

C A L C I U M   O X I D E  
F O R   W A S T E W A T E R   R E S I D U A L S



CLC DELIVERS SOLUTIONS

# CALCIUM OXIDE

BIOSOLIDS

*High-quality, technologically advanced products for the wastewater-to-biosolids industry, ensuring cost-effective regulatory compliance.*

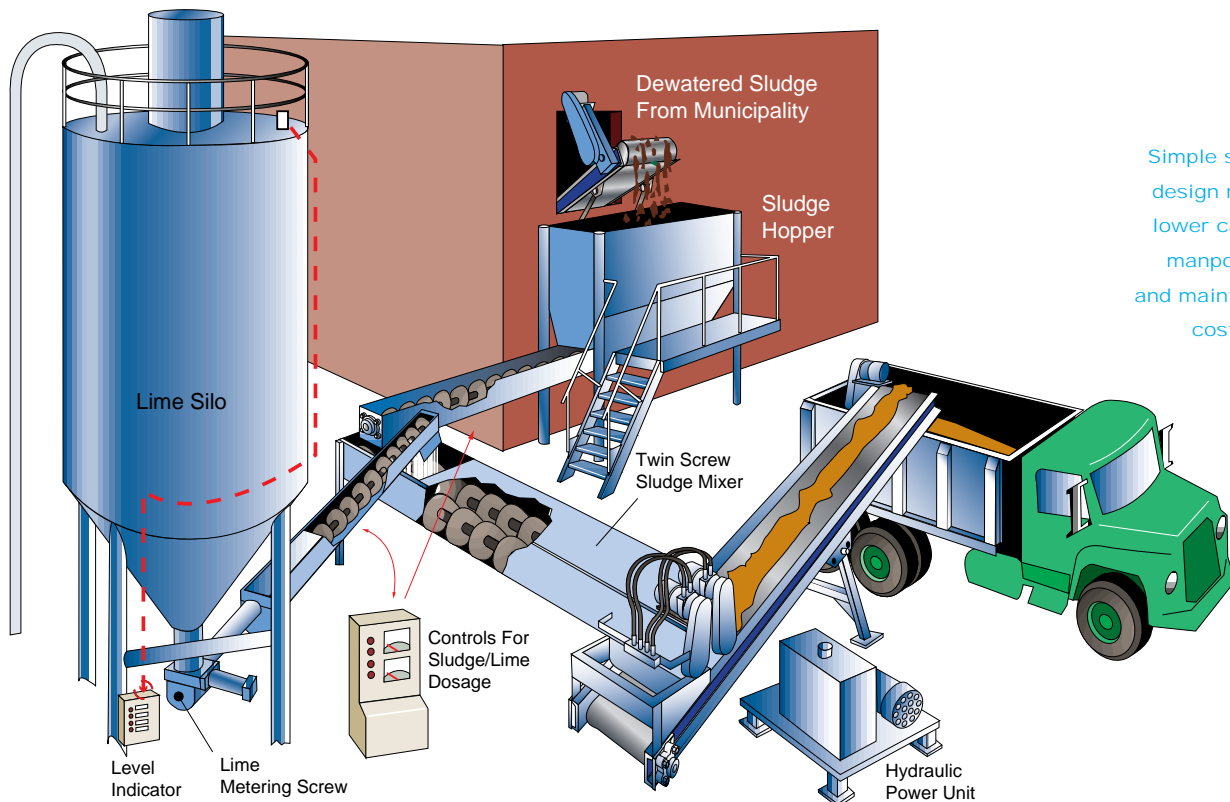
Lime — calcium oxide — treatment provides one of the most efficient methods available for the processing of wastewater residuals. Low cost and easy to use, calcium oxide enables wastewater treatment system operators to achieve — or surpass — federal mandates (EPA 503 Class A and Class B) and state requirements for pathogen reduction and vector attraction reduction without the use of capital-intensive or proprietary processes.

## Versatile Technology = Regulatory Compliance

Processing wastewater residuals with calcium oxide produces materials that are eligible for a variety of beneficial reuse options: surface disposal, land application (food and nonfood crops), landfill applications, and land reclamation. In addition to pathogen reduction and vector attraction reduction, calcium oxide provides excellent long-term organic odor control.

Because calcium oxide treatment is an inexpensive process, it ensures compliance for facilities using digestion technologies—picking up where other processes often fall short.

Class A pasteurization requires that residuals be heated to 70°C for at least 30 minutes. Calcium oxide provides both the heat required for pasteurization (via the exothermic reaction between the moist residual and the reactive calcium oxide) and



Simple system design means lower capital, manpower, and maintenance costs.



Class A and Class B calcium oxide-treated biosolids can be used on nonfood crops.

the elevated pH necessary to achieve pathogen reduction attraction.

Class B stabilization requires that residuals maintain a pH of 12 for 24 hours. Calcium oxide provides for both the pathogen reduction and vector attraction reduction.

Achieving Class B status requires less calcium oxide than that required for achieving Class A, therefore Class B residuals can be upgraded to Class A by simply increasing the calcium oxide dosage. In addition, Class A and Class B materials can be produced using the same equipment, increasing disposal options.

#### “One-stop Shopping”

Economical, turnkey lime treatment systems can be custom-engineered to serve plants processing anywhere from two MGD to 200 MGD. State-of-the-art systems features include metered sludge hoppers, lime silos, mixers, lime feeders, pug mills, storage and loading bins, and any necessary conveying equipment. Hydraulic motors on the sludge and lime feeds are controlled

by electronic processors that permit automatic mixing adjustments based on belt press output, weather conditions, prevailing state and federal regulations, and intended use. Straight-forward system design means customer personnel can operate the systems without extensive or expensive training. CLC processing systems and products are available for purchase or lease on a price-per-ton basis and feature a maintenance support program.

#### Product Specifications and Delivery

CLC’s calcium oxide for wastewater residuals treatment is custom sized and ANSI/NSF 60 certified. The material is generally delivered in pneumatic trucks for quick, clean off-loading into a silo. The delivery process is handled exclusively by the truck driver.

Approximately 200 wet tons per day are processed through the small system.

#### On-site Demonstration

Chemical Lime Company’s mobile demonstration unit is available for use at a customer’s site using dewatered residuals from the local facility. CLC delivers the unit and runs the material through the system. Wastewater treatment system operators receive first hand knowledge of the ease of achieving compliance with lime at a fraction of the cost of other currently available processes. Able to process up to



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50 wet tons per day, this full-size machine is also available for lagoon clean-out and emergency situations.

Chemical Lime Company is North America's leading producer and supplier of solutions-oriented, lime-based products for industrial, municipal, and environmental applications. CLC, headquartered

in Fort Worth, Texas, has 40 locations in North America. The company serves the water, wastewater, steel, paper, building construction, highway construction/soil and asphalt, mining, copper, gold and alumina processing, flue gas desulfurization (FGD), and industrial markets. CLC is a member of the Lhoist Group, Brussels, Belgium.

Please refer to Material Safety Data Sheets for product safety information.

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Information subject to change.

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CLC's mobile demonstration unit—available for use on the customer's site, using the plants residuals.



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