Understanding PFAS in Canada: An emerging risk

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Overview

For decades, per- and polyfluoroalkyl substances (PFAS) have been pervasive in our environment. From its use in cookware, carpets and clothing, to its application in cleaning products and firefighting foams, it is virtually impossible to avoid interacting with these manufactured chemicals. Despite their widespread presence, the study of long-term health and environmental consequences of PFAS is ongoing.

Across North America, some actions are being taken to address and tackle the developing consequences of PFAS. In the U.S., president-elect Joe Biden has pledged to tackle PFAS in drinking water. In Canada, perfluorooctanesulfonic acid (PFOS) were declared toxic to the environment by Environment Canada in 2009. The Ontario Ministry of the Environment, Conservation and Parks (MECP) is currently studying PFAS, while British Columbia is the only province that has stepped in to regulate. Federal regulation is pending in 2021.

It should be noted that in most cases, environmental investigations conducted in support of transactions involving real estate and due diligence rely upon the standard suites of contaminants identified by the regulators in each jurisdiction. For example, in Ontario, there are the *Site Condition Standards* developed by the MECP in 2011. Because PFAS compounds are not currently regulated in most Canadian jurisdictions, they do not get analyzed or reported on in Phase II investigations.

In the U.S., there is substantial PFAS litigation, and we can expect claims will begin to emerge in Canada as this risk becomes better understood and identified.

What you need to know

- PFAS are a group of nearly 5,000 different synthetic chemicals predominately known for their composition of carbon-fluorine bonds. The carbon-fluorine bond is the strongest in organic chemistry, thus making it incredibly difficult for PFAS to degrade.

- For many years PFAS were believed to be safe, unreactive substances with no impact on living tissue; however, they have now become known as the "forever chemicals" since there is no natural way to break down their carbon-fluorine bonds.
- In 2013, Health Canada's biomonitoring program found all Canadians sampled had PFOS and PFOA present in their tissues or blood. This is the case even though PFAS are not produced in Canada (and never have been).
- Canadians will continue to face exposure to all kinds of PFAS due to the importation of substances containing these synthetic chemicals.

Where are these chemicals in Canada?

PFAS are widespread throughout Canada and are commonly found in:

- Fire fighting foams and products;
- **Food** – packaged in materials containing PFAS, processed with equipment that used PFAS and/or grown in PFAS-contaminated soil or water;
- **Commercial household products** – found in stain- and water-repellent fabrics, non-stick products (*e.g.*, Teflon), waxes, paints, cosmetics and cleaning products;
- **Workplaces** – namely production facilities and/or industries that use PFAS;
- **Drinking water** – typically localized and associated with a specific facility; and
- **Living organisms** – including fish, animals and humans, where PFAS have the ability to build up and persist over time.[1]

PFAS do not occur naturally in the environment, but rather they are released during manufacture and transport, in connection with the use of consumer products and as a result of the breakdown of larger PFAS. Consequently, PFAS are detectable in a wide range of locations and environmental contexts. In fact, these "forever chemicals" have come to contaminate even the most remote parts of Canada, including our most important fresh water resource - the Great Lakes. Thus, PFAS do not remain within confined borders, and are globally mobile.

What's to come – pandemic-related problems?

Questions remain as to how these forever chemicals will impact our response to COVID-19. Could PFAS be worsening COVID-19 infections? Are these forever chemicals capable of interfering with metabolic pathways that are relevant to COVID-19? Researchers are continuing to explore the suspected links between PFAS exposure and the coronavirus.[2] Current literature suggests that PFAS may aggravate the course of the coronavirus.[3] In particular, it indicates that PFAS may reduce the effectiveness of vaccines and antibody response at their present concentrations in the human body.[4] This may emerge as a point of contention in future litigation. While PFAS-related concerns are by no means novel, their existence in these modern circumstances will no doubt ignite new challenges.

How do the Courts deal with PFAS?

To date, Canada has dealt with minimal reported PFAS-related litigation. In contrast, there are a multitude of claims in the United States, mainly related to environmental

contamination and human health effects. For example, in 2017, *E. I. du Pont de Nemours and Company* (DuPont) and the *Chemours Company* (Chemours) agreed to settle personal injury claims for US$671 million class action settlement, not including post-settlement cases.

Securities disclosure obligations are another source of related liabilities. Shareholders have filed several cases accusing chemical companies (such as 3M[5] and Chemours[6]) of misleading investors on the extent of PFAS liabilities. The shareholders claim company executives knew about the financial risks for decades, but only recently disclosed them.[7] Evidence indicates that as early as the 1950s, in-house scientists at 3M and DuPont began discovering that PFAS were bioaccumulative and toxic.[8]

In 2019, a high profile (but unsuccessful) corporate dispute[9] took place when Chemours alleged that DuPont left the company responsible for PFAS liability.[10] DuPont founded Chemours as a spin-off in 2015 to deal with DuPont's performance chemicals business, which has since assumed various liabilities arising from lawsuits against DuPont.

Takeaways

The environmental impacts associated with PFAS are an emerging issue in Canada. With increased study in the provinces, and pending federal regulation, we can expect to see increased focus on these risks, especially with the added scrutiny of COVID-19 related studies. If the experience in the U.S. serves as an example; PFAS investigation, associated risk management and litigation will become more targeted across Canada. As each jurisdiction develops its approach, it will need to evolve an evidence-based action plan involving multiple stakeholders to provide both short-term solutions and long-term strategies for these "forever chemicals."

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[1] IARC, *IARC Monographs on the Evaluation of Risk to Humans* (7 July 2019).

[2] The University of Rhode Island, *New research examines suspected links between PFAS exposure and COVID-19*.

[3] MedRxiv, *Severity of COVID-19 at elevated exposure to perfluorinated alkylates*, (26 October 2020).

[4] Massive Science, *These common household and industrial chemicals impair immune system function*, (5 July 2020).

[5] *In re 3M Company Securities Litigation,* D. New Jersey, No. 2:19-cv-15982.

[6] *In re The Chemours Company Securities Litigation,* D. Delaware, No. 1:19-cv-01911 ; *Saw v. The Chemours Company et al,* D. Delaware, No. 1:19-cv-02074.

[7] Ellen M. Gilmer, "Forever Litigated 'Forever Chemicals': A Guide to PFAS in Courts" *Bloomberg* (13 January 2020).

[8] Bio-plastic News, "US Congress not amused with dupont chemours and 3m in pfas fiasco".

[9] The Associated Press, "Judge Dismisses Chemours Lawsuit Against DuPont" *The New York Times* (30 March 2020).

[10] *The Chemours Company v. DowDuPont Inc.*, Delaware Court of Chancery, No. 2019-0351.

By

Gabrielle K. Kramer

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Centennial Place, East Tower
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T2P 0R3

T 403.232.9500
F 403.266.1395

Ottawa

World Exchange Plaza
100 Queen Street
Ottawa, ON, Canada
K1P 1J9

T 613.237.5160
F 613.230.8842

Vancouver

1200 Waterfront Centre
200 Burrard Street
Vancouver, BC, Canada
V7X 1T2

T 604.687.5744
F 604.687.1415

Montréal

1000 De La Gauchetière Street West
Suite 900
Montréal, QC, Canada
H3B 5H4

T 514.954.2555
F 514.879.9015

Toronto

Bay Adelaide Centre, East Tower
22 Adelaide Street West
Toronto, ON, Canada
M5H 4E3

T 416.367.6000
F 416.367.6749