wentworth technologies
best value company

February 23, 2022

The Honourable Steven Guilbeault, P.C., M.P.
Minister, Environment and Climate Change
200 boul., Sacré-Coeur
Gatineau, Québec, K1A 0H3
ec.plastiques-plastics.ec@canada.ca

Tracey Spack
Director, Plastics Regulatory Affairs Division
Environment and Climate Change Canada
351 Saint-Joseph Blvd.
Gatineau, Québec, K1A 0H3

Dear Minister Guilbeault,

RE: Notice of Objection and Request for Board of Review in relation to the Single-Use Plastics Prohibition Regulations, *Canada Gazette*, Part I, Volume 155, Number 52, 2021-12-25

I am writing you today on behalf of Wentworth Technologies (Wentworth), a private business headquartered in Brantford, Ontario. Wentworth was started in 1990 by our chairman and CEO Walter Kuskowski. Today, Wentworth has sales of ~$300 million and employs ~1,800 people across 14 facilities located in Ontario, the US and Poland. Wentworth's primary business is plastics packaging for industrial, consumer and foodservice markets. Our foodservice division includes the iconic brand Stone Straw – the largest manufacturer of straws in Canada.

Wentworth's Commitment to Sustainability

Wentworth supports the government's goals as outlined in the G7 Ocean Plastics Charter formed in 2018. We have actively participated in the series of workshops aimed at implementing the CCME Zero Plastic Waste Strategy.

Wentworth's mission is to work with our customers and technology partners to develop ***smart, safe, sustainable packaging solutions*** that are based on the principles of a growing Circular Economy and in support of the government's goals. As an examples, our portfolio of sustainable solutions includes our Back To Earth™ bio-based BPI Certified compostable straws made with cellulose (wood) and acetate (vinegar) that have been tested by an independent third-party lab and certified by BPI and TUV Austria to be industrial compostable (ISO 14855 & ASTM D6400).

Sustainability permeates everything we do – from our mission and corporate strategy to our product offerings and key initiatives. Wentworth has been committed to helping shape policy and solutions through participation in several CCME, MECP and ECCC workshops, pilots and forums. We've also worked closely with industry stakeholders across the value chain through our active engagement in a number of industry organizations who's goals and mission are aligned with the Circular Economy.

wentworth technologies
best value company

Chemistry Industry Association of Canada

Wentworth is a member of the Chemistry Industry Association of Canada's (CIAC) Plastics Division, which represents Canada's leaders in plastics industry sustainability – a $35 billion sector that directly employs over 100,000 Canadians. CIAC is committed to helping shape public policy and initiatives such as aiding the federal government towards its goal of net-zero emissions for all of Canada by 2050.

Canada Plastics Pact

Wentworth is a member of the Canada Plastics Pact (CPP) whose membership stretches across the value chain. The CPP is creating a shared action plan to build a circular economy for plastics packaging, tackling plastic pollution with plastic solutions.

Food Packaging Institute

Wentworth is a member of the Food Packaging Institute (FPI), a group representing the foodservice packaging industry dedicated to ensuring food packaging products are recycled or composted instead of littered.

This submission responds to the December 25, 2021, Canada Gazette Notice ("Notice") in which the Departments of the Environment and Health sponsored Single-Use Plastics Prohibition Regulations were published. Wentworth formally objects to the proposed regulation and requests the establishment of a Board of Review under section 333 of the Canadian Environmental Protection Act (the Act) to review the recommendations.

The sections below provide the supporting details of Wentworth's objection and outlines the areas where new or expanded information is available for consideration by a Board of Review.

Expansion of Scope: New Items Added without Consultation

The October 2020 consultation proposed six single-use plastic items be prohibited based the following criteria: environmentally problematic, recovery problematic, and alternatives exist. Those six items were reflected in the December 25 Canada Gazette Notice, Part I: checkout bags, cutlery, stir stick, straws, ring carriers and foodservice ware. Although the draft regulation itself is silent on the treatment of compostable plastics, the RIAS indicates that compostable plastic versions of these six items to be prohibited and will be treated the same as single-use plastics. This inclusion of compostable plastics is an expansion of the list of six items that has not been publicly consulted on and goes beyond those items assessed.

The management approach published in 2020 contemplated and encouraged compostable products. It recognised "the potential for new and innovative technologies to improve the environmental outcomes of some single-use products. For example, the use of compostable, bio-based or biodegradable plastics may in some cases improve a product's environmental footprint or increase recovery rates of single-use

Wentworth Technologies Company Limited
156 Adams Blvd., Brantford, Ontario N3S 7V5
Tel: 519-754-5400 Fax: 519-754-5403
Email: wtbvc@wtbvc.com Website: www.wtbvc.com

items when they become waste. The government will consider how the ban or the restriction on certain harmful single-use plastics might be designed to support the growth of new and innovative technologies that further the goals of environmental protection and the transition to a circular economy."

Further support of compostable packaging was demonstrated by the Ministry of Environment, Conservation and Parks (MECP) leadership beginning with its Environmental Plan published November 2018 in which MECP promotes compostable packaging as an alternative to traditional single use plastic. In support of compostable packaging, MECP organized a Technical Working Group in the summer of 2019, and facilitated a Compostable Pilot in 2021 with the findings published in 2022. The pilot field test was designed and managed by Compost Manufacturing Alliance (CMA).

Introducing Back To Earth™ Straws

In 2019, Wentworth partnered with BASF to develop and launch its first Back To Earth™ straw (BTE 1.0) produced using Polylactic Acid (PLA) material. BTE 1.0 is BPI Certified Industrial Compostable. BTE 1.0 was tested by Cedar Grove, one of the largest composters in the U.S. **Cedar Grove uses the CMA testing methodology. BTE 1.0 straws passed Cedar Grove's test and are listed as an "Accepted Product" on its website** https://compostmanufacturingalliance.com/brand/stone-straw/.

In 2020, Wentworth partnered with Eastman Chemical to develop and launch its second Back To Earth™ straw (BTE 2.0) with the goal to produce a more environmentally friendly product. BTE 2.0 is a bio-based product made with a material called Aventa™ which shares its origins with paper, bamboo and other fibre-based materials. Aventa™ is made from cellulose (wood pulp) and acetate (vinegar). Aventa™ straws are BPI and TUV Austria Certified Industrial Compostable (ISO 14855 & ASTM D6400). The material was also tested by an independent third-party lab and certified by TUV Austria to be biodegrade in soil and water (according to standards ISO 17556, ISO 14851, ASTM D6691).

Aventa™ material performs in a similar manner to cellulose (used to produce paper straws) as illustrated by the following graphs.

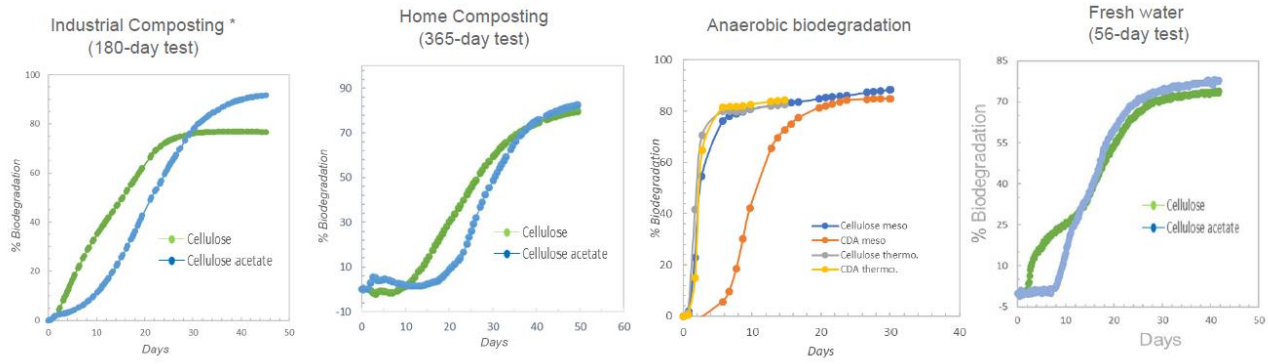

*Figure 1 Test Conducted at Organic Waste Systems OWS (Gent, Belgium) *According to ASTM D6400*

wentworth technologies
best value company

MECP Field Test

Wentworth participated in MECP's Compostable Pilot Project. We were allowed to include one article in the field test and elected to submit BTE 2.0 which had a negative result.

The CMA test is known to have limitations with fibre-based product composting that result in false negatives. This has been recognized by composting industry leaders. Studies to understand the discrepancy are on-going by US Composting Council, CMA and BPI to understand the limiting factors associated with current test methods. Contributing factors include the use of bags and absence of the test extending through the curing process.

Wentworth, with support of its partner Eastman will continue to work with MECP to help identify learnings that may be applied to future developments concerning standards, protocols and tests.

Traceability of Compostable Products

The suggestion that compostable plastic products are difficult to distinguish from plastic versions is neither a credible nor evidence-based position in the context of the proposed prohibitions. For example, if all single-use polypropylene straws are banned, then compostable bio-based straws will be the only available single-use product on the market other than paper straws. This allows consumers to have confidence when disposing compostable straw in a green bin and when receiving the product at industrial compost facilities. The result is clear traceability, no contamination and success in keeping the material in the economy and out of landfill.

To add compostable bio-based alternatives to the prohibitions, without further scientific analysis, engagement or consultation is a breach of the regulatory process. It is also inconsistent with what has been encouraged by the ECCC and MECP. Further, products that are Certified compostable and are traceable, do not meet the Government's criteria for prohibition. We ask that the government continue to work with MECP, other provinces, and various stakeholders to establish a Canadian designated Certification body that applies field testing which is designed based on science and data and closely emulates an industrial facility and establish a standard process for compostable products such as straws to be certified for sale in Canada.

Innovative Technologies and Processes not Assessed in Determining Whether Materials are Recovery Problematic

The Federal Government's criteria used to assess items for prohibition can be briefly summarized as: is it environmentally problematic, is it value-recovery problematic, and alternatives are available. A review

Wentworth Technologies Company Limited
156 Adams Blvd., Brantford, Ontario N3S 7V5
Tel: 519-754-5400 Fax: 519-754-5403
Email: wtbvc@wtbvc.com Website: www.wtbvc.com

of the Regulatory Impact Analysis Statement (RIAS) revealed several critical technology solutions, already in place, that were not considered in the assessment process.

Carbon Black Plastics

Plastics that contain a black pigment produced through the partial or incomplete combustion of hydrocarbons, which are categorized as problematic plastics and are included in the proposed prohibitions, are a valuable source of polypropylene resin.

Technology exists on the market today that sorts black plastic and has the capacity to process higher volumes of carbon black plastics. Municipal budgetary constraints, and the absence of investment in available technology by many sortation and recycling facilities is the reason it is not collected, not the availability of technology. Given there is an industry solution in place for value-recovery, a prohibition on 'carbon black' foodservice ware does not meet the Government's criteria for prohibition. Further, Extended Producer Responsibility can play a role with necessary investment to establish common capability across recycling facilities, allowing capture of carbon black plastics.

Expanded and Extruded Polystyrene Foam Foodservice Ware

Polystyrene is one of the most recyclable materials, either through mechanical recycling or through advanced recycling, which turns it into a monomer that can be reused repeatedly. Increased collection, densification and technology advances have addressed past issues with the economics and logistics around polystyrene recycling. Recycled polystyrene is in high demand, and has a multitude of applications, including food and non-food packaging, durable goods, and insulation and construction materials. The circular economy of polystyrene is already being demonstrated in Québec. Extended Producer Responsibility with necessary investment to establish common capability across the country, will help extend this capability, allowing capture of Expanded and Extruded Polystyrene Foam Foodservice Ware.

Not acknowledging the current commercial polystyrene recycling technologies and established market led to the erroneous determination that foamed polystyrene was recovery problematic contributing to its inclusion in the proposed prohibition regulations.

Plastic Checkout Bags

While the RIAS includes a significant value associated with the re-usability of items, when it comes to plastic checkout bags, it fails to fully account for the benefits of secondary uses. There are many

Canadian studies[1] that show that plastic checkout bags are not single use and have high re-use and recycle rates. Findings include:

- 77 per cent of plastic checkout bags are re-used
- Of the remaining 23 per cent, 15 per cent are recycled and only 8 per cent are not re-used or recycled
- The net result is that plastic checkout bags have a 92 per cent reuse and recycling rate

Provincial Extended Producer Responsibility programs have recycling targets that are expected to help improved recycling rates.

In addition, a 2020 study by Materials Recovery that implemented several successful pilot projects demonstrating that flexible plastic packaging can be collected, sorted and baled at a material recovery facility (MRF) through curbside recycling programs. Many cities in Canada use a bag-in-bag approach to collecting plastic check out bags and "soft plastics", including ring carriers.

Through the establishment of a Board of Review, Wentworth is requesting that the contribution of each of the technologies above be considered when determining if a plastic manufactured item is truly recovery problematic. When taken into consideration, Wentworth is confident these technologies will demonstrate that prohibitions are not required to deliver against the stated regulatory goal of reducing plastic waste and plastic leakage into the environment.

Extended Producer Responsibility Programs Address Many Concerns about Post-Use Management of Single-Use Plastics

The implementation of other regulations that improve and address recovery challenges were not considered. Although the RIAS did recognise many existing provincial extended producer responsibility (EPR) programs include single-use plastics (SUP), the conclusion was that the prohibitions would be positive for provincial EPR programs. This demonstrates a fundamental lack of understanding of EPR programs. Under EPR programs, not only do producers take on post-use management for the products they supply to the market, but it also provides those same producers with the opportunity to recover the value retained in the post-use product through recycling or re-use. By removing certain single-use plastic items from EPR programs producers are required to find substitutes that in many cases do not have the value recovery proposition plastics do. In these instances, the substitutes become a pure system cost or end up in landfills because they are not readily recyclable. This is not a positive for the province or the producer, counter to the position stated in the RIAS.

[1] Faits saillants des résultats de l'analyse du cycle de vie environnementale et économique des sacs d'emplettes (gouv.qc.ca). See also City of Toronto 2010/2011 Waste Audit.

Provinces are putting in place EPR programs to ensure that plastics are continuously recycled and re-circulated in the economy and do not end up in landfills or as litter in the environment. EPR programs require that Producers meet recycling targets thereby ensuring that value-recovery is derived from plastics. Thus, the concept of a single-use item will disappear as value will be recovered from all plastic items.

By incorporating regulatory actions underway across Canada, with respect to EPR, into the assessment of recovery problematic, Wentworth believes a Board of Review will conclude that plastic manufactured items currently deemed recovery problematic will no longer be evaluated as such. Thereby removing the requirements to implement prohibitions of any sort for plastics.

Avoiding the Unintended Consequences of Alternatives

The RIAS focuses heavily on single-use plastic litter and its impact on the environment being the driving force behind the proposed prohibitions. Littering is a human behaviour and is not inherent within a specific product or substance. The implementation of prohibitions of specific products will not prevent litter.

As assumed by the RIAS, alternative single-use plastic products are expected to be littered at the same rate as their single-use plastic counterparts. This indicates that the outcome of regulation will be replacing one source of pollution for another. The RIAS does not attempt to quantify the impact of the new/increased source of pollution, instead it states that since the alternatives are likely to be made of wood, paper and moulded fibre, they are not expected to result in long term harm. This statement is based on perception rather than evidence and science.

Most paper straws sold in Canada are believed to be imported from Asia where carcinogenic strengthening resins are known to be used. Below are excerpts from a Pub Med publication entitled Investigation of factors influencing the release of chloropropanols (3-MCPD and 1,3-DCP) from food contact paper, dated September 2021.

- Chloropropanols such as 3-monochloropropane-1,2-diol (3-MCPD) and 1,3-dichloro-2-propanol (1,3-DCP) have drawn increasing attention due to their release from food contact paper and their potential carcinogenic effects.
- Cold water was found to be more severe than hot water for extraction of chloropropanols, with the highest water extraction value obtained at 23°C.

The abstract can be found at www.pubmed.ncbi.nlm.nih.gov/34477493. These products may introduce a health risk. Also, when littered, these products may have a negative impact on the environment.

In addition, paper and moulded fibre have additives. These products, when littered, may also have impacts over time as a result of cumulative exposure; this concept was not evaluated or explored.

In the case of wooden substitutes, these will likely be made from non-native species, such as bamboo, which could extend the length of time it is in the environment before if completely breaks down. Additionally, the concerns around wildlife/human injury and the potential for plastic cutlery to create floating platforms for invasive species, would also apply to some alternatives such as wooden cutlery.

The RIAS also indicates due to the increased weight of the alternative there will be an increase in tonnes of litter and waste generated as a result of the proposed regulation. Ultimately the result of the proposed prohibitions will be a greater mass of waste and litter in the environment with unknown, or unstudied, long-term impacts.

Environmental Assumptions Lack Scientific Rigour

RIAS treatment of Life Cycle Assessment (LCA) literature is not aligned to standard practice; LCA sources are not cited; and LCAs are not compared through any appropriate, standard methodology such as ISO14040/44.

RIAS relies on October 2020 Science Assessment, which the government itself identified as incomplete, as a statement of the impacts associated with plastic in the environment.

When evaluating alternatives, the RIAS does not consider the increased transportation emissions as a result of increased weight of material being transported to management facilities.

Littering impact of substitutes such as paper straws is not considered and there is no evidence provided in the RIAS that the use of substitutes will reduce littering and pollution in the environment. In contrast, the assessment acknowledges that alternatives to plastic will lead to higher pollution, thus the government is proposing substitutes that will not actually achieve environmental goals.

It is critical that the analysis of substitutes includes the emissions across the entire lifecycle of the product – sourcing, manufacturing, transporting and end of life. It is equally critical that the analysis of substitutes include the impact of litter on the environment, and the health risks.

Conclusion

As a government committed to sound science, collaboration, and engagement, we believe the establishment of an independent Board of Review is required to review the work of the government due to the selective analysis outlined in the RIAS. This is consistent with the Prime Minister's instructions in the Minister's mandate letter: "We will work to build that brighter future through continued collaboration, engagement, and the use of science and evidence-based decision-making."

Wentworth Technologies Company Limited
156 Adams Blvd., Brantford, Ontario N3S 7V5
Tel: 519-754-5400 Fax: 519-754-5403
Email: wtbvc@wtbvc.com Website: www.wtbvc.com

wentworth technologies
best value company

Government decisions and regulations must be based on current and complete science, technology and practices that will actually achieve stated environmental outcomes rather than create future environmental impacts that may be difficult to manage.

Wentworth welcomes an opportunity to discuss any of the material offered in this document or to respond to questions to help inform decisions and next steps.

Sincerely,

Rick Babington
President & COO
Wentworth Technologies

Wentworth Technologies Company Limited
156 Adams Blvd., Brantford, Ontario N3S 7V5
Tel: 519-754-5400 Fax: 519-754-5403
Email: wtbvc@wtbvc.com Website: www.wtbvc.com