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Pyrolysis/Gasification Units/U.S. Environmental Protection Agency Advance Notice of Proposed Rulemaking: American Chemistry Council Comments

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The American Chemistry Council ("ACC") submitted December 16th comments on the September 8th Advance Notice of Proposed Rulemaking ("ANPRM") titled:

Potential Future Regulation Addressing Pyrolysis and Gasification Units

The ANPRM was published in the Federal Register on September 8th at 86 Fed. Reg. 50296.

The United States Environmental Protection Agency ("EPA") stated it was seeking information to assist in the potential development of regulations for pyrolysis and gasification units used to convert solid or semi-solid feedstocks to useful products such as:

- Energy
- Fuels
- Chemical commodities

The solid or semi-solid feedstocks referenced include:

- Solid waste (e.g., municipal solid waste, commercial and industrial waste, hospital/medical/infectious waste, sewage sludge, other solid waste)
- Biomass
- Plastics
- Tires
- Organic contaminants in soils and oily sludges

The comments and data submitted are intended to be used to assist EPA in the consideration of potential changes to the Section 129 Clean Air Act regulations or in the alternative development of regulations pertaining to pyrolysis and gasification units undertaking the previously referenced activities. The agency stated it had received inquiries about Section 129 Clean Air Act regulations for solid waste incineration units and potential applicability to pyrolysis and gasification units for a number of process and feedstock types. Such inquiries apparently led EPA to believe that there is:

... considerable confusion in the regulated community regarding the applicability of CAA section 129 to pyrolysis and gasification units.

EPA describes pyrolysis and gasification as:

. . . heat induced thermal decomposition processes.

Pyrolysis is specifically described as a process where materials are thermally decomposed or rearranged under process conditions where extremely or little to no oxygen is present.

Gasification is described as a process of converting feed materials (primarily carbonaceous) into syngas (carbon monoxide and hydrogen) and carbon dioxide.

ACC in its December 16th comments on the ANPRM describes itself as representing a diverse set of companies engaged in all aspects of the United States business of chemistry. Further, by way of introduction, the trade association states that it strongly:

. . . supports policies that recognize the products of “advanced recycling,” which refers to processes like pyrolysis and gasification that turn plastic polymers back into feedstocks for new plastics or individual monomers, allowing materials to be reused in a variety of ways. These technologies can produce new virgin equivalent plastics and chemicals converted from post-use materials that would otherwise be landfilled or incinerated. Advanced recycling is an important complement to mechanical recycling methods currently in use and is necessary to achieving the United States’ plastics reuse and recovery goals.

The comments further indicate that the organization supports what it describes as a “consistent approach to the regulation of pyrolysis and gasification.” Nevertheless, it opposes regulation of these two activities under Section 129 of the Clean Air Act as “other solid waste incineration units.”

Support is expressed for what it describes as an approach EPA undertook in an August 31st 2020 proposed rule in which it states that the agency had determined:

. . . that pyrolysis units should not be regulated as OSWI because those units do not involve combustion of a solid waste.

Gasification is argued to similarly not involve combustion of a solid waste.

ACC comments raise the following points:

- Pyrolysis and gasification are not “combustion” of a “solid waste.” Therefore, EPA should finalize the August 31, 2020 proposal and reject scientifically unsupported comments arguing that these processes should be regulated under the OSWI regulations or any other Section 129 regulations.
- There is no legal or technical support to regulate pyrolysis or gasification as incineration of a solid waste.
- Pyrolysis and gasification facilities can be properly regulated and permitted as manufacturing facilities and as such, are properly regulated under the CAA.
- Regulating pyrolysis and gasification facilities as “incineration” under Section 129 is inconsistent with a strong trend in state regulations.
- EPA has not provided, and there is no justification for reversing course and now regulating pyrolysis or gasification facilities as incinerators under Section 129.
- Regulating pyrolysis or gasification facilities under Section 129 would discourage the use of innovative technology, which is critical to the circular economy and the efforts to meet accelerating EPA recycling targets.

A copy of the comments can be downloaded [here](#) and the September 8th Federal Register Notice [here](#).