ZETA | ZERO EMISSION TRANSPORTATION ASSOCIATION

Overview of EPA Interim Guidance on Destroying and Disposing of Certain PFAS and PFAS-Containing Materials That Are Not Consumer Products

Agency: Environmental Protection Agency (EPA)
Action: Interim guidance released on April 9, 2024 that builds on guidance EPA issued in 2020 by incorporating information gained from new EPA test methods as well as recent findings pertaining to destruction and disposal of PFAS-containing materials in non-consumer settings.
Next Steps: EPA is now accepting public comment on this recently introduced interim guidance for 180 days. Submit public comments via the federal eRulemaking portal.
Authority: EPA was required by the National Defense Authorization Act (NDAA) to issue this guidance and per the Act will review public comments and new science to revise the interim guidance again within three years.
Goal: The updated guidance gives government officials and private industry the ability to make informed decisions on PFAS disposal and destruction.
Why Does this Matter for ZETA: *Understanding the relevance of this guidance for battery manufacturers and recyclers.*

Key Links:

- 2024 Press Release
- 2020 Press Release
- Interim Guidance Landing Page
- Interim Guidance Document
- Interim Guidance Fact Sheet
- Interim PFAS Destruction and Disposal Guidance; Notice of Availability for Public Comment

Overview:
The interim guidance **does not** establish requirements for destruction or disposal of PFAS materials. The updated guidance gives government officials and private industry the ability to make informed decisions on PFAS disposal and destruction. The guidance also doesn't appear to show any potential impacts to battery recyclers or manufacturers directly. Overall the guidance offers **recommendations** for how decision makers should destroy and dispose of PFAS and PFAS materials with three main techniques being identified by EPA as the most promising:

- Underground injection (UIC),
- Landfills,
- Thermal treatment under certain conditions, which includes incineration.

Further, the guidance summarizes research needs and data gaps and calls for increased collaboration with EPA to collect data and enhance decision-making. The guidance also describes new EPA test methods and improved screening tools to identify and prioritize safeguards for communities located near destruction and disposal facilities that are already overburdened by pollution. Notably, decisions regarding the management of PFAS and PFAS-containing materials are specific to each type of material and destruction and disposal option. The guidance also provides a technology evaluation framework to help analyze the effectiveness of new destruction and disposal technologies. Additionally, EPA recommends using their shared tools, methods, and approaches for considering the impacts of potential releases and exposure on communities near disposal facilities.

There is ongoing research on this topic. Accordingly, EPA will review public comments and new science to revise the interim guidance again within three years as required by the National Defense Authorization Act (NDAA).

Manufacturers/Recyclers Mentions:
Battery recycling isn't mentioned directly as a PFAS linked industry, but there is a table on p.18-21 of the guidance document that notes battery/electronic manufacturers as an industry that uses PFAS containing materials in manufacturing. Automotive component manufacturing and the mining industry are noted in this table as well. The guidance then serves as a helpful way to handle PFAS and PFAS materials from a manufacturing perspective as a byproduct and input, but doesn't touch on the perspective of a secondary recycler of those manufactured products.

In the context of battery recyclers outside research notes that "currently the most common LIB recycling process involves pyrometallurgy, which operates at high temperatures (up to 1600 °C), sufficient for PFAS mineralization." "...However, hydrometallurgy, an increasingly popular alternative recycling approach, operates under milder temperatures (<600 °C), which could favor incomplete degradation and/or formation and release of persistent fluorinated substances." In this case, if an organization used the hydrometallurgy process, it would make sense to evaluate the EPA guidance and determine if one of the three techniques identified by EPA would be appropriate, or generally how to incorporate the guidance into their PFAS disposal and destruction plans. It also makes sense for them to comment if they feel so inclined.