

PVC PIPE ASSOCIATION

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December 9, 2020

The Honourable Jonathan Wilkinson, P.C., M.P.
Minister of Environment and Climate Change Canada
c/o The Executive Director Program Development and Engagement Division
Department of the Environment
Gatineau, Quebec K1A 0H3
eccc.substances.eccc@canada.ca

Dear Minister Wilkinson,

RE: Notice of Objection and Request for Board of Review in relation to the Proposed Order to add plastic manufactured items to Schedule 1 to the Canadian Environmental Protection Act, Canada Gazette, Part I, Volume 154, Number 41: Order Adding a Toxic Substance to Schedule 1 to the Canadian Environmental Protection Act, 1999 published Saturday, October 10th, 2020
<http://www.gazette.gc.ca/rp-pr/p1/2020/2020-10-10/html/reg1-eng.html>

This submission responds to the October 10th, 2020 Gazette Notice (“Notice”) in which the Governor in Council, on the recommendation of the Minister of the Environment (“Minister”), proposed an Order to add “Plastic Manufactured Items” to Schedule 1 of the Canadian Environmental Protection Act, 1999 (“CEPA”) (hereafter referred to as “Proposed Order”).

As the Canadian government is planning to deem plastics as toxic under Schedule 1 of the Canadian Environmental Protection Act (CEPA), we are writing to you today to express our opposition to any proposed regulation on this matter and specifically, to note the lack of reliable scientific evidence to support this action from the government, and the absence of a robust and thorough consultation with both industry and the public on this matter.

The Uni-Bell PVC Pipe Association (PVCPA) was founded as a non-profit organization and is the authoritative source of information on PVC pipe, serving the engineering, regulatory, public health and standardization communities since 1971. Our mission is to promote use of longer-life, lower-maintenance, PVC piping in water and wastewater systems – for real sustainability, strength and long-term asset management.

The PVC pipe industry contributes in excess of \$14 billion annually to the North American economy and supports over 25,000 jobs. PVC pipe is the product of choice for buried water, sewer, drainage and irrigation infrastructure and has been voted by utilities as the preferred sewer collection system pipe. It is the most common pipe used by tens of thousands of rural communities across Canada and the U.S. because of its longevity and affordability.

PVC pipe was introduced in North America in 1951, using a tin stabilizer, and as a cost-effective, corrosion-proof piping solution. A 2018 study from Utah State University confirms that PVC pipe has the lowest water main break rate¹ of all pipe materials. As well, PVC is the only pipe material to have publicly released a life cycle assessment (LCA) and environmental product declaration (EPD) undertaken according to the rigorous methodology of the International Organization for Standardization (ISO), which is recognized as one of the most reliable sources of industry standards in the world.

The EPD was also certified by global health organization NSF International, which provides independent verification to determine whether an EPD meets the requirements for the relevant LCA ISO standards and the applicable Product Category Rule (PCR). The LCA included an analysis of other commonly used pipe materials and showed that PVC pipe had the lowest carbon footprint.²

Over 40,000 North American water utilities use PVC pipe today, and more than one million miles are in service – or about 78 percent of all new drinking water distribution pipes installed on the continent. PVC water pipe for municipal infrastructure applications is available in sizes from 3 to 60 inches. Some 10 million quality control tests have been conducted on water carried through PVC pipe since it was introduced in North America and around the world. All of them confirm the product is safe and beneficial to public health.

PVC pipe is one of the safest and most tested materials used in North America. For over 60 years, every aspect of its production, use and disposal has been evaluated and approved by government and independent certification and testing agencies. It meets or exceeds all required health and safety standards and regulations governed by the U.S. and Canadian Safe Drinking Water Acts and other international statutes. Its use is monitored by independent agencies like NSF International – and government bodies like the U.S. EPA ensure its safety through mandatory regular testing.³

PVC piping requires less energy⁴ and fewer resources to manufacture than legacy metallic piping,⁵ and its production creates virtually no waste, supporting both sustainability and affordability goals of water and wastewater utilities. PVC pipe continues to have the lowest initial cost, lowest carbon footprint during installation, lowest maintenance cost, lowest short-term and long-term operating costs, lowest break rate, lowest overall life cycle cost and lowest overall carbon footprint of all pipe materials. Furthermore, PVC pipe manufacturing is a closed loop process recycling 99 percent of the PVC waste (regrind) generated during the manufacturing process.

This Draft Science Assessment is lengthy and complex which requires more time than the consultation period provides in order for PVCPA to complete a meaningful, in-depth review and analysis of the studies cited. Following our initial review, we believe that any proposed initiative to add plastics and specifically vinyl to Schedule 1 of CEPA creates at least 2 undesirable situations:

- An unnecessary concern about exposure on the part of the public who are using these products every day rather than keeping the focus on the societal benefits of these products; and
- An insensitivity by the public toward substances that actually represent significant risk.

As requested, PVCPA provides the following additional comments related to the Draft Science Assessment:

1. This assessment is the first step in the process for determining whether all plastics including PVC/vinyl warrants regulatory action. In our view this approach is far too wide reaching when at least three critical variables need to be considered concurrently to reflect the risk accurately:
 - Differences between a wide range of polymers as well as differences in their physical configuration (microplastics in microbead, fragment, fibre and pellet form).
 - Differences in an even broader range of applications among these polymers and
 - Differences in the impacts among various media (air, soil, surface water, groundwater)

This assessment does not adequately address these variables. Further, any action arising from the assessment would be extremely complex and unwieldy to manage for government and difficult to navigate for affected producers. Of equal importance, the lack of clarity in addressing these variables will make it extremely challenging to communicate the meaning of declaration in any effective way to the public without the risk of creating misinformation.

2. The position of PVCPA is that the Draft Science Assessment does not support any regulatory action regarding PVC/vinyl. Although numerous studies are cited in the assessment report, informed conclusions and decisions regarding the classification of vinyl cannot be made based on this assessment. The appraisal of the evidence as part of a systemic review has not been adequately applied in this assessment. There are several issues with the assessment which are grouped under the following three general categories:
 - Many of the references are based on exposure data for multiple polymers and do not specify proportions of PVC or the other polymers involved.
 - It is unreasonable to extrapolate some of the PVC specific studies cited (one specific example being findings from surface water situations in other geographic areas of the world extrapolated to the Canadian environment).
 - Some assertions about PVC applications and their environmental fate in the assessment are not adequately validated. We note that some important health care applications have not been reflected in Table 2-1 of the assessment.
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PVCPA's position is supported by the acknowledgement of ECCC that additional research is recommended and that funding through the "Increasing Knowledge on Plastic Pollution" Initiative (IKPP) has been provided. Therefore, we request to be advised of the specific projects that are approved under IKPP so that we can submit relevant input for consideration, where appropriate. Again, PVCPA emphasizes that all decisions be strictly science based and must consider expert industry input.

The current COVID-19 crisis underscores the critical contribution vinyl products make to society. There are obvious products related to provision of blood and other treatment fluids. Vinyl is also a key ingredient in surgical masks, gloves, protective gowns and other personal hygiene products. Protective suits for hazardous exposure are also often made with a high vinyl content due to its excellent chemical resistance.

Vinyl products are not only safe and inert, but they also uniquely positioned to provide numerous positive contributions and benefits to our environment, including:

- Reduced weight in automobiles, planes and trucks
- Safe and reliable distribution of clean drinking water
- Secure transport of storm and sanitary waste sewage from buildings and underground for ultimate treatment
- Improved energy efficiency from vinyl building materials, and
- Lower carbon footprints and recyclability

Of particular note is the use of vinyl for long-lasting pond and landfill liners that prevent contents from leaching into groundwater supplies and the associated vinyl grid system for leach collection from landfills. Another example demonstrating vinyl's safety is the Environmental Product Declaration (EPD) for PVC Water and Sewer Pipe. As mentioned earlier, the EPD complies with internationally recognized ISO 14025 standards and was independently certified by global health organization, NSF International. The EPD states confirms that PVC pipe has the lowest environmental impacts of all water and sewer pipe materials and is safe to use: "No known chemicals are released internally into the water system. No known toxicity affects occur in the use of the product"

Again, there is no need for any regulatory action relating to PVC/ vinyl, especially given the numerous positive benefits of vinyl products.

Please contact me directly with any questions at 214.244.9202 or bhollands@uni-bell.org.

Sincerely,



Bruce Hollands
Executive Director

References

- ¹ Folkman, Steven, "Water Main Break Rates In the USA and Canada: A Comprehensive Study" (2018). *Mechanical and Aerospace Engineering Faculty Publications*. Paper 174. https://digitalcommons.usu.edu/mae_facpub/174/
- ² "Life Cycle Assessment of PVC Water and Sewer Pipe and Comparative Sustainability Analysis of Pipe Materials." ISO 14040 Series. Sustainable Solutions Corporation. (2017). <http://www.sustainablesolutionscorporation.com/resources#whitepapers>
- ³ "Assessing the Transparency & Reliability of Environmental Product Declarations for Underground Piping." Uni-Bell PVC Pipe Association. (2020). <https://www.uni-bell.org/Portals/0/assessing-the-transparency-and-reliability-of-environmental-product-declarations-for-underground-piping.pdf>
- ⁴ "Hydraulic Analysis: Pumping Costs for PVC and Ductile Iron Pipe." Uni-Bell PVC Pipe Association. (2018). <https://www.uni-bell.org/Portals/0/ResourceFile/hydraulic-analysis-pumping-costs-for-pvc-and-ductile-iron-pipe.pdf>
- ⁵ "Evaluating Life Cycle Assessments for Underground Infrastructure." Sustainable Solutions Corporation. (2018). https://www.uni-bell.org/portals/0/ResourceFile/evaluating_life_cycle_assessments_for_underground_infrastructure.pdf
- ⁶ U.S. Water Alliance – One Water Hub. <http://uswateralliance.org/one-water>
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