

## *Comparing Regulations for Land Spreading Across Industries with Anaerobic Digesters in Wisconsin*

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	<b>On-Farm Animal Feeding Operations Regulations</b>	<b>Landfill Solid Waste Regulations</b>	<b>Wastewater Domestic Sewage Sludge Management Regulations</b>
<u>Sampling Reqs</u>	<p>Manure, process wastewater and soil on fields used for land application shall be sampled by the permittee in accordance with this chapter and WPDES permit conditions. <b>Manure or process wastewater shall be analyzed on at least an annual basis for nitrogen, phosphorus and percent solids in years when the manure or process wastewater is applied.</b> The department may require more frequent monitoring and monitoring for other parameters as part of a WPDES permit where necessary to provide representative samples of manure and process wastewater. Manure and soil samples shall be analyzed by a laboratory certified under s. ATCP 50.50. Samples of process wastewater that are not mixed with manure shall be analyzed using applicable methods specified in ch. NR 219. The department may specify alternative methods for sampling in the WPDES permit. The permittee shall submit appropriate quality control information for sampling and analysis upon written request of the department. Note: NRCS Standard 590 requires soil testing once every 4 years.</p>	<p>Analysis of the waste material for the following parameters. The limit of detection and the limit of quantitation shall be reported with the sample results. If a substance is detected below the limit of quantitation, the detected value with the appropriate qualifier shall be reported.</p> <ol style="list-style-type: none"> <li>1. pH.</li> <li>2. Nutrient content including Kjeldahl-nitrogen, ammonia-nitrogen, nitrate and nitrate-nitrogen, phosphorous and potassium.</li> <li>3. <b>Salt content including chloride, fluoride and sulfate.</b></li> <li>4. <b>Biological populations including total coliform, fecal coliform and any virus present in the waste material.</b></li> <li>5. <b>Metals content including aluminum, barium, boron, calcium, copper, iron, manganese, magnesium, sodium, strontium and zinc.</b></li> <li>6. <b>A bulk chemical analysis for additional analytes</b> may be required by the department based on the information provided in pars. (a) to (d).</li> </ol>	<p>A representative sample of the sludge shall be analyzed by the permittee as specified in the permit, for any or all of the following parameters, depending on the treatment facility size, processes used for treatment, methods of beneficial use or disposal, and characteristics of industrial discharges to the treatment facility:</p> <ol style="list-style-type: none"> <li>1. Characteristics such as the percentage of total solids, volatile solids, pH and specific oxygen uptake rate (SOUR).</li> <li>2. Nitrogen, phosphorus and potassium.</li> <li>3. Arsenic, beryllium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium and zinc.</li> <li>4. Fecal coliform, salmonella, enteric viruses and viable helminth ova.</li> <li>5. Selected phenolics, pesticides, toxic substances and persistent organics.</li> <li>6. Priority pollutant scan.</li> <li>7. Toxicity characteristics leaching procedure (TCLP) test if landfilling.</li> <li>8. Paint filter test if landfilling.</li> <li>9. Any other parameters which the department determines may be present in the sludge and which may result in detrimental effects to public health or the environment.</li> </ol>

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