eyes for other potential waste streams.

LAND DISPOSAL:

- Hazardous waste to be land disposed must not contain free liquid and must meet Title 128, Chapter 20 Land Disposal Restrictions (LDR).
 - Only Conditionally Exempt Small Quantity Generator (CESQG) hazardous waste or properly treated characteristic Small Quantity Generator (SQG) and Large Quantity Generator (LQG) hazardous waste may be disposed at a municipal solid waste landfill.
 - Some municipal solid waste landfills either cannot or will not accept any hazardous waste or properly and fully treated hazardous waste materials. Call the landfill first.
 - Ignitable wastes must be treated using only the designated technology-based standards found at Title 128, Chapter 20, Tables 9 & 10 (may include waste filter media).
 - Treatment must address Underlying Hazardous Constituents if applicable (Title 128, Chapter 20, §006.01).

- Waste which is contaminated with dioxin or other hazardous waste (other than a waste identified as hazardous solely on the basis of ignitability) is prohibited from use as a dust suppressant (Title 128, Chapter 7, §007.04B).
- Land application of non-hazardous process waste requires:
 - An approved special waste request (Title 132, Chapter 13, §001)

OR

- A valid determination that the material is being legitimately used for non-waste purposes and not a hazardous waste or a treated hazardous waste that did not meet the LDR.
 - For example, agronomic rate application as a soil conditioner or “approval” from the Nebraska Department of Agriculture that the waste is acceptable as a soil amendment.

RESOURCES:

- DWEE Home Page <https://dwee.nebraska.gov/>

Contacts:

- DWEE Main Number (402) 471-2186
- DWEE Toll Free Number (877) 253-2603
- DWEE Hazardous Waste Compliance Assistant (402) 471-8308
- EPA Region 7 SPCCP (913) 551-7050
- Email questions to: DWEE.moreinfo@nebraska.gov

DWEE Publications:

- Environmental Guidance Document – Comparison of Hazardous Waste Generator Requirements
- Environmental Guidance Document – Waste Determinations & Hazardous Waste Testing
Guidance documents are available on the DWEE website by clicking “Visit Nebraska Department of Environment and Energy (DEE),” selecting “Forms,” and “Publications, Grants & Forms.”
- [Title 128 – Nebraska Hazardous Waste Regulations](#)
- [Title 132 – Integrated Solid Waste Management Regulations](#)
Titles are available on the DWEE website by clicking “Visit Nebraska Department of Environment and Energy (DEE),” selecting “Resources and Services,” “Laws & Regulations,” and “Rules & Regulations.”

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