

**SIGNIFICANT NEW USE RULES ON CERTAIN CHEMICAL  
SUBSTANCES (23 – 2.5e)**

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Office of Pollution Prevention and Toxics  
Environmental Protection Agency

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**AMERICAN FUEL & PETROCHEMICAL MANUFACTURERS  
COMMENTS**

**Attention: EPA–HQ–OPPT-2023-0245; FRL-10985-01-OCSP**

August 18, 2023  
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## **I. Introduction**

The American Fuel & Petrochemical Manufacturers (“AFPM”) respectfully submits these comments on the Environmental Protection Agency’s (“EPA” or “the Agency”) Federal Register notice titled, “Significant New Use Rules on Certain Chemical Substances (23-2.5e)” (“Proposed SNURs” or “Proposal”).<sup>1</sup> The Proposed SNURs identify new uses for pyrolysis process streams from post-consumer plastics, in addition to setting out requirements for manufacturers to stay within the boundaries of approved uses. AFPM’s comments highlight that the Proposed SNURs:

- Are critically flawed and thus should be withdrawn and repropose after EPA documents that it has considered all relevant factors,
- Will drastically stifle American innovation and investments in circularity, specifically advanced recycling, when it is needed most; and,
- Demonstrate a gross lack of detail and deficient justification for the Proposal.

## **II. AFPM Interest in the Proposed SNURs**

AFPM is the leading trade association representing the manufacturers of the fuels that keep America moving and base petrochemicals that are the essential building blocks for plastic products that improve the health, safety, and living conditions of humankind. AFPM members are committed to sustainably manufacturing safe, high-performing fuels and the petrochemicals and derivatives for plastics that growing global populations and economies need to thrive, improving and innovating recycling and reuse rates, and developing policies and technologies to address plastic pollution.

AFPM members are committed to collaborating with policymakers and other stakeholders to develop sound, risk- and science-based policies to address environmental issues. AFPM members abide by numerous chemical policies and environmental regulations administered by the EPA and other federal agencies. AFPM supports policies designed to protect the environment, decrease emissions, incentivize recycling and recovery of plastic waste, and promote research and development in recycling technologies through pilot phases to full commercialization. By supporting such policies AFPM strives to achieve an appropriate regulatory balance that addresses real risks and allows the safe manufacture of the fuels that Americans depend on every day and the petrochemical building blocks that make modern life possible.

## **III. Relevant Background on Plastic Recycling**

In the context of developing policies that affect advanced recycling, and pyrolysis in particular, it is important that EPA, as well as other agencies at the federal, state, and local level, have a robust understanding of all types of recycling, specifically the differing technologies and processes used, and their benefits and limitations. AFPM provides a high-level overview of the two predominate methods of recycling (*e.g.*, mechanical and advanced recycling). This

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<sup>1</sup> See 88 *Fed. Reg.* 39804, “[Significant New Use Rules on Certain Chemical Substances \(23-2.5e\)](#),” EPA-HQ-OPPT-2023-0245; FRL-10985-01-OCSPP, published June 20, 2023.

knowledge should inform any eventual policy decisions by EPA on if, when, and how it should apply TSCA to the products from advanced recycling.

There are several different technologies being used to address the challenge of moving post-consumer plastics through the recycling value stream. The most common is mechanical recycling, where certain types of plastic are shredded and melted back down into plastic pellets, which can then be used to make new products — including things like running shoes, reusable plastic bottles, and even some of the roads we drive on. This is what the recycling and plastics industries generally refer to as “traditional recycling” and what people often first think of when they hear the term “recycling.” But not every plastic can be mechanically recycled. An additional challenge with traditional mechanical recycling is that plastics can only be recycled a limited number of times in this manner before the material degrades and loses the required quality and durability for further use.

Advanced recycling (a family of technologies including chemical and molecular recycling) is a scientific process where heat and various catalysts, or chemical reagents, are used to initiate reactions that return plastics to their original monomer building blocks, identical in structure to the original monomers, or as virgin feedstocks like naphtha.<sup>2</sup> Molecular recycling often involves pyrolysis, which uses heat with no oxygen to break large molecules into smaller molecules. Catalysts may be used to help guide the reaction to the desired products and enhance overall process safety by reducing operating temperatures.

Advanced recycling produces monomers or naphtha that can be used as a substitute for virgin feedstocks. Once plastics are chemically converted back to monomer form, either directly or through naphtha cracking, there are a much wider range of options for recycling and reuse.<sup>3</sup> These monomers are effectively identical (drop-in) to virgin feedstocks currently used to make the plastics that go into thousands of different manufacturing supply chains. Advanced recycling expands the number and volume of plastics that can be recycled and can be used to recycle materials that were previously thought to be unrecyclable, expanding the potential end uses of those recycled plastics.<sup>4</sup>

The naphtha that comes from pyrolysis oil is also very suitable for use in fuel blends, which is another pathway for the use of recycled, post-consumer plastics. Naphtha is not a single chemical compound; it is actually comprised of various hydrocarbons within a narrow carbon number range and is refined further into finished gasoline or used as an additive to boost octane. It can also be processed by steam cracking (another pyrolysis process that has been around for decades) to make base petrochemicals like ethylene, propylene, butylenes, benzene, toluene, and xylenes, which are building blocks for the plastics industry and organic chemistry in general.

Advanced recycling, as a complement to mechanical recycling, has the potential to increase recycling rates, help meet ambitious recycled content targets for consumer products, reduce plastic pollution, and displace or augment plastics derived from virgin feedstocks, aiding carbon circularity. A recent study notes that if existing constraints were resolved, advanced

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<sup>2</sup> See Closed Loop Partners – [Advancing Recycling’s Role in a Circular Economy](#) [Accessed 7/13/2023]

<sup>3</sup> See AFPM.org, [Advanced Recycling: A Breakthrough in Plastic Sustainability](#) [Accessed 7/13/2023]

<sup>4</sup> See AFPM.org, [Mechanical vs. advanced recycling — what’s the difference?](#) [Accessed 7/13/2023]

recycling could grow to 20 to 40 million metric tons and meet up to 8 percent of polymer demand by the end of the decade, providing investment opportunities of more than \$40 billion.<sup>5</sup> The same study also suggests that while global polymer demand is set to increase over the next decades, embracing advanced recycling has the potential to decrease the use of virgin feedstocks.<sup>6</sup>

In the case of converting post-consumer plastics to fuels (also known as “plastics-to-fuels” or “advanced recovery”), pyrolysis is used to break apart the bonds of the polymers in the plastic waste, the goal of which is to yield smaller molecules that fall into the range of naphtha. In the case of converting post-consumer plastics back to monomers, the goal is to yield smaller molecules like ethylene, propylene, and butylene, which are building blocks for many manufacturing supply chains, including plastics.

#### **IV. Substances Subject to the Proposed SNURs**

The substances subject to the Proposed SNURs are protected by the Confidential Business Information (“CBI”) provisions found in TSCA Sec. 14. The specific chemical identity and CAS numbers cannot be disclosed as part of this proposed rulemaking. EPA provides the following Premanufacture Notice (“PMN”) numbers and generic names for the Proposed SNURs:

P-21-144	naphtha, heavy catalytic cracked
P-21-145	naphtha, heavy alkylate
P-21-146	naphtha, full range alkylate, butane-containing
P-21-147	naphtha, hydrotreated heavy
P-21-148	naphtha, light catalytic cracked
P-21-149	naphtha, light alkylate
P-21-150	naphtha, hydrotreated light
P-21-152	clarified oils, catalytic cracked
P-21-153	distillates, hydrotreated heavy
P-21-154	gas oils hydrotreated vacuum
P-21-155	distillates, light catalytic cracked
P-21-156	distillates, clay-treated middle
P-21-157	distillates, hydrotreated middle
P-21-158	distillates, hydrotreated light
P-21-160	gases, C4-rich
P-21-161	gases, catalytic cracking
P-21-162	residues, butane splitter bottoms
P-21-163	tail gas, saturate gas plant mixed stream, C4-rich

The generic names are very similar to other names of existing Class 2 substances (i.e., naphthas, distillates, gases, etc.), which are classified by EPA as Chemical Substances of Unknown or Variable Composition, Complex Reaction Products, and Biological Materials

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<sup>5</sup> See McKinsey & Company. May 16, 2022. [Advanced recycling: Opportunities for growth](#) By Zhou Peng, Theo Jan Simons, Jeremy Wallach and Adam Youngman [Accessed 7/13/2023]

<sup>6</sup> *Id* at Exhibit 3.

(“UVCBs”). The Class 2 substances listed above have very similar toxicity profiles as other UVCBs with the same generic description because they are the same molecules only in slightly different concentrations.

For instance, heavy naphtha from a distillation tower that uses crude oil as feedstock is not much different than heavy naphtha from coal tar or heavy naphtha from wood. Each naphtha stream is processed to remove impurities that could affect the quality or safety of the end product. After processing, the naphthas from different feedstocks are hard to distinguish from one another, other than slight differences in boiling point or other physical properties. AFPM is unaware of anything in the scientific literature that demonstrates fully processed naphtha from one feedstock would have a different toxicity profile or different exposure pathways than other fully processed naphthas. Additionally, AFPM could not find anything in the docket or Proposal that demonstrates naphtha from post-consumer plastic presents different risks than naphtha derived from other sources.

## V. General Comments on the Proposed SNURs

If the Proposed SNURs were implemented as written, they would jeopardize the tens of billions of dollars in potential recycling investments expected to be made in the United States during this decade.<sup>7</sup> It would slow the entry of recycled materials into the marketplace at a time when demand far exceeds supply, forcing consumer goods companies and others with lofty sustainability goals to look elsewhere for recycled materials. Furthermore, it will stifle American innovation because it will force players in advanced recycling and circularity into EPA’s burdensome process for notice reviews and safety determinations for substances (e.g., naphtha, pyrolysis oil, etc.) that have already been in the marketplace for decades.

The Proposal cuts against the Biden Administration’s desire to promote American manufacturing and will result in manufacturing operations interested in enhancing sustainability to choose other countries that do not impede advanced recycling.

### a. Due to its manifest defects, the Proposed SNURs should be withdrawn and proposed after documentation of the consideration of all relevant factors.

TSCA Sec. 5(a)(2) requires EPA to consider “all relevant factors” *before* issuing a SNUR, including:

"(2) A determination by the Administrator that a use of a chemical substance is a significant new use with respect to which notification is required under paragraph (1) shall be made by a rule promulgated after a consideration of all relevant factors, including—

(A) the projected volume of manufacturing and processing of a chemical substance,

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<sup>7</sup> See McKinsey & Company. May 16, 2022. [Advanced recycling: Opportunities for growth](#) By Zhou Peng, Theo Jan Simons, Jeremy Wallach and Adam Youngman [Accessed August 18, 2023] and *see also* Global Partners of Plastics Circularity, “[Tracking Our Progress](#)”, [Accessed August 18, 2023}.

(B) the extent to which a use changes the type or form of exposure of human beings or the environment to a chemical substance,  
(C) the extent to which a use increases the magnitude and duration of exposure of human beings or the environment to a chemical substance, and  
(D) the reasonably anticipated manner and methods of manufacturing, processing, distribution in commerce, and disposal of a chemical substance."<sup>8</sup>

The Agency cannot defer consideration of these statutory requirements to the subsequent Significant New Use Notice "SNUN" review process.<sup>9</sup> In Unit II.A, EPA lists the above considerations from Sec. 5(a)(2) and generally states that it also considered "technical procedures, measures, methods, protocols, methodologies, and models" and that the considerations "have been subject to independent verification or peer review;" however, there is nothing in the Proposal or the docket that specifies what was considered, how it was considered, the participants in verification or review, or any other information upon which AFPM can provide informed comment.<sup>10</sup> There is no assessment of whether impurities that may be in post-consumer plastic reasonably could be present in derivative fuel products and become a source of human health or environmental risk. EPA has not completed the statutorily-mandated analyses necessary to support its issuance of the proposed SNURs.

Not only do these deficiencies run counter to the clear Congressional direction in the statute, but they will also result in unnecessary SNUNs that EPA will have to review. AFPM strongly urges EPA to withdraw the Proposed Rule. EPA should only issue a new proposal if the Agency explicitly and quantitatively considers all relevant factors, including the implementing regulations in 40 CFR 721.170(b)(5).

**b. The Proposed SNURs will make it nearly impossible to commercially convert post-consumer plastics to fuel in the United States.**

EPA is proposing that the substances listed in this proposal are subject to the requirements of the SNUR if their feedstocks contain *any amount* of the listed contaminants.<sup>11</sup> Lacking a de minimis threshold for any of these compounds, EPA will not only make it nearly impossible for future entrants into the plastic-to-fuels market, but it will also make it nearly impossible to manufacture or import the substances that have already been through the PMN review process.

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<sup>8</sup> See U.S. Code [Title 15, Chapter 53, Subchapter I, § 2604](#).

<sup>9</sup> If EPA promulgates a Significant New Use Rule (SNUR), a manufacturer or processor wishing to engage in a designated significant new use must submit a Significant New Use Notice (or "SNUN") to EPA at least 90 days before engaging in the new use.

<sup>10</sup> See *88 Fed. Reg. 39804*, "[Significant New Use Rules on Certain Chemical Substances \(23-2.5e\)](#)," EPA-HQ-OPPT-2023-0245; FRL-10985-01-OCSPP, published June 20, 2023, p. 39805.

<sup>11</sup> The list of existing substances that will effectively be banned from being impurities in post-consumer waste for recycling include heavy metals, dioxins, phthalates, per- and polyfluoroalkyl substances (PFAS), polybrominated diphenyl ethers (PBDEs), alkylphenols, perchlorates, benzophenone, bisphenol A (BPA), organochlorine pesticides, ethyl glycol, methyl glycol, or N-methyl-2-pyrrolidone (NMP).

The illogical outcome of this position is that demonstrating compliance becomes nearly impossible, as there is no way to demonstrate the complete absence of these compounds beyond analytical limits of detection. Not only has EPA not provided information in the Proposed SNURs on how it will view levels of those substances tentatively identified below the limit of detection or at low levels that do not present any significant risk, but it has also failed to demonstrate the risks incurred if these substances are present in feedstocks below method detection limits. The failure to include a de minimis exclusion without justification is arbitrary and capricious and further supports the need for EPA to withdraw the Proposal.

**c. The Proposed SNURs will significantly impair American innovation and investment.**

The scope of the Proposed SNURs affects any use of products from pyrolysis that is not a fuel, fuel additive, or fuel blend stock. As a result, using the naphtha from pyrolysis oil to make petrochemical building blocks, identical from a molecular perspective to virgin feedstocks, especially for plastics, will be subject to the Agency's slow and onerous review process of notices for new chemicals and new uses of existing chemicals.

EPA is so far behind in its reviews under TSCA Sec. 5 (there is currently a backlog of 371 PMNs) that many companies will be better off establishing their advanced recycling activities in other regions of the globe that are more supportive of recycling.<sup>12</sup> As written, the Proposed SNURs, along with demonstrated challenges in obtaining a timely SNUN review, will make it easier to process the post-consumer plastic overseas. Most facilities in Europe and Asia use naphtha as a primary petrochemical feedstock to make the base petrochemicals and convert those petrochemicals to non-hazardous resins that can be shipped anywhere in the world, including the United States.

**d. EPA does not provide any detail or quantified justification for the Proposed SNURs.**

In Unit II.A.3 and Unit II.B.1 of the Proposed SNURs, EPA references the considerations required by statute, yet there is no information as to what specifically was considered in the context of the substances subject to the SNURs. There appear to be no citations or background documents that quantify toxicity, exposure, or risk; rather, EPA only lists general hazards associated with naphtha and claims it needs more information. The substances subject to the SNURs are well-characterized from a risk perspective and have been used safely for decades, yet there are no references or citations to any toxicity or exposure studies. Under these circumstances, EPA cannot support the issuance of the SNURs and they must be withdrawn.

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<sup>12</sup> According to the American Chemistry Council [new chemicals tracking system](#), the backlog of PMN reviews has increased 91% from 204 PMNs in January 2021 to 371PMNs as of August 16, 2023.



## VI. Comments on Specific Elements of the Proposed SNURs

### a. The Proposed SNURs contradict TSCA Sec. 5(a)(5), 40 CFR §§ 721.45(i), 721.170, and 751.405(b).

Under TSCA, post-consumer plastic is treated as an article because it is a finished good that has had a useful life prior to being collected for conversion into pyrolysis oil through advanced recycling. Sec. 5(a)(5) states that EPA “may require notification under this section for the import or processing of a chemical substance as part of an article or category of articles under paragraph (1)(A)(ii) if the Administrator makes an affirmative finding in a rule under paragraph (2) that the reasonable potential for exposure to the chemical substance through the article or category of articles subject to the rule justifies notification.”<sup>13</sup> EPA has made no such finding under paragraph (2), nor has it demonstrated a “reasonable potential for exposure.” In fact, the Agency has not made any effort in the Proposed Rule or docket to demonstrate an increase in the potential for exposure to the substances subject to the SNURs or the post-consumer plastic from which the substances are derived.

In the Background section of the SNURs, EPA is proposing to make the exemption in 40 CFR § 721.45(i), pertaining to parties under consent orders, inapplicable, which is an unusually arbitrary action.<sup>14</sup> The Agency offers no justification for making this exemption inapplicable, other than a general allegation that plastic waste could be contaminated with substances from the proposed list. EPA does not make a risk- or exposure-based finding to justify the SNURs. In Unit II.A.3, the Agency lists sources from which it based its suspicion of contamination, but only one of those (from the European Chemicals Agency) is even germane to the substances for which the SNURs apply.<sup>15</sup>

In addition to going back on its agreement with the parties subject to the consent orders, EPA is also circumventing its own implementing regulations for SNURs in 40 CFR § 721.170. EPA must determine “that activities other than those described” in the PMN “may result in significant changes” in exposures or releases to the environment or “that concern exists” about the hazards of the substance.<sup>16</sup> The Agency does not demonstrate any increase in exposures or releases to the environment in its Proposal. 40 CFR § 721.170(b) lists specific toxicological criteria for EPA to make a finding of concern, yet the Agency provides no evidence with respect to those criteria (i.e., toxicological data) to support the Proposed SNURs.

40 CFR § 721.170(b)(1)(ii) explicitly states that a substance cannot be “regulated based on a finding under paragraph (b)(1),” which is the concern finding, “unless EPA has also made the finding under 40 CFR § 721.170(c)(2),” which stipulates that a SNUR can only apply to activities that result in “changes in exposure or release levels that are significant in relation to the

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<sup>13</sup> See 15 U.S. Code § 2604(a)(5).

<sup>14</sup> See [40 CFR § 721.45\(i\)](#), which clearly states in cases where “a provision of such section 5(e) order is inconsistent with a specific significant new use identified in subpart E of this part, abiding by the provision of the section 5(e) order exempts the person from submitting a significant new use notice for that specific significant new use.”

<sup>15</sup> See Section VI(f) of these comments for further discussion.

<sup>16</sup> See [Title 40 Chapter I Subchapter R Part 721 Subpart D § 721.170\(a\)](#), (b), and (c).



health and environmental concerns.”<sup>17</sup> EPA has not only failed to make a finding of concern, it has also failed to demonstrate any change in exposure or release levels.

For impurities, 40 CFR § 721.170(b)(5) states that EPA must make a finding of concern based upon the same criteria as the substance subject to the SNUR, and that the impurity is either a new chemical substance or that conditions of use “result in significantly increased human exposure to or environmental release of the impurity.”<sup>18</sup> EPA has not even met the criteria for the substances subject to the Proposed SNURs let alone any impurities. In fact, the Agency has not provided any evidence that there are even impurities in those substances.

EPA has also contradicted itself by listing polybrominated diphenyl ethers (“PDBEs”) on the list of potential contaminants. The Agency regulates decabromodiphenyl ether (“decaBDE”) – a type of PDBE – under 40 CFR § 751.405, and under § 751.405(b) there is an exemption for the recycling of post-consumer plastic that contains decaBDE. Although not mentioned in the Proposed SNURs, EPA also has an exemption for recycling of plastics that contain phenol, isopropylated phosphate (“PIP 3:1”) under 40 CFR § 751.407(b)(1)(vi). EPA has set precedents supporting recycling, but this Proposed SNUR contradicts the Agency’s earlier support without justification. AFPM strongly urges EPA to continue its support of recycling and withdraw this proposal which stifles it.

**b. The Proposed SNURs would result in more animal testing.**

Unit III of the Proposed SNURs calls for a list of animal tests before EPA will lift the restrictions of the Order, because in Unit II.B, EPA claims that the information was insufficient to make a risk determination. Unit II(E) of the Proposed SNURs points to the use of New Approach Methodologies (“NAMs”) to reduce the impact of testing on animals; however, those methods are in the very early stages of development and validation. As stated previously, the substances subject to the SNUR, although manufactured from different feedstocks, are well-studied. There is no need to subject animals to laboratory testing for these substances.

**c. The Proposed SNURs demonstrate a lack of understanding of pyrolysis.**

Much of the discussion in the Proposed SNURs is centered around potentially contaminated post-consumer plastic, yet the Agency provides no evidence that the substances subject to the SNURs, which should be the focus of review and discussion, have ever been contaminated. In addition, there is no evidence put forth by the Agency that the contaminated post-consumer plastic itself presents any kind of risk. Simply put, the presence of a substance does not mean that it poses a risk.

AFPM members using pyrolysis oil and its derivatives in their operations already require extensive testing as part of quality assurance programs ensuring product purity and protecting their equipment. Any feedstock (circular or virgin) used to make base petrochemical building blocks must be free of contaminants to avoid unwanted chemical reactions that affect the quality

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<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

of the resulting products. Petrochemical and fuel manufacturers do not put contaminated feedstocks into their very complex and sophisticated processing units.

Processing units at petroleum refineries and petrochemical plants are custom designed and engineered for specific chemical reactions. Deviations from purity specifications can lead to a variety of undesirable outcomes, from poor product quality to potentially unsafe operating conditions. AFPM members place safety, sustainability, and quality as their top priorities. No engineer who designs and operates a processing unit is going to process contaminated feedstock.

**d. The Proposed SNURs improperly apply the New Chemical provisions to focus on feedstocks.**

The Proposed SNURs restrict the presence of existing chemicals in post-consumer plastic used as a feedstock for new chemicals. This is an inappropriate use of Sec. 5 authority because a SNUR should be focused on the substance that is being manufactured, not the feedstock and certainly not on existing chemicals. Furthermore, there is nothing in the TSCA statute that prohibits the ongoing use of existing chemicals, in accordance with any restrictions initially imposed by rule or order, unless they have been subject to risk management actions under Sec. 6.

If a manufacturer goes through the new chemical process and has commenced manufacture of a naphtha-type substance, there is nothing in the statute that prohibits the use of the existing substances listed in the Proposed SNURs in a formulation. The statute does not distinguish between existing substances in a formulation or in any other type of product (i.e., plastic); therefore, unless there has been a restriction or some other risk management action under Sec. 6, manufacturers and processors are in their full legal right to use those substances.

**e. The Proposed SNURs lack technical justification for the list of potential contaminants.**

The list of potential contaminants proposed by EPA is poorly conceived and compliance with the proposed restrictions will be nearly impossible. EPA offers no justification or criteria for inclusion of each particular substance on the proposed list. Many are classes of chemical substances (e.g., phthalates, alkylphenols, etc.) and not discrete chemical compounds. EPA offers no guidance on analytical testing of post-consumer plastics; in fact, analytical testing for minute concentrations of contaminants in a complex matrix, such as post-consumer plastics, is exceptionally difficult and will not yield information that has any practical utility to the Agency.

There is no discussion in the Proposed SNURs on the risk posed by any of the substances on the list of potential contaminants. There is not even a discussion on the levels at which they could appear in any of the substances subject to the SNURs or potential routes of exposure. In the case of substances used as fuels, fuel additives, and in the blend stock, there are several that are flammable, only composed of carbons and hydrogens, and would combust along with the fuel. There is no discussion of that scenario, or any risk associated with it. There are several on the list, such as phthalates, polyfluorinated alkyl substances, BPA, alkylphenols, etc., that have been used in plastics manufacturing and processing for decades. Again, there is no discussion in the Proposed SNURs of potential exposure pathways or risk from those substances. To repeat, the presence of a substance does not mean there is a risk.

**f. The Proposed SNURs are based on nongermane sources of data.**

There have been few supporting materials available in the docket during most of the comment period and those are mostly redacted and sanitized documents related to PMNs and consent orders. EPA only provides information to support the unremarkable assertion that the source plastic products may contain impurities. The Agency provides no data or analysis on the potential presence of any such impurities in commercially produced pyrolysis oils.

In Unit II.A.3 of the Proposed SNURs, EPA does provide a list of seven “sources of data documenting the presence or absence of such contaminants in pyrolysis products;” however, only three mention pyrolysis in the title and only one is germane to pyrolysis of plastic waste.<sup>19</sup> The rest are focused on plastics additives that can generally be found in plastics or plastic waste.

EPA listed an Environmental Defense Fund (“EDF”) “scorecard” for substances commonly used in food packaging as a source for information on pyrolysis oil.<sup>20</sup> There is no information on any studies or other substantial evidence underlying the list in EDF’s scorecard. The scorecard is not a published scientific study, nor does it have anything to do with pyrolysis oil. EPA lists its own “State of the Science White Paper: A Summary of Literature on the Chemical Toxicity of Plastics Pollution to Aquatic Life and Aquatic-Dependent Wildlife” as another data source.<sup>21</sup> This is an internal white paper about general plastics pollution in the ocean and not about pyrolysis oil.

The Agency also lists a report from the Air and Waste Management Association titled, “Pyrolysis processing of PFAS-impacted biosolids, a pilot study” as a data source for contaminated pyrolysis oil from post-consumer plastic.<sup>22</sup> AFPM questions the relevance of biosolids to plastic. AFPM also questions the relevance of “Directly Fluorinated Containers as a Source of Perfluoroalkyl Carboxylic Acids” and “Hazardous metal additives in plastics and their environmental impacts” to the pyrolysis oil derivatives subject to the SNURs, as the former concerns a crude experiment to test for PFAS after fluorinating plastic packaging and the latter is a general paper on metal additives.<sup>23</sup> Out of all the data sources listed by EPA, there is only one that is germane to the substances subject to the SNURs.

Even the study published by the European Chemicals Agency (“ECHA”) is just a literature search of other studies that are generally about substances of concern in plastics.<sup>24</sup> The section that does discuss pyrolysis studies found that none of the studies “discusses criteria for inclusion of studies in the review or develops any method for evaluating the quality of evidence.” ECHA also found that it is “unclear if the reviewed chemical recycling technologies have

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<sup>19</sup> See 88 *Fed. Reg.* 39804, “[Significant New Use Rules on Certain Chemical Substances \(23-2.5e\)](#),” EPA-HQ-OPPT-2023-0245; FRL-10985-01-OCSPP, published June 20, 2023, p. 39806.

<sup>20</sup> *Id.* at 39806.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> See Chemical Recycling of Polymeric Materials from Waste in the Circular Economy, Final report prepared for the European Chemicals Agency. August 2021. p.48.

actually been applied in the industry” and that “limitations should be taken into account when using the findings of these extensive reviews.”<sup>25</sup>

## **VII. Conclusion**

AFPM appreciates the opportunity to comment on the Proposed SNURs. Subjecting players in the advanced recycling marketplace to the new chemicals or significant new use notice and review process will not provide EPA with information that has practical utility and will only serve to inhibit a very innovative sector.

The Proposed SNURs include an attempt by EPA to inappropriately regulate existing chemicals as new chemicals. If Congress had intended for Sec. 5 to be used as a catchall to regulate any chemical, it would have done away with Sec. 6 when it updated the statute in 2016. The SNURs also provide no evidence of contamination with respect to the substances derived from pyrolysis oil, nor do they quantify the risk or magnitude of exposure for those substances.

The Proposed SNURs, as written, do not conform to the requirements of TSCA because, among other things, EPA has not performed an analysis required by Sec. 5(a)(2). EPA may not defer consideration of all relevant factors to the SNUN review process. Nor has the Agency fulfilled its own obligations under 40 CFR 721.170. AFPM urges EPA to rescind the Proposed SNURs and form a multistakeholder group to develop a more realistic path forward to ensure the safe use of pyrolysis oil and its derivatives.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Cooper". The signature is fluid and cursive, with the first name "James" and last name "Cooper" clearly distinguishable.

James Cooper  
Senior Petrochemical Advisor

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<sup>25</sup> *Id.*