

ADVANTAGES AND DISADVANTAGES OF PRODUCING EXCEPTIONAL QUALITY BIOSOLIDS

In January and May 1997 the Pennsylvania Department of Environmental Protection's (DEP) Municipal Waste Regulations were changed, which may impact decisions made concerning biosolids handling.

The most significant regulation change is that DEP is now issuing land application beneficial use permits for exceptional quality and non-exceptional quality biosolids. The requirements for the two types of biosolids are different with the more stringent requirements applying to the non-exceptional quality biosolids.

There are many reasons wastewater-facilities may want to consider a different approach to biosolids reuse/recycle program, switching from a non-exceptional quality land application program to an exceptional quality biosolids program. Some of these reasons are:

- Significant costs can be incurred in permitting additional farmland for handling non-exceptional quality biosolids.
- Wastewater treatment facilities do not have adequate control over operational techniques, quantities and times, with farm owner decisions prevailing.
- Available, local land, with owners willing to participate in this type of program, is getting more difficult to locate and secure.
- Public perception and a NIMBY

(Not In My Back Yard) attitude can be difficult to overcome.

- Compliance with PA DEP and U.S. EPA regulations is more involved.

DEP's new exceptional quality biosolids permitting alternative provides wastewater facilities with an option to produce a marketable product with less regulatory requirements than in the past. Biosolids must meet five criteria to be considered exceptional quality by DEP. These criteria are:

- Be non-liquid.
- Be non-recognizable as human waste.
- Have pollutant concentrations that do not exceed DEP limits.
- Meet one of six Class A pathogen reduction requirements.
- Meet one of eight vector attraction reduction requirements.

Advantages of producing exceptional quality biosolids include the following:

- Public perception that "exceptional

quality" is better than "non-exceptional quality." Frequently "perception" is "reality."

- The environmentally sound beneficial reuse of exceptional quality biosolids can be more widespread. Exceptional quality biosolids can be distributed for use on lawns and home gardens and can be sold and given away.
- Written consent of the landowner does not have to be obtained prior to land application.
- Adjacent landowners, the county and the municipality do not have to be notified in writing prior to the first time biosolids are spread at a site.
- Soil sampling is not required. With non-exceptional quality biosolids, soil sampling is required before biosolids are applied for the first time and soil pH must be monitored regularly because of a minimum soil pH requirement.
- A Sewage Sludge Enhancement Plan does not have to be prepared.
- Equipment used in land application does not have to be placarded.

Disadvantages of producing exceptional quality biosolids include the following:

- The cost of building and operating the facilities necessary to produce exceptional quality biosolids can be more than the cost to build and

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operate facilities producing non-exceptional quality biosolids.

- More byproduct monitoring is required.

In summary, advantages of developing an exceptional quality biosolids program include a more sound, environmentally better program for the ultimate reuse/recycle of the WWTP-produced biosolids, the potential to have a marketable product, fewer and less stringent regulations, a higher public opinion and the availability of more land for reuse areas. The main disadvantage is the additional cost involved in constructing and operating such a program.

DEP Announces Final Rule Making - Chapter 94 (Municipal Wasteload Management)

On June 16, 1998, the Environmental Quality Board approved final regulations amending 25 PA Code Chapter 94, with the amendments placed into effect with publication in the September 5, 1998 *Pennsylvania Bulletin*.

The Chapter 94 program, or better known as the WWTP Annual Wasteload Management program, was amended by these new rulings to improve specific sections that have been identified as obsolete, too prescriptive or written in a way that may cause significant noncompliance. The amendments went into effect upon publication in the *Pennsylvania*

Bulletin as final rule making. The major elements of the final rules are:

1. Annual report content requirements have been clarified and simplified for better and easier understanding.
2. The proposed requirements for measuring wastewater flows were revised and clarified so that only one total plant flow meter would be required.
3. A number of provisions have been added outlining and promoting pollution prevention techniques at wastewater treatment plants.
4. The final Chapter 94 rule deletes sections of the regulations which indicate the PA DEP's delegation for the administration of the U.S. EPA pretreatment program. DEP does not intend to accept delegation at this time.

If you are involved with your facilities Chapter 94 program and would like additional information, please contact Glenn Maurer at DEP
11th Floor
Rachel Carson State Office Bldg
400 Market Street
P.O. Box 8774
Harrisburg, PA 17105-8774
(717) 787-9666, or your consultants, or our office.

Review the *Pennsylvania Bulletin* for the final rule or a copy of the final rule is available through DEP's web site at <http://www.dep.state.pa.us>.

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Check out these articles and more at CET's Technology Transfer Corner at www.cet-inc.com

Strategies for Complying with the Total Residual Chlorine Rule without Compromising Disinfection Performance

Disinfection is probably the most important wastewater unit process because of its role in protecting human health. Many factors must be considered when selecting a disinfection alternative which limits total residual chlorine. CET's Pete Lusardi, P.E., has prepared this interesting article to assist owners and operators of wastewater treatment facilities in evaluating and selecting a residual chlorine strategy.

Understanding and Using Compressive Strength Tests of Cast-in-Place Concrete

What is the purpose of concrete testing during the construction of water and wastewater treatment facilities? What do the results mean and to what extent can they be applied in evaluating the work of the contractor? These questions and more are handled in this article by CET's Ken Grubb, P.E.

Practical Guidance for Industrial Waste Pretreatment Programs

Will you be ready when DEP inspects your wastewater treatment plant laboratory? What will they look for? How can you be at your best? Judy Musselman's article on Laboratory Audits will help you be more prepared.

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Look for information and periodic updates on a Class A biosolids demonstration project involving CET, DEP and several Dauphin County municipalities in future issues of etCETera.

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Published by CET Engineering Services, Raymond H. Myers, P. E., Editor, rhmayers@cet-inc.com