

Public Comment on Proposed Edits to Delaware's 1301 Solid Waste Regulations

To Whom It May Concern,

We respectfully request the inclusion of more technology-inclusive language in the proposed updates to Delaware's 1301 Solid Waste Regulations, specifically as they pertain to the treatment of regulated medical waste (RMW).

Currently, the regulation references **autoclaves** as the sole example in multiple sections, specifically 11.13.2.5.1, 11.13.3.3.1, and Appendix B.3. In these examples, autoclaves are used to illustrate placement of biological indicators and challenge load preparation. While autoclaves are widely used and historically important, they are no longer the only approved treatment option. Several more environmentally sustainable technologies are currently in use and approved by state agencies, including Delaware, for the treatment of biohazardous medical waste.

Three Autoclave Examples

- 11.13.2.5.1
 - "...For example, the worst case scenario for an autoclave would be to place the container(s)container or containers of test microorganisms and/or indicator microorganism spores within a sharps container that must in turn be deposited in a plastic biohazard bag that is then located centrally within the challenge loads."
- 11.13.3.3.1
 - "...For example, an autoclave may use option 3 (e.g., demonstrate at a minimum the destruction of one million1,000,000 *Bacillus stearothermophilus* spores) to meet the Periodic Verification Test requirement."
- Section 11.0 Part 1 Appendix B. 3
 - "...For example, the worst case scenario for an autoclave would be to place the container of test microorganisms and indicator microorganism spores within a sharp container that must in turn be deposited in a plastic biohazard bag that is then located centrally within the treatment unit."

Why This Matters

Referencing only autoclaves as examples of how to meet biological indicator requirements implies a preference or default to those legacy technologies. This may unintentionally discourage innovation or create a regulatory perception that newer, safer, and more sustainable alternatives are less valid, even when they meet or exceed the same efficacy and verification standards.

As Delaware continues to prioritize sustainability in waste management and climate planning, regulations should reflect the availability and applicability of low-emission, energy-efficient alternatives to traditional thermal methods.

Proposed Solution

We propose that DNREC revise the language in at least one of the three sections where autoclaves are referenced as an example to include a **non-thermal technology** instead of, or in addition to, autoclaves. This would create a more balanced, technology-neutral regulatory framework.

Suggested Revision – Section 11.13.3.3.1

Current text (excerpt):

- “For example, an autoclave may use option 3 (e.g., demonstrate at a minimum the destruction of 1,000,000 *Bacillus stearothermophilus* spores)...”

Proposed revision:

- “For example, an autoclave may use option 3 (e.g., demonstrate at a minimum the destruction of 1,000,000 *Bacillus stearothermophilus* spores), or an approved ozone-based treatment system may use option 3 (e.g., demonstrate at a minimum the destruction of 1,000,000 *Bacillus Atrophaeus* spores)...”

This simple revision retains the clarity and intent of the regulation while acknowledging the reality of the evolving technology landscape.

Including broader, technology-neutral examples in Delaware's Solid Waste Regulations will support innovation, encourage adoption of environmentally preferable systems, and reflect the diversity of approved medical waste treatment methods already in use across the state. It also aligns with Delaware's broader environmental and sustainability goals.

Dec. 22, 2025



Thank you for your time and consideration. We would be happy to engage in conversation should your team have an interest in discussing further.

Kelly Prchal, CEO
Clean Waste Systems
612-599-1226
Kelly@CleanWasteSystems.com

And

Peter Jude, COO
Clean Waste Systems
(320) 963-1953 ext 4
Peter@CleanWasteSystems.com