Flexible Packaging Association
Connecting. Advancing. Leading.

185 Admiral Cochrane Drive
Suite 105
Annapolis, MD 21401

Tel (410) 694-0800
Fax (410) 694-0900

www.flexpack.org

May 4, 2026

U.S. Environmental Protection Agency (EPA)
Office of Land and Emergency Management
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20460

Submitted via: regulations.gov Docket ID: EPA-HQ-OLEM-2026-05491

RE: Comment in Support of Removing Pyrolysis and Advanced Recycling from the Definition of Solid Waste – Federal Register Notice 2026-05491

Dear Administrator and EPA Rulemaking Staff,

The Flexible Packaging Association (FPA) appreciates the opportunity to comment on the *Federal Register* Notice 2026-05491: ***Standards for Air Curtain Incinerators That Only Burn Wood Wastes, Yard Wastes and Clean Lumber; Provision for Commercial and Industrial Solid Waste Incineration Units: Temporary Use Incinerators and Air Curtain Incinerators Used in Disaster Recovery.*** While we recognize this regulation addresses much more than the discussion on the definition of "municipal waste combustion unit" via pyrolysis found in Section VI, we are limiting our comments to this section as its relevance is of utmost importance to our industry.

The FPA provides the following information to help the EPA evaluate whether it should revise the definition of "municipal waste combustion unit" included in the other solid waste incinerators (OSWI) rules to remove "pyrolysis/combustion units." We believe the current regulatory classification of pyrolysis as solid waste management creates unnecessary barriers, stifles investment, and undermines the nation's capacity to build a truly circular economy for plastic materials—particularly as it relates to flexible plastics.

source reduction
less waste in the *first* place.®

The Flexible Packaging Association (FPA) is the voice of the U.S. manufacturers of flexible packaging and their suppliers. The association's mission is connecting, advancing, and leading the flexible packaging industry. Flexible packaging is produced from paper, plastic, film, aluminum foil, or any combination of those materials, and includes bags, pouches, labels, liners, wraps, rollstock, and other flexible products. Flexible packaging is the fastest-growing and second largest segment of the U.S. packaging industry, representing $51.5 billion in annual sales and approximately 98,000 workers in the U.S.

Pyrolysis is Manufacturing

Pyrolysis is a controlled thermal process that converts post-use plastics and other hydrocarbon feedstocks into usable, lower-menthane-primary streams (such as oils, monomers, and refinery-like feedstocks) in the absence or near-absence of oxygen. Contrary to public opinion, it is not combustion or incineration, which are waste-destruction and energy-valorization processes designed to reduce waste volume often through direct oxidation and energy recovery. Properly designed and operated pyrolysis facilities emphasize feedstock production for manufacturing, with rigorous controls on feedstock purity, off-gas treatment, and product quality to ensure reliable return of materials into circular supply chains for plastics and packaging. This is no different than refining for other materials. When a steel mill uses scrap metal as a feedstock to produce new steel, the EPA does not regulate it as a solid waste facility. When a paper mill uses recovered fiber to produce new paper products, the EPA does not classify it as waste disposal. When crude oil is refined into gasoline, diesel, and petrochemical feedstocks, the EPA does not regulate it as solid waste. This same logical framework should apply to advanced recycling facilities that use recovered plastics as a manufacturing input to produce new products.

Regulatory Reclassification Is Essential to the Circular Economy

The United States stands at a critical inflection point in plastics management. Across the country, states are actively developing and implementing extended producer responsibility

(EPR) frameworks for packaging. A framework even the federal government has discussed and evaluated, and which has further been promoted by the EPA.[1] Additionally, there is growing momentum at the federal and state levels toward establishing post-consumer recycled (PCR) content mandates for packaging and products to help further cement circularity principles. As demand to recover and reuse plastic packaging increases, the reality is that mechanical recycling alone cannot meet this demand**.** Many plastic materials — including multi-layer flexible packaging, food or bio-contaminated films, and mixed plastic streams — are currently technically or economically unsuitable for mechanical recycling. They are, however, recoverable through advanced recycling capacity, such as pyrolysis.

Perhaps no sector illustrates the *critical necessity of pyrolysis* more clearly than the flexible packaging industry. Flexible packaging is one of the fastest growing and most functionally important segments of modern packaging, yet for some essential flexible packaging formats they are challenges to recover those formats under conventional mechanical recycling frameworks. For example, multi-material flexible packaging combines layers of different polymer types such as polyethylene (PE), polypropylene (PP), polyethylene terephthalate (PET), polyamide (nylon), and ethylene vinyl alcohol (EVOH) along with adhesives, inks, coatings, and in many cases aluminum foil or metallized film layers. These multi-material constructions are engineered to deliver exceptional performance characteristics such as barrier properties, shelf-life extension, and product protection. Yet the advantages multi-material packaging offers also render the packaging fundamentally incompatible with mechanical recycling.

The vast majority of multi-material flexible film packaging serves food applications, from snack bags and frozen food pouches to stand-up pouches and condiment sachets. Here, these performance properties are not optional but are ***essential*** to food safety and self-life. Mono-material packaging formats cannot offer these same essential properties. Furthermore, direct

[1] Environmental Protection Agency (2024) National Strategy to Prevent Plastic Pollution

contact between packaging and food may introduce contamination and safety risks, with residual food facilitating bacterial proliferation and attracting vermin and other vectors of hazard as it advances from initial use towards recovery. This biological and chemical contamination often renders multi-material films unsuitable for mechanical recycling, which cannot remove embedded odors or restore the polymer to food-grade purity. Consequently, advanced recycling, such as pyrolysis, emerges as a critical pathway because it breaks down complex, soiled plastics into their original molecular building blocks, effectively resetting the material for safe reuse in food-contact applications.

Mechanically recycled plastics derived from post-consumer film packaging cannot, under current U.S. Food and Drug Administration (FDA) regulations and guidance, be used in direct food contact applications without an extraordinarily burdensome and costly FDA letter-of-no-objection (LNO) process. The U.S. currently lacks sufficient volume of LNO PCR content film to meet demand.[2] This means that even where mechanical recycling of flexible films is technically feasible, the resulting PCR content resin cannot re-enter the food packaging supply chain and must be downcycled into lower-value, non-food applications. Because pyrolysis breaks plastic materials down to their molecular building blocks — producing pyrolysis oil and naphtha that are chemically equivalent to virgin petrochemical feedstocks — the resulting resins produced from these outputs can qualify for food contact applications. The FDA has recognized this principle, and several advanced recycling facilities have successfully obtained FDA LNOs for food-contact resins derived from pyrolysis outputs. For the flexible food packaging sector, pyrolysis is therefore the only pathway that closes the loop — enabling post-consumer food packaging films to become the feedstock for new food-grade packaging resin.

[2] Circular Matters for AMERIPEN and Recycling is Real (2025) U.S. Packaging Recycled Content Goals Analysis.

The stakes are equally high for healthcare and medical packaging, where flexible packaging plays an indispensable role, and barriers to mechanical recycling are even more pronounced. Medical and pharmaceutical flexible packaging, including sterile pouches, IV bags, and pharmaceutical blisters, must meet extraordinarily stringent requirements for sterility, barrier protection, and product integrity, driving the use of complex multi-material laminates. Furthermore, post-use medical packaging is frequently contaminated with pharmaceutical residues, biological materials, or controlled substances, making it categorically unsuitable for conventional recycling streams. Under some of the emerging EPR frameworks, producers of medical and pharmaceutical packaging will bear direct responsibility for its end-of-life management. Pyrolysis offers a safe pathway to ensure we retain the safety inherent to sterile packaging while balancing sustainability goals for recovery and reuse.

Reclassifying pyrolysis as a manufacturing process removes a critical regulatory barrier to ensure recovery of harder to mechanically recycle materials while at the same time alleviating the barriers to investment in the advanced recycling infrastructure that EPR and PCR content policies will require. Changing the definition of pyrolysis from a solid waste framework to a manufacturing process sends a clear market signal that the federal government views recovered plastics as a resource, not a liability.

Advanced Recycling Creates Jobs and Economic Opportunity

The economic case for reclassifying pyrolysis is compelling and aligns with the Administration's priorities around domestic manufacturing, energy security, and job creation. Industry analysis suggests that a single commercial-scale advanced recycling facility can support hundreds of direct and indirect jobs in the communities where they are located.[3] Scaling this industry

[3] American Chemistry Council (2022) The Potential Economic Impact of Advanced Recycling and Recovery Facilities in the United States.

nationally has the potential to create tens of thousands of jobs across the manufacturing, waste management, and chemical sectors.

Lastly, by establishing a domestic supply of recycled plastic resins and chemical feedstocks, advanced recycling reduces dependence on volatile global commodity markets and strengthens the resilience of U.S. manufacturing supply chains.

Reclassification Supports, Not Undermines, Environmental Protection

We anticipate that some commenters will argue that removing pyrolysis from the solid waste definition will weaken environmental protections. We respectfully submit that this concern, while understandable, does not withstand scrutiny when examined in the context of a well-designed regulatory framework. *Reclassification does not mean deregulation*. We urge the EPA to design any reclassification framework with clear, enforceable environmental standards that ensure pyrolysis facilities operate cleanly and safely, while removing the artificial regulatory barriers that currently impede the industry's growth.

Conclusion

The United States needs every tool available to advance our competitiveness in the circular economy, meet the demands of emerging EPR and PCR content policy frameworks, and build a genuinely circular economy for plastic materials. Pyrolysis represents a critical and complementary tool in that toolkit — one that can process plastic materials that mechanical recycling cannot easily or effectively handle, create domestic manufacturing jobs, strengthen supply chains, and reduce the volume of plastic sent to landfill and incineration.

The current classification of pyrolysis as a solid waste process is an outdated regulatory artifact that does not reflect the technological reality, economic function, or policy needs of the modern plastics recycling landscape. We urge the EPA to take this opportunity to recognize

advanced recycling as the manufacturing process it is and create the regulatory foundation for a thriving domestic advanced recycling industry.

Please do not hesitate to contact us if we can provide further information or answer any questions.

Respectfully,

Kyla Fisher
Director of Regulatory Affairs and Sustainability
Flexible Packaging Association (FPA)