



May 1, 2020

Via E-Mail

**Re: Canada Gazette, Part I, Volume 154, Number 5 dated February 1, 2020
Comments Regarding the Draft Science Assessment of Plastic Pollution by the
American Fuel & Petrochemical Manufacturers**

Dear Executive Director,
Program Development and Engagement Division,
Department of the Environment,
Gatineau, Quebec K1A 0H3,
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I. EXECUTIVE SUMMARY

American Fuel & Petrochemical Manufacturers ("AFPM") welcomes the opportunity to comment on the Government of Canada's efforts to address "plastic pollution."¹ AFPM members manufacture the chemicals used to produce plastics and thus are impacted by policies that address the plastics value chain, including policies to address plastic waste. The plastics value chain is critically important to our countries' economies, as feedstocks, petrochemicals and finished plastic products frequently cross the U.S.-Canadian border.

AFPM has reviewed the Draft Science Assessment of Plastic Pollution (the "Draft") and provides the following comments on the Draft's contents and its potential to support the regulatory process.

1. Using CEPA to address concerns with Plastic Pollution is inappropriate.

The Canadian Environmental Protection Act's ("*CEPA*") toxic substances provisions are intended to apply to a limited number of truly toxic substances under the federal government's criminal law powers. Plastics, which provide countless societal benefits, are not akin to the types of substances that are properly listed as toxic under *CEPA* and plastics pollution, as described within the Draft, is a waste management issue that is not properly addressed through the toxic substances provisions of *CEPA*.

2. The Draft fails to substantiate the listing of plastics – or any class of plastics – on the List of Toxic Substances at Schedule 1 of CEPA.

¹ We share your concern on the need to address plastic pollution. As we work to address this shared concern it is important to distinguish between "plastic waste" and "plastic pollution." For the purposes of this document AFPM defines "plastic waste" as "plastic material that a consumer has ceased to use and has been discarded into a waste stream (this may include plastics that have been disposed of through both proper and improper disposal methods)." AFPM defines "plastic pollution" as "plastic waste material that has been improperly deposited into the environment, either directly by a consumer or through mismanagement of the waste stream."

The Draft falls far short of providing the data to substantiate listing plastics or any category of plastics as toxic. While deemed a “Science Assessment” by the Government of Canada, the Draft is simply a literature review of previous studies. The Draft contains no data, discussion, nor analyses of whether "plastics" meet the criteria of a toxic substance in section 64 of *CEPA*, acknowledges the uncertainty present in current scientific studies, and concludes that additional scientific research is *required*.

Moreover, as the Draft falls outside the existing legislative mechanisms to assess substances and does not assess or reach a conclusion as to whether "microplastics" or "macroplastics" meet the criteria of a toxic substance pursuant to section 64 of *CEPA*, AFPM questions how the Draft can provide anything other than a first step in a larger, data-driven, risk-based assessment of specific substances for the purpose of determining the appropriateness of using *CEPA* to regulate plastics. There is no scientific evidence to support the view that plastics – either as a broad class of substances or as individual polymers - are toxic in the ordinary sense or based on a reasonable application of the definition at section 64 of *CEPA*. Plastics, and polymers that make plastics, are simply not analogous to the toxic substances that have been comprehensively assessed and are currently included on the List of Toxic Substances.

The Draft notes that "[i]n keeping with the precautionary principle, action is needed to reduce microplastics and macroplastics that end up in the environment."² Yet while *CEPA*'s definition of the precautionary principle includes a reference to cost-effectiveness,³ the Draft includes no such considerations or an examination of more cost-effective solutions to address mismanaged plastic waste. A survey of research relevant to the economic and societal costs and benefits related to plastics policy is essential to informed decision-making.

Making any decision regarding the toxicity of plastic on the basis of the Draft would sidestep *CEPA*'s existing risk assessment mechanisms and processes that would otherwise ensure a transparent procedure and science-based decision-making and would turn its back on Canadian Supreme Court precedent on this issue.

3. Plastic pollution is a waste management issue.

Plastic waste issues are numerous, complex, and intertwined up and down the value chain, and plastic pollution must be managed with an equally system-level approach. Effective waste management policies (both regulatory and non-regulatory) must recognize how plastics improve the lives of people while addressing environmental issues. Policies must ensure that consumers reap the benefits of plastic products and that plastic waste is properly handled and managed to prevent plastic pollution. Accordingly, AFPM supports policies designed to improve poor waste management globally, incentivize recycling, and promote research and development in recycling technologies through pilot phases and full commercialization.

² Draft Science Assessment at page 78 (Findings). See also pages 10 (Introduction).

³ *CEPA* at Preamble.

4. CEPA does not provide effective tools to manage plastic waste.

CEPA is not designed to manage the complex interactions that lead to plastic pollution. The management of plastic waste requires a wraparound approach that incorporates all supply chain participants and moves towards a resource-efficient lifecycle for plastics. Simply labeling plastics or categories of plastic as "toxic" or imposing a ban of certain plastics is not a comprehensive approach to waste management and is unlikely to address the problem of plastic disposal in the natural environment. A "toxic" designation under *CEPA* would blur the line between the truly toxic substances intended to be managed by *CEPA* and those that are not.

5. The Federal Government's goals are best achieved with a collaborative approach with industry and other jurisdictions.

Rather than trying to force-fit haphazard waste management into the existing *CEPA* regulatory scheme, or banning certain plastics that provide enormous health, safety, and economic benefits to society, Canada has an opportunity to address the plastic waste issue in a collaborative and creative manner that can achieve results. AFPM urges Canada to adopt the following roadmap to achieve a realistic solution: (1) convene multiple stakeholders, including participants throughout the supply chain, to assess the current situation, (2) identify the sources of plastic waste mismanagement, (3) identify potential legislative and regulatory gaps, (4) craft solutions that will better address the underlying causes of plastic waste in the environment; and (5) implement those solutions. Simply labeling something as "toxic" is not a holistic approach and will not likely address the real need to better manage plastic waste.

6. Next steps

Plastics (including single-use plastics) provide many societal benefits and play a vital role in keeping people in both Canada and the United States safe. Plastics are integral to ensure food safety: they help prevent the spread of disease through proper sanitation and protect citizens and health care professionals from dangerous pathogens. AFPM urges the Canadian Government to delay any further action on plastics until the current public health pandemic has passed.

Regardless of the approach chosen, AFPM wishes to engage with the ongoing development of risk-based policies to effectively address issues of plastic waste on an ongoing basis to ensure such policies do not deprive consumers of the products required daily by Canadians. Without further consideration and process, any action to list plastic or a category of plastics as toxic under *CEPA* would be pre-decisional and be an exercise in decision-based evidence-making. Such action is unwise and wholly inconsistent with the provisions of *CEPA*.

II. INTRODUCTION

AFPM welcomes the opportunity to comment on the Draft pursuant to the notice posted by the Department of the Environment and the Department of Health in the Canada Gazette, Part I, Volume 154, Number 5 on February 1, 2020 (the "Notice") under *CEPA*. In accordance with the Notice, this

letter provides AFPM's comments on the scientific considerations provided in the Draft. In addition to the science specific comments provided in this draft, AFPM requests that the Government of Canada:

- **Reconsider the mechanism and process being used to evaluate the impacts of plastic pollution**
- **Complete a full risk assessment that includes both the societal cost of mismanaged plastic waste and societal benefits of plastics**
- **Delay finalization of the draft until the current global coronavirus pandemic is resolved**

AFPM is a national trade association representing most of the United States ("U.S.") refining and petrochemical manufacturing capacity. AFPM's member companies produce the gasoline, diesel, and jet fuel that drive the modern economy, as well as the petrochemical building blocks that are used to make the millions of products that make modern life possible, from clothing to life-saving medical equipment and food packaging. Our industries make modern life better, safer, healthier and most of all, possible. AFPM member companies are also leaders in human safety, process safety and environmental responsibility.

AFPM members have the responsibility of supplying the petrochemicals and derivatives that growing global populations and economies need to thrive while doing so in an environmentally sustainable way. Plastic waste is part of a larger issue related to insufficient global waste management infrastructure. According to the United Nations, nearly 3 billion people worldwide do not have access to proper waste collection or disposal systems.⁴ AFPM recognizes that, as a component of this wider challenge, mismanaged plastic waste is a significant issue and is committed to engaging in the development of plastic waste management policies. AFPM supports waste policies and programs that improve the lives of people and the environment by improving waste management, incentivizing recycling and research and development, and maintaining consumer choice in modern materials.

Our members abide by numerous chemical policies and regulations administered in Canada, the U.S., and other jurisdictions in which they operate. Many regional policies are shared and discussed internationally through the Organization for Economic Cooperation and Development and the United Nations. There are also international conversations occurring regarding the sustainability of single-use plastics and their alternatives. AFPM realizes this is a global issue and that actions in one part of the world may have wide ranging implications throughout the petrochemical value chain.

These impacts would be amplified if such policies were enacted by a participant in the United States–Mexico–Canada Agreement ("USMCA"), such as Canada. The USMCA includes a sectoral annex on chemical substances that was absent in the original North American Free Trade Agreement. This Annex promotes a risk-based approach to regulation, directing the three countries to align their risk assessment and management measures within their legal frameworks. Further, the annex defines "risk-based approach" to mean "the evaluation of a chemical substance or chemical mixture that

⁴ 2015 UNEP report *Global Waste Management Outlook* <https://www.unenvironment.org/resources/report/global-waste-management-outlook>

includes the consideration of both the hazard and exposure.”⁵ It is clear that the intention of the USMCA and Annex 12-A is to harmonize the risk-based approach between United States, Mexico, and Canada.

AFPM supports a tiered, targeted and risk-based approach to chemical safety. Technology continues to rapidly evolve and we need a regulatory system that adapts to these advances and ensures that North America remains a competitive location for the production of petrochemicals and that consumers are afforded the benefits of plastic products in the most sustainable way possible.

III. AFPM'S INTEREST IN THE DRAFT

AFPM members manufacture the feedstocks and chemical building blocks for plastics that are central to the plastics value chain and thus impacted by plastic waste and associated policies. That plastics value chain spans North America, as feedstocks, petrochemicals and finished plastic products all frequently cross our northern border. For example, natural gas liquids ("NGLs") are produced in the United States, and then are separated into the individual gases that make up the NGL mixture. One such gas, ethane, is exported to Canada and processed (by cracking) into ethylene, which is then shipped back into the U.S. for making value-added polystyrene, polyethylene, and other products. This trade in intermediate products results in tremendous efficiencies that ultimately benefit consumers and the economies of both countries and illustrates how policies adopted on either side of the U.S. / Canadian border can have wide ranging implications on both countries.

1. Healthy North American Trade is Integral to the Success of the Petrochemical Industry.

North American trade is a key element for continued economic growth in both Canada and the U.S.. Trade flows in feedstock and finished products travel across our shared border in both directions. The U.S. imports significant volumes of crude oil from western Canada and refined products from eastern Canada. Likewise, Canada is a key trading partner for petrochemicals. In 2018, Canada exported \$2.5 billion and imported \$1 billion of petrochemicals alone.⁶ The United States is the primary trading partner with Canada's chemical industry, and is the destination for 79% of Canada's exports and source of 69% of Canada's imports.⁷ Canada's petrochemical sectors are concentrated in Alberta, Ontario, and Quebec, where the chemical industry ranks in the top 10 manufacturing industries of each province by value of shipments, value added, and employment metrics.⁸ Both our countries are competitive internationally and export oil, refined products, and petrochemicals worldwide.

Because petrochemicals are building blocks used in a wide variety of manufacturing supply chains, the ease of their movement across borders is critical. Furthermore, North Americans benefit

⁵ See United States–Mexico–Canada Agreement Annex 12-A

https://ustr.gov/sites/default/files/files/agreements/FTA/USMCA/Text/12_Sectoral_Annexes.pdf

⁶ Chemistry Industry Association of Canada, 2019 Economic Review of Chemistry at page 34, <https://canadianchemistry.ca/blog/2019/05/13/2019-economic-review-of-chemistry/>

⁷ *Ibid* at page 12.

⁸ *Ibid* at pages 20 to 33.

from robust environmental, health and safety policies that are among the most protective in the world. It is essential that North American supply chains remain secure and globally competitive to ensure petrochemicals and plastics are produced and managed responsibly.

Canada is the second largest trading partner for the U.S. U.S. goods and services trade with Canada totaled an estimated \$718.5 billion in 2018 with U.S. exports totaling \$363.8 billion and imports totaling \$354.7 billion. Canada and the U.S. are also important trading partners when it comes to the petrochemical and plastics value chain. For example, in 2017, Alberta's chemical manufacturing industry exported CAD \$6 billion worth of goods, of which 80% was destined to the United States.⁹ Petrochemical manufacturers are thriving; they are expanding existing capacity and building new plants to process increasing supplies of ethane and other light feedstocks. With access to secure North American petroleum feedstocks, North American petrochemical and derivatives manufacturers are well-positioned to supply the expected increase in global demand for the many products made from petrochemical building blocks.

Trade in all chemicals has more than tripled since the North American Free Trade Agreement came into force, from \$20 billion in 1994 to \$63 billion in 2014. Petrochemical imports to the U.S. from Canada and Mexico totaled around \$419 million in customs value, while exports to both countries totaled around \$749 million in customs value.¹⁰ Further, plastics trade is included in the top five export and import categories for both the U.S. and Canada (\$14 billion and \$12 billion respectively).¹¹

2. North American Policy Coordination is Essential for Chemical Regulation.

The importance of policy coordination between the U.S. and Canada cannot be stressed enough. This importance is amplified when dealing with aspects of the fuel and petrochemical industries that freely trade across the northern border. The upgrade of the North American rail tank car fleet in the wake of the Lac-Mégantic rail incident¹² provides an illustrative example of this importance. AFPM was actively engaged in this regulatory process to update the tank car standards and stressed the essential nature of data driven, science-based and harmonized regulations between the U.S. and Canada. To this end, AFPM worked closely with Transport Canada to share technical expertise and help inform expedient solutions to help address risk.

The governments of the U.S. and Canada themselves recognize the need for collaboration and initiatives like the U.S.-Canada Regulatory Cooperation Council. Another important example is the Commission for Environmental Cooperation, under which a great deal of coordination has taken place, especially in the area of chemicals policy and management of toxic substances. The US *Toxic Substances Control Act* ("TSCA") and the Canadian Chemicals Management Plan ("CMP") under *CEPA* have served as benchmarks for risk-based management of toxic substances. While some other

⁹ Alberta, "Petrochemicals" [accessed April 1, 2020] <https://investalberta.ca/industry-profiles/petrochemicals/>

¹⁰ American Fuel & Petrochemical Manufacturers, AFPM SELECTED PETROCHEMICAL STATISTICS, U.S. Trade Data (December 2016).

¹¹ See Office of the United States Trade Representative, Trade partners summary [accessed April 1, 2020] <https://ustr.gov/countries-regions/americas/canada>

¹² On July 6, 2013, an unattended 74-car freight train carrying crude oil rolled down a decline and derailed in Lac-Mégantic, Quebec, Canada. The derailment killed 47 people and the accident resulted in Transport Canada and the U.S. Department of Transportation adopting additional operational controls and new tank car standards.

countries and regions have departed from these scientifically validated approaches, the U.S. and Canada have remained committed to a risk-based approach.

Under chemicals management in North America, there is an expectation that sound science and evidence will form the basis of regulatory decision-making, from new chemicals first entering the marketplace to existing chemicals that have provided for our high standard of living. The foundation of this decision-making and sound science in chemicals management is the consideration of both hazards and potential exposures. The priority under TSCA and the CMP has been substances that are most likely to pose the greatest risks; in other words, those that cause severe harm to human health and the environment and present the greatest exposure pathways to those harms. This type of approach has led to enhanced protection of health and the environment, while allowing consumers to benefit from the many advanced products that make up our modern life. The USMCA provides another example of the need for compatible policies, particularly when it comes to chemicals. This aspect was so important that the drafters of USMCA ensured that the trade deal included an annex specifically dealing with chemicals (see Annex 12-A).¹³

It must be noted that public policy, either good or bad, that is adopted in one nation could serve as a model for other countries. AFPM has a vested interest in Canadian policy particularly related to petrochemicals and plastics. This interest includes not only the specific content of the policy proposals but also the regulatory and legislative pathways to adoption of such policies. Regulatory policies in North America that are not compatible or disharmonized has the potential to create unnecessary trade barriers between important trade partners.

As mentioned above, there is a very diverse portfolio of petrochemicals crossing the border that affects a wide variety of manufacturing supply chains throughout North America. Those supply chains often go back and forth across borders, blurring the distinction of purely American and Canadian manufacturing and creating a North American manufacturing bloc. There is no disputing that plastic waste management is a significant global issue; however, with appropriate North American and international policies working in tandem and with meaningful partnerships, the North American Petrochemical industry can play a leadership role in the stewardship of plastic waste. For that to be possible, plastic waste policies must recognize the vital role and many societal benefits that petrochemicals and their derivatives provide our nation and the world, and comport with clear legislative authorities to protect health and the environment.

IV. AFPM COMMENTS ON THE REGULATORY PROCESS

1. CEPA and the List of Toxic Substances is not an Appropriate Way to Address a Solid Waste Problem.

AFPM submits that the broad-based regulation of plastics under the toxic substance provisions of *CEPA* is inappropriate.

¹³ See Agreement between the United States of America, the United Mexican States, and Canada, [accessed April 1, 2020] https://ustr.gov/sites/default/files/files/agreements/FTA/USMCA/Text/12_Sectoral_Annexes.pdf

Plastics as a broad class of substances are simply not comparable in toxicity to the majority of other substances listed as toxic substances; and, in particular, those that were part of the original groups of listed toxic substances. Regulating plastics as toxic substances is an overly broad application of the statute and goes beyond the intent of the toxic substance provisions in CEPA. The Supreme Court of Canada has narrowly construed the toxic substances provisions of CEPA under the criminal law powers granted to Parliament under section 91(27) of the *Constitution Act, 1867*.¹⁴ In doing so the Supreme Court of Canada concluded that the toxic substances provisions were only intended to apply to a limited number of truly toxic substances. For example, and for context in these circumstances, the Court has determined as follows:¹⁵

When one examines the original Schedule, as it appeared in the statute, it is evident that it comprises a very restricted number of substances, nine, and it is also apparent that they set forth asbestos, lead and mercury, substances that even to the uninitiated are well known to be toxic in certain circumstances when they enter the environment.

[...]

For all these reasons, I conclude that when the Governor in Council makes an order adding to the List of Toxic Substances in Schedule I, it involves a determination that the substances added are of a kind akin to those already listed in Schedule I" [emphasis added]

There is no scientific evidence to support the view that plastics – either as a broad class of substances or as individual polymers - are toxic in the ordinary sense or based on a reasonable application of the definition at section 64 of CEPA. Plastics and polymers that make plastics share no similarities to other substances that were analyzed and are currently included on the List of Toxic Substances.

Instead, as detailed below, plastic waste issues are numerous, complex, and intertwined up and down the value chain. The legal structure provided by CEPA, supported by the criminal law power, is simply not designed for the proper management of a broad class of substances such as plastics. AFPM urges the Ministers of Environment and Climate Change ("ECCC") and Health Canada ("HC") to work with the provinces, industry, consumers and other jurisdictions to develop a more suitable approach to the management of plastics through legislation and policy initiatives that are more reflective of the nature of plastics and their use in society.

2. The Draft does not substantiate placing plastics – or a category of plastics – on the List of Toxic Substances at Schedule 1 of CEPA.

AFPM disputes the use of the CEPA as a mechanism to regulate plastic waste. However, even if ECCC and HC choose to proceed with the regulation of waste using the provisions of CEPA, the

¹⁴ *R v Hydro-Québec*, [1997] 3 SCR 213

¹⁵ *Ibid* at para 145.

Draft does not provide an adequate basis for including plastics on the List of Toxic Substances in Schedule 1 to *CEPA*.

Most importantly, the Draft fails to conclude that microplastics or macroplastics, as defined therein, meet the definition of a "toxic substance" under section 64 of *CEPA*. *CEPA*'s definition of a "toxic substance" is not included or mentioned in the scope of the Draft. The studies surveyed are not reviewed with regards to the statutory definition of a "toxic substance." Without concluding how the studies surveyed apply to *CEPA*'s definition of a toxic substance, the Ministers cannot reasonably determine there is a scientific basis for adding plastics to the list of toxic substances under section 90 of *CEPA*.

Further, the Draft has not been undertaken pursuant to any of *CEPA*'s information collection or risk assessment pathways that would lead to a recommendation by the Minister that a substance be listed as toxic pursuant to section 77 of *CEPA*.¹⁶ The Draft is not a screening assessment (*CEPA* section 74), a review of a decision of another jurisdiction (*CEPA* section 75), or an assessment of a substance on the Priority Substance List (*CEPA* section 76). Nor was the Draft prepared pursuant to a *CEPA* section 71 notice to collect information for the purpose of assessing whether a substance is toxic or is capable of becoming toxic, or for the purpose of assessing whether to control, or the manner in which to control, a substance. While these pathways are not mandatory precursors to the Ministers making a recommendation under *CEPA* section 90 to list a substance as toxic, they demonstrate the scientific examination and study expected under Canada's federal pollution prevention legislation.¹⁷ Simply ignoring the standard set by these statutorily mandated scientific evaluations – and the consultation periods they trigger – undermines the rigorous process set out by *CEPA* for designating toxic substances. AFPM suggests that relying solely on a broad literature review like the Draft to determine that a broad category of ubiquitous substances is toxic falls far short of *CEPA*'s underlying structure, which require decisions to be supported by appropriate scientific study, consultation and risk assessment.

Recent experience shows that risk assessment using recognized information collection or risk assessment pathways under *CEPA* is possible and desirable. For example, the process undertaken by the Ministers to designate microbeads as toxic included an information collection request under *CEPA* section 71, followed by the preparation and publication of a Science Summary Report that explicitly considered whether microbeads met the definition of a "toxic substance" at section 64 of *CEPA*, and then reached a conclusion based on the science that report reviewed.¹⁸ The federal government's process to collect information on microbeads in personal care applications demonstrates both the legislative process and the scientific review that took place before the Ministers could reasonably recommend the designation of microbeads as toxic.

In contrast, the Draft does not follow any existing approach to risk assessment or information collection set out by *CEPA* nor does it assess the findings of the studies reviewed against the definition of a toxic substance under *CEPA*. On this basis, the Draft cannot reasonably be relied on as anything

¹⁶ See Canadian Environmental Protection Act, 1999 (S.C. 1999, c. 33), section 77 <https://laws-lois.justice.gc.ca/eng/acts/c-15.31/page-9.html>

¹⁷ *Ibid* at Sections 71, 74, 75, 76 and 90.

¹⁸ See <https://www.canada.ca/en/health-canada/services/chemical-substances/other-chemical-substances-interest/microbeads.html>.

more than a literature review and it is not a scientifically valid analysis of whether plastics meet the definition of “toxic” under *CEPA*. Moreover, in substance, the gaps in research and inconsistent findings identified in the Draft demonstrate exactly why additional input and a robust review process is required before the Ministers of HC and ECCC make any recommendation to Cabinet regarding how *CEPA* may be used to regulate plastic waste. Canada’s failure to follow the risk-based process - upon which *CEPA* and *CMP* were built -- will undermine the legitimacy of the program as a leading chemicals management model.

Accordingly, AFPM urges the Ministers to move forward in a manner that will permit additional data, consultation, analysis, and collaboration that, at a minimum, complies with the spirit of the existing review mechanisms provided in *CEPA*. The Draft can provide only the first steps of a larger, risk-based assessment of specific substances for the purpose of addressing plastic waste. Finally, for all the reasons identified herein, AFPM respectfully submits that the Draft would provide a deficient basis for designating plastics as toxic under section 90 of *CEPA*.

3. Plastic pollution can only be addressed through waste management

The mismanagement of plastic waste is a complex, system-wide issue that requires collaboration between provinces, industry and consumers to address effectively. The complexity is demonstrated in the Draft, which identifies the significant variation in the pathways, characteristics and impacts of plastics. Each plastic product is different, with varying practical uses and potential for mismanaged plastic waste. As a result, using *CEPA* to address individual plastic polymers or products one by one will do little to assist with system-wide management efforts that should be focused on the problem – the improper disposal of plastic wastes. By the same token, listing entire categories of plastics as toxic will do little to address the real issues and will have unnecessary and significant negative impacts on products that are essential to Canadians' day-to-day lives.

AFPM is committed to reducing plastic waste using effective, waste management-based approaches. In January 2019, global companies in the plastics value chain, from petrochemical manufacturers to consumer products companies and waste management experts, including many AFPM members, announced the creation of a non-profit organization, the "Alliance to End Plastic Waste" ("AEPW"), whose sole focus is providing solutions to the largest sources of plastic waste in our oceans. To this end, member companies committed \$1.5 billion over five years to help end plastic waste in the environment. A study in *Science* magazine estimates that almost 60 percent of plastic waste going into our oceans comes from just five rivers in southeast Asia.¹⁹ As such, AEPW’s work focuses on these areas as they provide the greatest opportunity to positively impact marine debris.

While AEPW and AFPM members’ efforts to combat plastic waste embrace a full lifecycle approach, restrictions and bans on plastic products will have little impact on mismanaged plastic waste on a global scale. To fully be effective, plastic waste policies must include a variety of approaches along all aspects of the value chain. Focusing efforts on a single area will not be effective and successful policies must address the underlying issue of deficiencies in waste management

¹⁹ Jenna R. Jambeck et al., Plastic Waste Inputs from Land into the Ocean. *Science*, 13 Feb. 2015, Vol. 347, Issue 6223, pp. 768–771, <http://science.sciencemag.org/content/347/6223/768>.

infrastructure, traditional and non-traditional recycling, research and development, and education. Furthermore, focusing solely on "bans" of plastics or categories of plastics (such as single-use plastics) risks depriving the global consumer of the benefits plastics provide, including in the prevention and treatment of pathogen-based disease, reducing greenhouse gas and other emissions, and minimizing food waste, among other areas.

4. CEPA cannot effectively address plastic waste problems.

The narrow tools available to address toxic substances under *CEPA* are simply inadequate to effectively address the complex solid waste management issue posed by plastic waste.

A "toxic" designation for plastics – or any category of plastics, such as single-use plastics - under *CEPA* would have wide-ranging and damaging implications as consumers would associate a group of products that provide great benefits to the public as a potentially dangerous material. Such a broad-brush, categorical approach based on current research would, in any case, contradict the Prime Minister's stated intention to take steps that are "supported by scientific evidence and warranted."²⁰

Furthermore, such a designation would blur the line between the truly toxic substances intended to be managed by *CEPA* and those that are not. Consumers must have confidence in their nation's chemicals management program, and that confidence will only come from a risk-based approach based upon sound science. Labeling a non-toxic substance as toxic is not scientifically justifiable, nor is it good policy when Canadians rely on plastics in nearly every aspect of their everyday lives, and during this current pandemic when the benefits of plastic are more important now than ever.

From a policy perspective, the significant negative social and economic impacts of designating non-toxic categories of plastic as toxic vastly outweighs the potential benefits of waste management opportunities offered under *CEPA*.²¹ This imbalance is particularly acute because the designation as toxic does not address the fundamental causes of mismanaged plastic waste.

5. If the Government of Canada Insists on Using *CEPA* to Address Plastic Pollution, the Review Process Must Include a Robust Risk Assessment Process and Cooperation with the Provinces.

The best way to manage plastic waste is to develop waste management policies or legislation in cooperation with industry, the provinces, and international partners. Such efforts would provide better outcomes in support of the federal government's existing domestic and international policy initiatives, including the Ocean Plastics Charter. Ample opportunity exists for the federal government to support the considerable work completed by the Canadian Council of Ministers of the Environment

²⁰ Justin Trudeau, Prime Minister of Canada, Canada to ban harmful single-use plastics and hold companies responsible for plastic waste (June 10, 2019) accessed April 1, 2020 <https://pm.gc.ca/en/news/news-releases/2019/06/10/canada-ban-harmful-single-use-plastics-and-hold-companies-responsible>

²¹ Negative social and economic costs would include instilling fear in consumers and driving them away from products that are entirely safe for use thus depriving consumers of the benefits of plastics including, but not limited to improved hygiene, sanitation, and food safety. Impacts also would include increased greenhouse gas emission from some plastic alternatives.

by the Canada-wide Strategy on Zero Plastic Waste, which lays out concrete measures to achieve the vision of keeping plastics in the economy and out of the environment, and is noticeably silent on regulating plastic as a toxic substance or using *CEPA* to address plastic waste disposal problems.²²

The Draft clearly states it "is not intended to quantify the risks of plastic pollution on the environment or human health." While the Draft's review of pollution studies is a step in the evaluation process, it must be taken within *CEPA*'s established risk assessment structure. AFPM supports a process where, if after a review and evaluation of the best available science and a weighting of the relevant evidence, there appears to be significant concerns, then a robust scientific risk assessment must be conducted. This is consistent with the risk-based approach defined in Annex 12-A to the USCSMA that includes "the consideration of both the hazard and exposure."

It appears, however, that **ECCC and HC's proposed course of action is to skip over the risk assessment as a means to fast track the process to reach a predetermined conclusion.** This is unwise and wholly inconsistent with the provisions of *CEPA* and the CMP. AFPM is also concerned that failure to conduct a risk assessment is a breach of Canada's commitments under the USCSMA, which requires Canada to use a risk-based approach to the assessment of specific chemical substances and chemical mixtures where appropriate.²³ The USCSMA similarly requires cooperation between the parties to address matters of mutual interest with respect to combatting marine litter, such as addressing land and sea-based pollution, and promoting waste management infrastructure.²⁴ AFPM therefore urges Canada to undertake a risk-based approach that does not preempt cooperation in North America.

V. AFPM COMMENTS ON THE SCIENTIFIC CONSIDERATIONS IN THE DRAFT

1. The Draft Accurately Concludes that Scientific Consensus on the Impacts of Plastic Pollution Varies

The Draft clearly demonstrates that the potential impacts, pathways and interactions related to the enormous variety of compounds that fall under the umbrella of "plastics" vary enormously. Inasmuch as the Draft identifies impacts, it equally identifies the dangers of the lack of scientific consensus or certainty regarding the impacts of plastic pollution.

2. The Draft Includes Studies That Found Plastics Have No, or Minimal, Negative Impacts on Environmental and Human Health

The Draft conclusively demonstrates that studies have not reached a uniform conclusion that plastics cause negative effects on environmental and human health. Several studies found no or minimal impacts from plastic pollution; other studies that reached conclusions on the negative impacts of plastics pollution did not meet criteria for reliable studies or came to wildly varying results.

²² Canadian Council of Ministers of the Environment, Strategy On Zero Plastic Waste (2018) <http://www.ccme.ca/files/Resources/waste/plastics/STRATEGY%20ON%20ZERO%20PLASTIC%20WASTE.pdf>.

²³ See United States–Mexico–Canada Agreement, Article 12.A.4, paragraph 3 https://ustr.gov/sites/default/files/files/agreements/FTA/USMCA/Text/12_Sectoral_Annexes.pdf

²⁴ *Ibid* at Article 24.12, paragraph 3.

AFPM highlights the following excerpts from the Draft, identifying studies that conclude that plastics cause minimal or no negative impacts on environmental and human health:

i. *Impacts on Environmental Health*

Studies on the impacts to environmental health demonstrated minimal or no negative impacts of plastics on environment and considerable uncertainty in studies completed to date.

Studies Highlighting Lack of Standard Research Methods

- "Given the lack of standardized methods for quantifying occurrence in biota as well as the limited data on occurrence in Canadian species, criteria for selecting reliable studies (e.g., studies that used an analytical method to identify microplastics) were identified but many studies did not meet these standards." (section 6.2.1)

Studies Demonstrating Limited Ingestion / Egestion of Plastics

- "The frequency of occurrence of macroplastic and microplastic ingestion by Atlantic salmon and capelin was 0% for specimens collected between 2015 and 2016 (a total of 419 fish). In Atlantic cod examined during the same period, the frequency of occurrence of plastic ingestion was 1.68%. These results are consistent with a previous study by Liboiron et al. (2018), in which 134 silver hake (*Merluccius bilinearis*) from the south coast of Newfoundland were studied and found to have a 0% frequency of occurrence of plastic ingestion." (section 6.2.1)
- "While the ingestion of microplastics has been widely demonstrated, egestion has also been shown to be possible in some organisms. For example, Grigorakis et al. (2017) found that goldfish (*Carassius auratus*) have efficient gut clearance of microbeads and microfibres: the time required for 90% clearance was 33.4 hours. Mazurais et al. (2015) found complete egestion of PE microbeads from European seabass (*Dicentrarchus labrax*) larvae after 48 hours. In invertebrates, significant microplastic egestion was seen in studies by Chua et al. (2014), Blarer and Burkhardt-Holm (2016), Frydkjær et al. (2017), and Hämer et al. (2014). In *Hyaella azteca*, an amphipod crustacean, microplastic fibres were found to be more slowly egested than microbeads during acute exposure; however, both were able to be completely egested (Au et al. 2015)." (section 6.2.1)

Studies Demonstrating No Impacts on Environment

- "Conversely, several current studies report no significant effects on vertebrates for any of the endpoints measured. De Felice et al. (2018) exposed tadpoles of African clawed frog (*Xenopus laevis*) to PS microplastics and found no significant effects on mortality, body growth, or swimming activity during their early life stages, despite observing microplastics in the digestive tracts of all exposed tadpoles. Further, Ašmonaitė et al. (2018) observed no significant histological effects or inflammatory responses in rainbow trout (*Oncorhynchus mykiss*) exposed to PS microplastics, and Jacob et al. (2019) observed no effects on foraging or predation avoidance in coral-reef fish (*Acanthurus triostegus*) exposed to PS microbeads.

Dietary exposure to PVC, PA, PE, and PS microplastics also did not affect stress responses, growth rate, or induce pathology changes in seabream (*Sparus aurata*) (Jovanović et al. 2018)."(section 6.2.2, *Vertebrates*)

- "For the freshwater invertebrate *Gammarus pulex*, Weber et al. (2018) found no significant effects on juvenile survival, development (molting), metabolism, or feeding activity following chronic exposure to PET [polyethylene terephthalate]." (section 6.2.2, *Invertebrates*)
- "Hankins et al. (2018) found no significant effects on calcification in either the large polyp coral *Montastraea cavernosa* or the small polyp coral *Orbicella faveolata* despite active ingestion of PE microbeads." (section 6.2.2, *Invertebrates*)
- "Microplastic exposure has also been studied at early developmental stages for invertebrates. Lo and Chan (2018) found that larval and juvenile sea snails (*Crepidula onyx*) were not affected by exposure to environmentally-relevant concentrations of PS particles. [...] Beiras et al. (2018) found no significant effect on mussel embryonic development under static conditions from virgin PE microplastics." (section 6.2.2, *Invertebrates*)

Studies Highlighting no Food Chain Impacts

- "Current studies also exist that show an absence of significant effects on primary producers for endpoints tested. Sjollem et al. (2016) exposed both freshwater and marine microalgal species to uncharged virgin PS microbeads and negatively-charged beads and found an absence of significant effects on photosynthesis from exposure to all treatments. Further, Garrido et al. (2019) found no effect on the daily growth rate of the microalgae *Isochrysis galbana* exposed to PE particles at any of the tested concentrations."(section 6.2.2, *Primary Producers*)
- "There is limited information on the ability of microplastics to travel through different trophic levels, as seen in a food chain. Very few studies have looked at trophic transfer, and even fewer have studied the importance of bioconcentration, biomagnification, and bioaccumulation (Provencher et al. 2018a)." (section 6.2.3)
- "To study transfer along a natural food chain, Batel et al. (2016) exposed nauplii of the brine shrimp *Artemia* to microplastics ranging from 1 to 5 μm or from 10 to 20 μm , then fed the nauplii to zebrafish (*Danio rerio*). They observed that while the zebrafish were able to uptake the microplastic particles, no significant accumulation or further retention was observed within their intestinal tract, and no transfer to other organs was observed. Similarly, Welden et al. (2018) found by examination of stomach contents that trophic transfer of microplastics occurred between sand eels (*Ammodytes tobianus*) and their predator, plaice (*Pleuronectes platessa*) from the Celtic Sea. However, the microplastics were egested in the plaice." (section 6.2.3)

ii. *Impacts on Human Health*

Studies on impacts to human health cited in the Draft noted limited exposure to plastic pollution by humans (through a number of pathways) and thus minimal to no effect of plastic pollution. Further, studies on human health demonstrated limited to no health impacts of plastic pollution and highlighted the uncertainty and inconsistency data in many studies.

Studies on Human Exposure

- "Human exposure to macroplastic pollution is not anticipated to occur, and the effects of macroplastics on human health are therefore not considered in this report." (section 7.1)
- "The World Health Organization (WHO) recently carried out an assessment of human exposure to microplastics in drinking water using conservative worst-case estimates of the levels of additives and sorbed chemicals on microplastics (WHO 2019). The Food and Agriculture Organization of the United Nations (FAO) and the European Food Safety Authority (EFSA) conducted a similar assessment of exposure to microplastics in seafood (EFSA 2016; FAO 2017). These evaluations concluded that exposure to microplastics and/or chemicals associated with microplastics are considered to be a low concern to human health (EFSA 2016; FAO 2017; WHO 2019)." (section 7.2)

Studies on Human Ingestion and Health Impacts

- "At present, it is unclear how other properties, such as shape and surface chemistry, may affect the uptake, retention, and/or toxicity of ingested microplastics (Stock et al. 2019; WHO 2019)." (section 7.2.1)
- "The WHO conducted the most recent review of the toxicological data on microplastics ingestion. Consistent with previous reviews by the EFSA (2016) and FAO (2017), the WHO concluded that there were insufficient data to allow for a robust evaluation of the potential human health risks of ingested microplastics, although there was no information to suggest it represented a potential human health concern (WHO 2019)." (section 7.2.1, *Studies in experimental animals*)
- "In a 90-day study that was compliant with test methods from the Organisation for Economic Co-operation and Development (OECD), rats fed a daily diet that contained up to 5% milled PE and PET fabric exhibited no treatment-related adverse effects on blood parameters, organ weights, or histopathology (Merski et al. 2008). Based on the absence of observed toxicity, the highest test dose was considered to be the no observed effect level (NOEL), equivalent to approximately 2 500 mg/kg body weight (bw)/day (WHO 2019)." (section 7.2.1, *Studies in experimental animals*)
- "Other studies have reported adverse health effects in mice following the administration of very high oral doses of microplastics, several orders of magnitude above expected microplastic concentrations in food and drinking water (Deng et al. 2017, 2018; Lu et al. 2018; Jin et al. 2019). These studies have been extensively criticized for their lack of reliability and relevance

(Böhmert et al. 2019; Braeuning 2019; Tang 2017; WHO 2019; Stock et al. 2019)." (section 7.2.1, *Studies in experimental animals*)

- "No increases in lung or respiratory tract cancer were associated with exposure to PU dust in polyurethane foam (PUF) workers (Sorahan and Pope 1993; Mikoczy et al. 2004; Pinkerton et al. 2016)." (section 7.2.1, *Studies in humans*)

3. The Categorization of Plastics in the Draft is too Broad to Provide a Basis for Decision-Making

AFPM disagrees with the ambitious scope undertaken by the Draft. One purpose of the Draft included "the current state of the science regarding the potential impacts of plastic pollution on the environment and human health."²⁵ To do so, the Draft covers a considerable breadth of research in relation to the sources, environmental fate, and occurrence of plastic pollution, as well as impacts on the environment and human health.

The second purpose of the Draft was to "guide future research and inform decision-making on plastic pollution in Canada." However, some of the future research described in the Draft is essential and must be undertaken before making broad decisions regarding plastics that will lead to significant unintended consequences, such as misleading consumers on the safety of plastic products and depriving the public from the benefits that certain single use plastics provide.

AFPM questions the utility of the Draft to inform decision-making on plastic pollution in the absence of an accurate definition of "plastic pollution" or any categorization of plastics beyond microplastics and macroplastics. The term "plastic" is generally understood to mean a subset of chemically distinct polymeric substances. The thousands of unique polymers in use today each have their own chemical identity, physical and chemical properties, and other important characteristics. In addition, polymers are often compounded with other substances to make finished plastics, such that each type of "plastic" used in a particular application might be better described as an article instead of a discrete substance.

The Draft is a literature review and broadly classifies available information by setting out a definition of microplastics and macroplastics. This arbitrary classification does not permit an individual assessment of each plastic, be it a plastic product or an individual polymer. The Draft therefore ignores the specific properties of each plastic and provides no precise assessment of their risk of being a toxic substance under *CEPA*. Nor does the Draft permit a review of each plastic's use or trace the lifecycle of those plastics in a way that permits plastic waste products to become plastic pollution. Instead, the Draft creates overly broad classifications that do little to address the underlying reasons and ways plastic makes its way into the environment.

²⁵ Draft Science Assessment at page 7.

As a result, the Draft does not provide a basis for reaching substance-based conclusions regarding the entry of the substance into the environment in a quantity or concentration or under conditions that justify further action.

Furthermore, the division of microplastics and macroplastics does little to assist decision-makers to distinguish between and effectively address the widely varying sources, environmental fate, occurrence, and health and environmental impacts of "single-use plastics." To illustrate: the impacts and most effective policy approach to waste plastic bottles may be vastly different from the impacts and policy approach to sanitary items, but both fall within the same list of most prevalent macroplastic pollution types identified in the Draft.²⁶

As a result, without a further distillation and organization of the findings of the Draft, including additional research, its utility as a policy-making tool is undermined by the breadth of its contents and conclusions. Policy-setting and regulatory decision-making ought to be made on the basis of a more thoughtful and comprehensive risk assessment.

4. The Precautionary Principle is Applied Without Definition or Analysis

The Draft concludes that "[i]n keeping with the precautionary principle, action is needed to reduce microplastics and macroplastics that end up in the environment."²⁷ Notwithstanding this conclusion, the precautionary principle is not introduced or defined in the Draft, nor is any link made between the scientific studies reviewed and the precautionary principle.

The scientific rigor of the Draft and its utility to policymaking would be strengthened by defining the precautionary principle and discussing the analysis used to conclude that action is required pursuant to that definition. AFPM further submits that the application of weight-of-evidence and the precautionary principle in risk assessment, which are principles the Minister is required to consider when assessing many substances,²⁸ would contribute to a more robust risk assessment.

If the definition of the precautionary principle set out in the preamble to the *Canadian Environmental Protection Act* is used,²⁹ AFPM notes that some degree of scientific certainty is required. The need to invoke the precautionary principle must also be balanced with the magnitude of the apparent "threats of serious or irreversible damage" that is based on sound, peer-reviewed data and science. Accordingly, analysis in the Draft should reasonably include an identification and explanation of the potential serious or irreversible damage and an analysis of exactly which plastics pose which threat. Moreover, given the inclusion of cost-effectiveness in *CEPA*'s definition of the

²⁶ Draft Science Assessment at page 34.

²⁷ Draft Science Assessment at page 78 (Findings). See also pages 10 (Introduction).

²⁸ *CEPA*, section 76.1 requires the Ministers to apply a weight of evidence approach and the precautionary principle when conducting and interpreting the results of (a) a screening assessment under section 74; (b) a review of a decision of another jurisdiction under subsection 75(3) that, in their opinion, is based on scientific considerations and is relevant to Canada, or (c) an assessment whether a substance specified on the Priority Substances List is toxic or capable of becoming toxic.

²⁹ *CEPA*, Preamble: Whereas the Government of Canada is committed to implementing the precautionary principle that, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

precautionary principle,³⁰ a survey of research relevant to the economic and societal costs and benefits related to plastics policy is essential to informed decision-making.

5. The Government of Canada Does Not Have Sufficient Information to Make Any Type of Regulatory Decisions.

The Draft concluded that additional research is required in the following areas:

- Developing standardized methods for sampling, quantifying, characterizing, and evaluating the effects of microplastics and macroplastics;
- Furthering the understanding of human exposure to microplastics;
- Furthering the understanding of the ecotoxicological effects of microplastics;
- Furthering the understanding of the effects of microplastics on human health; and,
- Expanding and developing consistent monitoring efforts to include poorly characterized environmental compartments such as soil.

AFPM agrees with the Draft's finding that additional information is required on the above. AFPM recommends as a first step that the Government of Canada work with stakeholders and assess what information is available, including information from public comments on the Draft. Only after an extensive literature survey, accounting, and analysis of the current body of research on the subject of plastic pollution from stakeholders from a variety of industries should the Government of Canada expend resources on additional study.

VI. NEXT STEPS

1. The Government of Canada Should Complete Full Analysis of Societal Cost of Plastic Waste and Societal Benefits of Plastic Use.

The management of plastic waste is a global issue that cannot be resolved by North America acting on its own. It is now readily accepted and proven through research that the most significant pathways leading to marine debris occur outside the boundaries of Canada and the United States. While the U.S. and Canada are key players within the global effort to manage plastic waste, simple bans and restrictions in North America will not appropriately address the situation. As previously stated, the Draft relies heavily on the precautionary principle which as defined by *CEPA* includes reference to cost-effectiveness, yet the Draft does not consider or examine alternatives beyond bans to address plastic pollution. An examination of alternatives is essential to evaluate more cost-effective solutions that address mismanaged plastic waste while recognizing the tremendous benefits of plastics in our society.

The current COVID-19 crisis readily demonstrates the importance of plastics, particularly single-use plastics and highlights the short-sightedness of listing an entire class of substances as toxic.

³⁰ *Ibid.*

At a time when health care facilities use straws to rehydrate patients, personal protective equipment made from plastics protect our frontline healthcare workers from infection, grocery stores are refusing to pack food in reusable grocery bags for sanitary reasons, and plastic cutlery is needed to ensure sanitary food consumption, single-use plastics have a critical role to play in the response to COVID-19. The potential unintended public health consequences of listing single-use plastics – much less plastics more generally – as toxic at this critical juncture could cause considerable and unnecessary difficulties in the public health response to COVID-19. For example, consumers could become afraid to use essential single use plastics such as those used in medical applications or food safety because they are deemed “toxic.”

Similarly, local governments and consumer companies in the U.S. that placed bans on single-use grocery bags are rethinking their actions, resulting in pauses and reversals of those decisions. Single-use straws, dinnerware and cups can also be an important part of preventing the spread of pathogens. All of these considerations must be taken into account in a robust and sound waste management system.

2. The Government of Canada Should Strongly Reconsider the Process Being Utilized to Evaluate and Regulate the Impacts of Plastics.

AFPM understands that the federal government wishes to address single-use plastics in the near term. But unilaterally listing plastics on the List of Toxic Substances in Schedule 1 to *CEPA* would be an ineffective and irresponsible way to achieve this goal and would result in unforeseen negative impacts on producers and consumers alike.

Far from providing a scientific basis for any specific policy or regulatory direction, the Draft highlights the scientific uncertainty and complexity that underpin the policy questions associated with addressing plastic pollution. Moreover, the Draft is clear that it is not a risk assessment. The broad calls for action at pages 10 and 78 of the Draft do not extend to a consideration of policy options for plastics generally (or single-use plastics specifically), nor does it contain any consideration of the practical economic, medical and environmental impacts of policy changes. As a result, the Draft's findings – even once finalized – provide an incomplete basis for regulatory decisions.

The outcomes sought by the Government of Canada are best achieved through ongoing collaboration and consultation on next steps. AFPM encourages the Ministers of ECCC and HC to proceed with the development of a targeted legislative approach to plastic waste that would provide appropriate legal mechanisms to address this complex issue while also acknowledging the utility of plastic to modern society.

If the Ministers proceed with addressing plastic waste under *CEPA*, additional process and consultation is required. AFPM urges the Ministers to engage in a *CEPA* process that ensures consultation, dialogue, data development, and practical decision-making based on robust scientific inputs.

In recommending a collaborative approach, AFPM is aligned with the approach set out by the federal government's own policy statements in its Plastics Science Agenda and Oceans Plastics Charter, as well as the Canadian Council of Ministers of the Environment ("CCME") Strategy on Zero Plastic Waste. For example, in Canada's Plastics Science Agenda ("CaPSA"), ECCC identifies that a "cornerstone principle of CaPSA is that plastics science and research should combine expertise from multiple sectors and disciplines, wherever possible."³¹ In particular, CaPSA Theme 3 ("Plastic design and alternatives") acknowledges that the development of new plastic resins, additives and products is driven by industry, giving it an important role to play in decreasing the environmental footprint of plastics, including improving their design and enabling value recovery.³²

3. Finalization of the Draft Should be Deferred Until the Global Coronavirus Pandemic is Resolved.

In the face of the global COVID-19 pandemic, petrochemical manufacturers are focused on protecting and promoting human health and welfare by providing the petrochemicals (e.g., ingredients for sanitizers and disinfectants and feedstocks for plastics) that will help Canada, the U.S., and other nations overcome this virus. Now more than ever it is apparent that plastics made from petrochemicals deliver critical health and safety benefits across a wide range of products and packaging. Our products are essential in keeping food safe, protecting health care professionals, and manufacturing the testing kits that allow healthcare professionals to assess and determine the spread of COVID-19. Specifically, our products are the building blocks for plastics used in single-use surgical and medical gowns; N95 respirators and face masks; protective sheeting; single-use disinfecting wipes; surgical gloves; food service packaging; medical and pharmaceuticals packaging; bottled water; and, a wide variety of other critical goods and services.

Petrochemical manufacturers must focus on keeping their operations running and providing essential goods to the public in this time of crisis. Chemical production has been designated essential in Canada during this public emergency by the governments of Ontario, Alberta, and Quebec.³³ Likewise, our industries have been deemed an "Essential Critical Infrastructure Workforce" by U.S. Department of Homeland Security in recently issued guidance.³⁴ While AFPM has made every effort to provide comprehensive comments on Canada's proposal, there is no doubt our membership has been primarily focused on the COVID-19 response. An extension of this effort will afford for more thorough analysis of ECCC and HC proposals once our industry and our countries can get beyond the current pandemic.

Respectfully, pursuing a toxic designation for plastic at a time when plastics are critical to addressing an unprecedented global, public health crisis seems ill-advised. It will only confuse, distract and disrupt consumers, businesses and others, and lead to choices that impede the global

³¹ Environment and Climate Change Canada. (2019). Canada's Plastics Science Agenda at page 15 <https://www.canada.ca/en/environment-climate-change/services/science-technology/canada-science-plastic-agenda.html>

³² *Ibid* at pages 10-11.

³³ Public Safety Canada, "Guidance on Essential Services and Functions in Canada During the COVID-19 Pandemic" (April 2, 2020) <https://www.publicsafety.gc.ca/cnt/ntnl-scrtr/crtcl-nfrstrctr/esf-sfe-en.aspx>.

³⁴ U.S. Department of Homeland Security, Cybersecurity and Infrastructure Security Agency, "Guidance on the Essential Critical Infrastructure Workforce" (March 28, 2020) <https://www.cisa.gov/publication/guidance-essential-critical-infrastructure-workforce>.

coronavirus response, impacting public health and potentially the spread of the virus. AFPM implores the Ministers of ECCC and HC to delay further action until this crisis is abated, and in any case, urges the Ministers to explore better tailored approaches to addressing marine debris and plastic waste that is outside the *CEPA* process.

VII. CONCLUSION

It is possible to address the societal concerns with single use plastics without eliminating their societal benefits. Policies that ensure proper waste disposal and management, incentivize recycling and research and development, and maintain consumer choice in modern materials are a much-preferred and effective solution to plastic pollution. AFPM understands that the Canadian federal government wishes to address single-use plastics in the near term but unilaterally listing plastics as “Toxic” would be an ineffective and irresponsible way to achieve this goal.

Canada’s proposed course of action, to skip over the risk assessment as a means to fast track the process to reach a predetermined conclusion, is unwise and wholly inconsistent with the provisions of *CEPA*, the *CMP* and the *USCMA*. AFPM appreciates this opportunity to provide comments on the Draft and urges Canada to undertake a risk-based approach that does not preempt cooperation in North America. AFPM wishes to remain engaged in ongoing consultation and collaboration with the Canadian government to achieve better, safer and healthier outcomes in addressing plastic waste management.

Should you have any questions regarding these comments, please contact the undersigned.

A handwritten signature in blue ink that reads "R. Benedict". The signature is written in a cursive, slightly slanted style.

Senior Director, Petrochemicals
American Fuel & Petrochemical Manufacturers