**Section 391.501 Sludge Sampling and Analysis**

a) Permit applications, except water treatment plant sludge application projects, shall provide analyses for the following parameters;

1) % total solids, % volatile solids, pH, volatile acids (if anaerobic digestion is used);

2) Total Kjeldahl nitrogen, ammonia nitrogen, phosphorus and potassium;

3) Cadmium, copper, lead, manganese, nickel and zinc.

b) All analyses for Subsections (a)(2) and (3) above must be reported in mg/kg (dry weight basis).

c) Wastewater treatment plants whose design population equivalents are less than 1000, which have sanitary sewers not subject to large inflow sources and do not receive any industrial process wastewater may request an exemption from analyzing the metals under Subsection 391.501 (a) (3) except for cadmium which must always be analyzed. These generators shall periodically analyze their sludge used for land application and make the necessary calculations for nutrient and heavy metal loadings in accordance with the following schedule:

|  |  |
| --- | --- |
| Design Population Equivalents | Frequency of Sludge Analysis |
|  |  |
| >100,000 | Monthly |
| 10,000-100,000 | Quarterly |
| 1000-9999 | Semi-annual |
| <1000 | Annual |

1) If a treatment plant sludge application project is limited by heavy metal loading more frequent sludge analysis shall be required by the Agency as necessary to assure compliance with the Act and 35 Ill. Adm. Code, Subtitle C, Subchapter l.

2) If sludge analyses show only minor deviations in sludge quality, the applicant may request a less frequent sludge sampling and analysis program or compositing of samples with less frequent analyses of samples.

d) Water treatment plant sludge permit applications shall provide analyses for the following parameters:

1) % total solids, pH, % calcium carbonate equivalent;

2) Arsenic, barium, cadmium, chromium (hexavalent), chromium (total), copper, mercury, nickel, selenium, silver and zinc;

3) The Agency shall request an applicant to analyze water treatment plant sludge for additional parameters and limit sludge application rates based on these other parameters as necessary to prevent groundwater or surface water pollution, phytotoxicity, mammalian toxicity or other environmental concerns.

4) If raw water or sludge analyses show only negligible amounts of metals listed in (d)(2) above, the applicant may request less parameters to be analyzed.

e) All analyses for Subsection (d)(2) above must be reported in mg/kg (dry weight basis).

f) Water treatment plants shall analyze their sludge on an annual basis. For facilities that have on-site storage lagoons, analyses shall be performed at the time of lagoon cleanout.