

DEPARTMENT OF REVENUE

Revenue Notice # 98-17: Sales and Use Tax - Biosolids Processing Equipment

Introduction

Beginning July 1, 1998, exemptions are provided in Minnesota Statutes, § 297A.25, subdivision 73, for the gross receipts from the sale of and the storage, use, or consumption of equipment designed to process, dewater, and recycle biosolids for wastewater treatment facilities of political subdivisions and materials incidental to installation of that equipment.

Generally, this exemption includes equipment used to process, dewater, and recycle biosolids. The exemption also includes all materials necessary for the installation of this equipment or attached to this equipment, such as piping and pipelines, conduit, electrical wiring, instrumentation, and electrical systems. Also exempt are repair and replacement parts for qualifying equipment.

This revenue notice defines some of the terms used for administering this exemption, discusses some common processes used for processing biosolids, and gives examples of equipment used in these processes which qualify for exemption. Contact the Department of Revenue, Sales and Use Tax Division, for information on how this exemption applies to equipment used in biosolids processes which are not included in this revenue notice.

Biosolids

For purposes of administering this exemption, the term **biosolids** means sewage sludge which has been processed to meet federal and state regulations for beneficial use by land application. Biosolids are the primarily organic byproduct of wastewater treatment which can be beneficially recycled on land as a soil conditioner and nutrient source.

Biosolids do not include untreated wastewater or sewage sludge that does not conform to regulated pollutant and pathogen treatment requirements. It also does not include grit and screenings from preliminary treatment of wastewater and ash generated from the burning of sewage sludge.

Sewage sludge has the meaning given in Minnesota Statutes, § 115A.03, subdivision 29.

Processing of biosolids

The following provides general information on biosolids processing, on four processes used for processing biosolids, and gives examples of equipment used in those processes which qualify for the biosolids processing equipment exemption.

The processing stage in which sewage sludge becomes a biosolid is **stabilization**. **Biological and chemical stabilization** reduce harmful bacteria and odors and hasten decomposition of organic compounds. After stabilization, **biosolids** are acceptable for use as a soil conditioner and nutrient source.

Biological stabilization

Biological stabilization reduces the organic content of solids through controlled decomposition by biological agents. Biological stabilization processes include anaerobic (without oxygen) and aerobic (with oxygen) digestion. **Digestion** is the breakdown of complex organic substance through the action of bacteria or other microorganisms.

Anaerobic Digestion Process

The processing and recycling of biosolids using an anaerobic digestion process begins at digestion and ends with the application of the biosolids to the land. Equipment used in the following activities qualifies for the biosolids processing equipment exemption: pre-digestion thickening provided the thickener exclusively serves digesters, anaerobic digestion, chemical conditioning, biosolid transfer pumping, solids processing, storage, and land application of biosolids.

Examples of qualifying equipment used in these activities include dissolved air floatation thickeners, belt thickeners, hot water boilers, hot water pumps, recirculation pumps, heat exchangers, valves, fixed covers, floating covers, reclamation pumps, polymer feeding equipment, ferric chloride storage and feed pumps, transfer pumps, dewaterers, mixing equipment, compressors, control equipment, truck loading equipment, storage equipment including tanks, scales, and land applicators. Also exempt are sludge inflow pipes from thickeners to digesters and concrete and materials used to build an anaerobic digester.

Aerobic Digestion Process

The processing and recycling of biosolids using an aerobic digestion process begins at digestion and ends with the application of the biosolids to the land. Equipment used in the following activities qualifies for the biosolids processing equipment exemption: pre-digestion thickening provided the thickener exclusively serves digesters, air heating, sludge heating, aerobic digestion, curing/storage, centrifuge/dewatering, biosolids storage, and land application of biosolids.

Examples of qualifying equipment used in these activities include thickeners, blowers, aluminum covers, mechanical aerators, diffused aeration systems, lift-out header systems, floor-mounted header systems, valves, heat exchangers, sludge recirculation pumps, hot water boilers, hot water pumps, transfer pumps, mixing equipment, centrifuges, dewatering equipment such as belt filter presses and plate and frame filter presses, storage equipment including tanks, and land applicators. Also exempt are sludge inflow pipes from thickeners to digesters and concrete and materials used to build an aerobic digester.

Chemical stabilization

Chemical stabilization creates conditions that inhibit microorganisms in order to slow the decomposition of organic materials and reduce odor. The most common chemical stabilization process is to treat sewage sludge with alkaline chemicals such as lime.

Advanced Alkaline Stabilization Process

The processing and recycling of biosolids for an advanced alkaline stabilization system begins at the stage where the alkaline chemical is added to or mixed with the sewage sludge and ends with the application of the usable soil product to the land. Equipment used in processes where stabilization of the sewage sludge by the alkaline chemical results in land application of the resulting biosolid qualifies for the biosolids processing equipment exemption. Such processes may include: unit control room, thickening and dewatering exclusively for the alkaline process, polymer blending, mixing, truck loading, odor control, pasteurization monitoring, windrowing, storage, and land application of the soil product.

Examples of qualifying equipment include unit control room equipment, thickeners, dewaterers, polymer feeding equipment, chemical storage and feeding equipment, mixing equipment, conveyor belts, truck loading equipment, odor control equipment, air scrubbers, automated sensors, moveable floors and covers for trailers if sold separately from the trailer, windrow turning machines, front end loaders if used exclusively for product storage, and land applicators used exclusively to apply the useable soil product. Also exempt are sludge inflow pipes from thickeners to the stabilization unit.

Heat Drying Process

Heat drying processes remove virtually all water from biosolids and can stabilize biosolids to meet regulatory standards. An example of a heat drying process is a drum drying system

Drum Drying System

The processing and recycling of biosolids using a drum drying system begins at sludge heating and ends with the application of the usable granular material to the land. Equipment used in the following activities qualifies for the biosolids processing equipment exemption: thickening and dewatering prior to sludge heating provided the thickeners/dewaterers exclusively serve the drying process, process air heating, sludge drying, cooling and cleaning water from hot air, materials sorting, conveying materials through the process, materials screening, coarse materials grinding, fine and wet materials mixing, materials discharge, sacking and weighing, storage, and land application of the granular material.

Examples of qualifying equipment include thickeners, dewaterers, furnaces, drying drums, preseparators, polyclones, delivery fans, rotary valves, screw conveyors, vibrating screens,

roller mills, elevators, fine material recycling silos, fine material closing screws, fine material stock silos, wet material closing screws, mixers, granulate product silo, sacking system, heat exchangers, saturator/scrubbers, sensors, storage equipment, and land application equipment used exclusively to apply the granular material.

Non-qualifying Equipment

Equipment which does **not** qualify for the biosolids processing equipment exemption includes motor vehicles (trucks, trailers) subject to the sales tax on motor vehicles under Minnesota Statutes, Chapter 297B and equipment used in the preliminary and secondary treatment of wastewater.

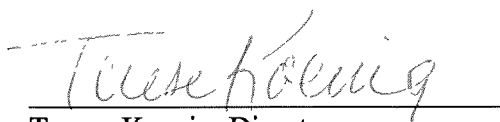
Equipment used in the disposal of sewage sludge is not included in this exemption. Disposal includes landfilling and incineration. Disposal also includes storing sewage sludge in lagoons for more than two years. Other non-qualifying equipment includes equipment used in disposing of biosolids by shipment to landfills, equipment used to incinerate sewage sludge, and equipment used in processing or disposing of incinerator ash.

This exemption also does not include building materials and supplies used to construct buildings which house qualifying equipment and for space heating, ventilation, and lighting of buildings.

To claim exemption

The purchaser must furnish their supplier with a properly completed Certificate of Exemption, Form ST-3 (Exemption Code 20), indicating the equipment qualifies for the biosolids processing equipment exemption as explained above

Dated: 24 August 1998



Terese Koenig, Director
Appeals, Legal Services and Criminal Investigation
Division