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June 21, 2021

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RE: Canada Gazette, Part I, Volume 155, Number 17: Government Notices (April 24, 2021), Department of the Environment, Department of Health, Canadian Environmental Protection Act, 1999 – Notice of intent to address the broad class of per- and polyfluoroalkyl substances

Dear Ms. Zweig, Ms. Gonçalves, and Mr. Morin,

I am writing on behalf of the member firms of the Ontario Environment Industry Association (ONEIA) to provide our response to the *Notice of intent to address the broad class of per- and polyfluoroalkyl substances* as released in the Canada Gazette, Part I, Volume 155, Number 17: Government Notices, dated April 24, 2021 (here after referred to as the Notice of Intent).

As you may know, Ontario is home to Canada's largest group of environmental and cleantech companies which employ more than 130,000 people across a range of sectors including private waste/resource recovery services, water and wastewater, brownfields remediation and redevelopment, and environmental consulting. These companies contribute more than \$25-billion to the national economy, with approximately \$5.8-billion of this amount coming from export earnings. ONEIA members are committed to working with various levels of government to enact smart regulations that protect the environment and drive the next generation of businesses.

ONEIA would like to thank the Government of Canada for the opportunity to review and provide comments on the Notice of Intent, and express our interest in being engaged in future discussions regarding per- and polyfluoroalkyl substances (PFAS).

ONEIA’s PFAS Committee has solicited comments from interested members and is happy to provide the feedback included in Table 1.

Table 1. ONEIA Comments on the Notice of Intent	
No.	Comment
1	How would the Government propose to define PFAS in the development of the class-based approach? For example, would the Government define PFAS as “...a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom”?
2	Not all PFAS have the same chemical and physical properties or structure, and not all PFAS behave the same in the environment, in people, or in the food chain. This needs to be taken into consideration if establishing policy and regulation that is class-based. Different regulatory frameworks recommend managing PFAS as sub-groups in light of their similar molecular structures, properties, and human health hazards. This could mean identifying guidelines or criteria for groupings of PFAS (e.g., long vs short, carboxylated vs sulfonated), or establishing an approach similar to that applied for polycyclic aromatic hydrocarbons (PAHs) and dioxins and furans where each parameter is assigned a weighting in relation to the more toxic of the chemicals. An advantage of targeting PFAS subgroups is that the toxicological end points are often assumed to be similar, which allows for extrapolation from well-studied PFAS (e.g. PFAA and their precursors) to those less studied. Establishing a single concentration for comparison to a sum of “all” PFAS concentrations is not expected to be a preferred or defensible approach.
3	Given the broad diversity in the health-based criteria established by international agencies for PFAS to date, and the lack of industry concurrence on the toxicological studies or endpoints that should be used to derive these values, the Government should ensure the toxicity reference values ultimately selected to drive this work are carefully vetted. What process will the Government use to either confirm or exclude the use of toxicological data in the development of the class-based approach?
4	There is an increasing interest in globally managing PFAS as sub-groups based on “use” categories to control exposure, such as in food packaging, firefighting foam, carpets and rugs and ski wax. Would the Government’s process include assessing and managing PFAS based on their use categories?
5	The primary exposure pathway of concern with PFAS has traditionally been exposure via drinking water. In establishing this class-based approach, will the Government’s focus be specific to drinking water? If not, what other media may be considered for the development of PFAS criteria?
6	Regulatory agencies and laboratories are currently working to advance, validate, and standardize analytical methods to measure total PFAS in certain media. What is the Government’s approach to further develop, use, and interlaboratory standardize the analytical methods to measure total PFAS?

7	It is widely recognized that PFAS is, and has been, ubiquitous in products used by society for decades. Consequently, PFAS can be expected to be found in end-of-life recycling, treatment, disposal and destruction applications including wastewater treatment plants, recycling facilities, composting operations and landfills. As the Government works to develop a risk-based approach to regulating PFAS, it will need to address how it will economically remove these PFAS from future use and how to contain, sequester or destroy PFAS in products currently in use or already disposed by society at large.
8	PFAS criteria are needed to both establish when contaminated materials are hazardous waste, as well as identify realistic treatment criteria for non-hazardous or other types of waste. As there are no established waste management concentrations, drinking water criteria have often been used to determine whether or not a waste is considered hazardous. This results in large quantities of minimally-contaminated groundwater being incinerated. Perhaps incineration would still be necessary with waste management guidelines in place; however, the lack of well-established waste concentration limits inhibits the development of appropriate and defensible waste management practices.
9	Treatment technologies and disposal/destruction methods that are effective for the entire class of PFAS are very challenging and currently not practical. Therefore, groupings of PFAS (e.g., long vs short, carboxylated vs sulfonated) may be needed to establish remedial goals and objectives for certain groups of PFAS based on the selected technologies.
10	The USEPA requires incineration at 1000 C with a two-second gas retention time for thermal destruction. While this is effective, is it possible that a lower temperature and retention time may also be effective and would allow the use of other thermal destruction methods (desorption, fluidized bed incinerators, etc)?
11	Available disposal options other than just thermal treatment need to be considered. The US military considers contaminated groundwater disposal at a hazardous deepwell disposal facility to be an acceptable disposition. Incineration may not always be necessary or preferred.
12	Another PFAS management approach that has been receiving attraction in recent years is to limit the uses of PFAS to only those considered “essential”, while fostering development of safer alternatives. Is the intent of the Government to phase out all non-essential uses of PFAS?

We welcome the opportunity to discuss our ideas further. Please contact Alex Gill, our Executive Director, at agill@oneia.ca or at (416) 531-7884 should you have any questions.

Sincerely,



Krista Barfoot
Co-Chair, PFAS Committee
ONEIA



Alex Gill
Executive Director
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