

**Health Canada's Response to Environmental Petition No. 0470**  
**Petition Assessing Effectiveness of Regulation of Asbestos and Asbestos Cement Pipes in Canada**

**Petitioners:**

- Fe de Leon (Canadian Environmental Law Association)
- Meg Sears (Prevent Cancer Now)

No.	Question	Lead	Response
1.	Has the department conducted a review of current management tools under the Prohibition of Asbestos and Products Containing Asbestos regulation to evaluate how effectively harm from asbestos is being prevented in Canada? Please provide the details of this review.	Joint - Environment and Climate Change Canada (ECCC) and Health Canada (HC)	<p>This response has been provided by ECCC.</p> <p>As part of the implementation strategy for the <i>Prohibition of Asbestos and Products Containing Asbestos Regulations</i> (the Regulations), Environment and Climate Change Canada (ECCC) and Health Canada developed performance measurement outcomes to assess the effectiveness of the Regulations. The immediate outcomes focus on awareness and understanding of the Regulations, intermediate outcomes focus on compliance, and the expected final outcome is that the import, sale, and use of asbestos and products containing asbestos no longer occurs in Canada, with a limited number of exclusions.</p> <p>ECCC and Health Canada conduct an internal review of the performance of the Regulations annually using quantitative indicators for each outcome. Imports of asbestos products are also monitored and analyzed annually using data from the Canada Border Services Agency. We are unable to provide additional detail at this time, as the Regulations have only been in force since December 28, 2018 and, due to the impact of the COVID-19 pandemic, not enough data has been collected yet to establish trends and complete a full assessment.</p> <p>Since the publication of the Regulations in 2018, ECCC has promoted compliance by providing guidance and information to stakeholders via factsheets and reminder letters, as well as promoting the Regulations in regional newspapers.</p>

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			<p>In a collaborative effort between ECCC and Statistics Canada, a nationwide survey was conducted in Fall 2022 to gauge stakeholder awareness of the Regulations. Results are expected in 2023-2024.</p> <p>A review of the Regulations is planned for 2024-2025, in accordance with the Government of Canada's <a href="#">Cabinet Directive on Regulations</a>. This review will assess whether the Regulations continue to be appropriate and effective and achieve their intended policy objectives. The targeted completion date for this review is March 31, 2025.</p>
2.	<p>The regulation contains a number of exemptions for asbestos use. The exemption for service equipment in nuclear facilities is being phased out in 2022 and the exemption for chlor-alkali facilities in 2029. What progress has been made to work towards these phase-out dates? What support is being provided to industries transitioning to non-asbestos or non-toxic technology? What types of replacement technologies are being instituted, and what risks are associated with them?</p>	Joint ECCC and HC	<p>This response has been provided by ECCC.</p> <p>The Regulations provided exclusions, until December 31, 2022, for the import, sale or use of a product containing processed asbestos fibres to service military equipment or equipment of a nuclear facility. These products were often manufactured or purchased at the same time as the equipment, such as submarines and nuclear power plants, and are designed to meet highly technical operating conditions. These exclusions were provided to give time to review inventory to determine which products continue to be necessary and which could be replaced by asbestos-free alternatives. As of January 1, 2023, the import, sale and use of these products containing processed asbestos fibres for servicing military equipment or equipment of a nuclear facility is only allowed under a permit and only for those products for which an asbestos-free alternative is not technically or economically feasible.</p> <p>For the 2021 reporting year, only one federal department reported using products containing asbestos to service military equipment, and no facilities reported using products containing asbestos fibres to service equipment of a nuclear facility. Data is not yet available for the 2022 reporting year as the annual reporting for 2022 is not due until March 31, 2023.</p>

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			<p>The Regulations also provide a time-limited exclusion, until December 31, 2029, for the import and use of processed asbestos fibres in the chlor-alkali industry. Asbestos is used in this industry as part of the diaphragm cell technology, which acts as a filter in the manufacturing of chlorine and caustic soda. This exclusion was provided to allow the only chlor-alkali facility in Canada that uses asbestos diaphragms sufficient time to develop and test new technology and safely implement necessary adjustments.</p> <p>Since the 2019 reporting year, this chlor-alkali facility has reported continued progress in converting to non-asbestos alternative technologies, consistent with a phase out date of 2029.</p> <p>Industries transitioning to non-asbestos technology as these exclusions are phased out are independently determining replacement technologies that fit the needs of their operations. To date, none have requested government support. While facilities are not required to report on their replacement strategies, any substance used as part of replacement technologies would be subject to applicable regulations or notification requirements under the <i>Canadian Environmental Protection Act, 1999</i> and its Regulations.</p>
3.	Does the Government of Canada plan to phase out the remaining exclusions (such as for disposal of consumer products with trace amounts, museum displays and laboratory research settings)? How does the government monitor and report the ongoing use of asbestos as exemption? Have reviews been conducted on how to phase out the use of asbestos for exclusions?	Joint ECCC and HC	<p>This response has been provided by ECCC.</p> <p>There is no current plan to phase out the remaining exclusions to the Regulations.</p> <p>ECCC and Health Canada monitor activities under the exclusions through annual reporting. Museums that display processed asbestos fibres are required to submit annual reports. Laboratories that import or use processed asbestos fibres, products containing processed asbestos fibres, or consumer products containing asbestos in greater than trace amounts are also required to submit annual reports. For laboratories, this includes samples imported and/or used for proficiency testing. These reports are</p>

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			<p>reviewed by ECCC and Health Canada annually as part of an internal assessment of the performance of the Regulations.</p> <p>As the low level of exposure to asbestos resulting from these exclusions is not expected to result in health risks, they are not currently being considered for phase-out, and no reviews have been conducted.</p>
4.	<p>When announcing the measures to ban asbestos and asbestos-containing products, the government stated, "There are no significant health risks if asbestos fibres are enclosed or tightly bound, in good condition, and left undisturbed." Ongoing, long-term water flow erodes and weakens old asbestos cement pipes. CELA and PCN ask for the details for ongoing monitoring of pipes and of drinking water quality undertaken across Canada, to assess whether asbestos is "enclosed or tightly bound, in good condition, and left undisturbed" and is not entering drinking water supplies? What is the incidence of failure of these pipes in across jurisdictions? Does failure result in increased water contamination, and/or residues in water mains, and how is this detected and remediated? What measures are taken to protect workers', bystanders' and environmental health when</p>	HC and Infrastructure Canada	<p>The objective of the PAPCAR is to prevent new asbestos and products containing asbestos from entering the Canadian market. The PAPCAR does not apply to asbestos that was integrated into a structure, infrastructure or a product before December 30, 2018.</p> <p>Infrastructure owners, such as municipalities, are responsible for assessing the condition of pipes and doing any maintenance and remediation. In most Canadian communities, municipal governments manage the day-to-day operation, maintenance and monitoring of drinking water treatment plants and distribution systems to ensure the water that reaches consumers meets the required drinking water quality standards. Health Canada develops <i>Guidelines for Drinking Water Quality</i> in partnership with the provinces, territories and other federal departments. Following Health Canada's assessment of new scientific data on asbestos in 2013 and 2018, it was concluded that there is no need to establish a maximum acceptable concentration for asbestos in drinking water as there is currently no consistent scientific evidence that asbestos ingested through drinking water is harmful, even if pipe failure, construction or repair were to increase levels of asbestos in drinking water. Despite this, some cities may monitor asbestos in drinking water, but Health Canada does not have a list of individual monitoring programs across the country.</p> <p>The health concern associated with asbestos from asbestos-cement pipes is to workers through inhalation of asbestos in dust created by cutting, breaking, or replacing existing water mains. All provinces and territories have occupational health and safety legislation, including acceptable limits</p>

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	replacing intact or collapsed AC pipes, and how is asbestos containment verified?		<p>for airborne asbestos fibres in workplaces, which applies during the replacement of asbestos-cement pipes within their jurisdiction. Provinces and territories also have measures in place to protect bystanders in the vicinity of construction zones. In addition, the <i>Canada Labour Code</i> specifies limits of acceptable concentrations of all forms of asbestos fibres allowed in air in federal buildings.</p> <p>As per the updated petition dated November 22, 2022, Infrastructure Canada will also provide a response to this question.</p>
5.	In response to CELA-CAUT's Environmental Petition No. 387 in 2016, Public Services and Procurement Canada responded that the department was creating a "National Asbestos Inventory for federally owned office buildings in its portfolio" that contain asbestos. The inventory has been updated as of June 2022. What measures have been taken to reduce or eliminate exposure by removing the asbestos-containing materials identified in the buildings listed in this inventory?	Public Services and Procurement Canada	As per the updated petition dated November 22, 2022, the response will be provided by Public Services and Procurement Canada.
6.	What steps remain to track and address remaining raw asbestos stockpiles, asbestos mining waste, and products containing asbestos (e.g., brake pads, construction materials) in Canada?	Joint ECCC and HC	<p>This response has been provided by ECCC.</p> <p>Asbestos has not been mined in Canada since 2011. The Regulations do not apply to raw asbestos, and ECCC and Health Canada do not track any remaining raw asbestos stockpiles that may exist. However, the Regulations prohibit the import, sale and use of asbestos; and, the manufacture, import, sale and use of products containing asbestos in Canada, with a limited number of exclusions, so the raw asbestos</p>

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			<p>stockpiles cannot be used to produce consumer products containing asbestos in greater than trace amounts.</p> <p>The Regulations also do not apply to mining residues (waste), except for the following activities, which are prohibited:</p> <ul style="list-style-type: none"> <li>- the sale of asbestos mining residues for use in construction and landscaping activities, unless authorized by the province in which the construction or landscaping occurs; and</li> <li>- the use of asbestos mining residues to manufacture a product that contains asbestos.</li> </ul> <p>Provincial and territorial occupational health and safety legislation manage risks of exposure to asbestos mining residues. While the potential risk of exposure to the public remains, the redevelopment and rehabilitation of former mine sites would be expected to reduce exposure to asbestos mining residues. ECCC and HC do not track asbestos mining residues.</p> <p>ECCC has been undertaking market research and testing to determine the amounts of asbestos in certain products available for retail purchase across Canada. In 2019, no asbestos was detected in 53 samples from new automotive brake pads/brake shoes, and in 2021, no asbestos was detected in 100 samples from talc-based facial cosmetic products. ECCC is currently in the process of purchasing additional products for testing and results will be available in 2023-2024.</p>
7.	The regulation outlines requirements to develop and maintain Asbestos Management Plans but does not provide for public review or reporting. The risk posed to human health by asbestos exposure should require substantial public transparency with these plans. How	Joint ECCC and HC	<p>This response has been provided by ECCC.</p> <p>The activities for which an asbestos management plan is required are not undertaken by the general public. Therefore, the plans focus on providing transparency to employees and workers, who are at most risk of exposure. Through the requirement to prepare and implement asbestos management plans, the Regulations provide transparency to employees and workers regarding their risk of exposure; methods for safely handling,</p>

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	is public transparency being fostered in the management of asbestos?		<p>storing and disposing of asbestos and products containing asbestos; and, applicable occupational health and safety requirements.</p> <p>The Regulations require that asbestos management plans be prepared and implemented for the following activities:</p> <ul style="list-style-type: none"> <li>• Use of a product containing processed asbestos fibres to service military equipment, until January 1, 2023, and their continued import or use under a permit granted after that time;</li> <li>• Use of a product containing processed asbestos fibres to service equipment of a nuclear facility, until January 1, 2023, and their continued import or use under a permit granted after that time;</li> <li>• Display of processed asbestos fibres in a museum;</li> <li>• Use of processed asbestos fibres in a laboratory in scientific research or as an analytical standard;</li> <li>• Use of processed asbestos fibres in diaphragms to be used in a chlor-alkali facility, until January 1, 2030; and</li> <li>• Import or use of processed asbestos fibres, products containing processed asbestos fibres or consumer products containing asbestos in greater than trace amounts under a permit to protect the environment or human health if there was no technically or economically feasible asbestos-free alternative available.</li> </ul> <p>Asbestos management plans are specific to the facilities at which the asbestos or products containing asbestos are used, or the museums at which the asbestos is displayed. They can be incorporated into existing management plans and may address unique considerations for each facility while maintaining the requirements as set out in Schedule 1 of the Regulations. Asbestos management plans may therefore be in a design or format that is most useful for employees or workers at the facility but not easily shared for public review.</p>

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			<p>Currently, one federal department, one military equipment service facility, four nuclear facilities, three museums, 51 laboratories and one chlor-alkali facility are required to implement an asbestos management plan.</p> <p>While public review or reporting of asbestos management plans is not required under the Regulations, these plans must be kept in Canada for a minimum of five years for inspection by ECCC enforcement officers.</p>
8.	What is being done to create a harmonized national asbestos strategy?	ECCC and Innovation, Science and Economic Development Canada	As per the updated petition dated November 22, 2022, the response will be provided by ECCC and Innovation, Science and Economic Development Canada.
9.	In CELA-CAUT Environmental Petition No. 387, the following question was asked: Has the government applied the precautionary principle in developing regulatory and non-regulatory measures on asbestos? Please provide a detailed response on how the two departments applied the precautionary principle in this strategy to address asbestos. If the precautionary principle was not applied, provide an explanation of why not.	Joint ECCC and HC	<p>This response has been provided by ECCC.</p> <p>Recognizing that asbestos can cause life-threatening diseases, such as asbestosis, mesothelioma, and lung cancer, ECCC and Health Canada developed the Regulations as part of the government-wide strategy announced in 2016 to protect Canadians from exposure to asbestos. The precautionary principle was a key driving factor in the design of the Regulations to prevent new asbestos and products containing asbestos from entering the Canadian marketplace to protect the health of Canadians.</p> <p>The Regulations prohibit the import, sale, and use of asbestos as well as the manufacture, import, sale, and use of asbestos-containing products, with a limited number of exclusions. In implementing the precautionary principle, (defined in CEPA as “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”), exclusions to the Regulations were only considered in exceptional circumstances, taking into account socio-economic factors, the</p>



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			<p>demonstrated absence of suitable alternatives, and with the consideration of health risks.</p> <p>In addition, exports of asbestos and asbestos-containing products are prohibited, with a limited number of exceptions, under the <i>Export of Substances on the Export Control List Regulations</i> and Schedule 3 to the <i>Canadian Environmental Protection Act, 1999</i>. Those changes came into force on the coming into force of the Regulations on December 30, 2018.</p>
10.	Is the Government of Canada supporting or conducting studies on water as a source of exposure to asbestos? If so, please provide details. If not, why not?	HC	<p>As the available scientific evidence on ingestion of asbestos from water does not suggest that such exposure would create a risk to human health, Health Canada is not currently supporting or conducting research on water as a source of asbestos exposure. Certain cities monitor asbestos in drinking water as part of the management of drinking water treatment and distribution systems. As part of its ongoing guideline review process, Health Canada will continue to monitor new research on asbestos. Health Canada collaborates with international organizations, such as the World Health Organization, to access the most up-to-date scientific information.</p>
11.	How can Health Canada maintain there is not "convincing, consistent" evidence that ingested asbestos is hazardous given several NRC reports referring to asbestos fibres in water as a "health concern" and one suggesting that severely deteriorated AC water pipes could cause cancer? This is an unreasonable, unethical standard given the type of data collection such as exposure estimation in the distant past, in the face of lack of infrastructure information in Canada that would be necessary to study	HC	<p>As part of its ongoing guideline review process, Health Canada assessed new scientific data on asbestos in 2013 and 2018, including studies evaluated by the Texas State Department of Health and United States Environmental Protection Agency. The review of the hazard and exposure data related to ingestion of asbestos in drinking water still supports the assessment detailed in the 1989 guidelines that there is no causal relationship between asbestos ingestion and negative health effects.</p> <p>Available evidence on ingestion of asbestos from water does not suggest that it poses a risk to human health that would warrant the development of new guidelines. Epidemiological studies investigating asbestos exposure via drinking water and incidence of cancers of the stomach and gastrointestinal tract show inconclusive results. Chronic exposure studies in animals have also failed to show evidence of cancer effects or systemic</p>

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	<p>these cancers, with long latency. Provide evidence and the origin to substantiate Health Canada's position. Explain the research that would be necessary to meet the evidentiary bar to demonstrate harm associated with ingested asbestos. Delaying action on the basis of underpowered or inherently imprecise epidemiology is a well recognized misuse of epidemiological methods.</p>		<p>toxicity. Animal studies show that ingested asbestos fibers largely move through the digestive system without being absorbed or trapped.</p> <p>Other international organizations, including the <a href="#">World Health Organisation (2021)</a> and the <a href="#">Australian National Health and Medical Research Council (2022)</a>, have reached the same conclusions as Health Canada.</p> <p>The most informative study design to investigate the association between exposure to asbestos in drinking water and the incidence of disease would be to conduct prospective cohort studies. Cohort studies initially classify patients into two groups based on their exposure status. Cohorts are followed over time to see who develops the disease in the exposed and non-exposed groups. The study design must include detailed information on exposure and individual characteristics to control for important covariates, such as other environmental contaminants, lifestyle, socio-economic status, and alcohol consumption.</p> <p>In the absence of well-designed prospective cohort studies, multiple studies of appropriate design and quality can be used to contribute to the weight of evidence in its entirety. For example, a weight of evidence approach helps determine whether results are consistent across studies conducted in different context and populations. Study quality is also key. Generally, various epidemiological, animal and laboratory study designs are helpful to build the weight of evidence, with each type having its advantages and bringing a piece to the puzzle.</p> <p>The National Research Council (NRC) reports mentioned in Section 4 of the petition (Q10-Q14, footnotes 20, 21, 22, 24, and 25) cannot be used as evidence that asbestos ingested through drinking water is a health concern. These reports are about infrastructure, namely addressing various aspects of asbestos-cement pipes. The reports are not focused on health issues and studies cited in the reports have methodological</p>

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			limitations from a health perspective that prevent the study authors from estimating and drawing conclusions on health risks.
12.	Given Health Canada's stance that the evidence on the threats posed by asbestos in drinking water is inconsistent, how is the absence of a MAC for asbestos in drinking water reconciled with the precautionary principle? Will Canada establish a MAC for asbestos? If so, please provide details on this process, when it will be initiated, and the seeking of public input. If not, provide the rationale for not establishing a MAC.	HC	<p>The precautionary principle underlies Health Canada's decisions when identifying, assessing and managing risks, including when developing drinking water guidelines. Health Canada's <a href="#">application of weight of evidence and precaution in risk assessment</a> is supported by many specific tools and approaches to address the lack of full scientific certainty or uncertainty in risk assessment.</p> <p>Health Canada monitors research on asbestos in drinking water and found in reviewing the available scientific evidence in 1989, 2013 and 2018 that the overall weight of evidence from epidemiology and animal studies does not suggest an increased risk of negative health effects from ingesting asbestos in drinking water. In relation to the <a href="#">criteria for developing the Guidelines for Canadian Drinking Water Quality</a>, there is no health basis for establishing a maximum acceptable concentration (MAC) for asbestos in drinking water. Health Canada will re-assess exposure and hazard data on asbestos in drinking water during the next <a href="#">prioritization process for guidelines development</a>, which is planned for 2025. Health Canada will continue to monitor new research on asbestos and work collaboratively with international partners such as the World Health Organization. If the state of the science changes, Health Canada will update the guidelines and establish a MAC; the public would be able to submit comments on any draft guideline during a 60-day comment period.</p>
<b>Questions 13-18 are not directed to Health Canada</b>			
13.	According to the NRC and Energy, Mines and Resources Canada, many	IC	As per the updated petition dated November 22, 2022, the response will be provided by Infrastructure Canada.

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	more AC water pipes were installed in Western Canada, as opposed to Central Canada and Eastern Canada. Please provide the status of AC pipes in use across the country. Why were AC pipes used more frequently in Western Canada compared to other regions in Canada?		
14.	Canada announced that it is conducting a National Infrastructure Assessment to create a credible source of data and evidence on Canada's key infrastructure needs. The last federal review of AC pipes was conducted in 1977, 45 years ago. Will the National Infrastructure Assessment gather updated data on the amount, condition, and location of AC pipes? If so, please provide details. If not, why not?	IC	As per the updated petition dated November 22, 2022, the response will be provided by Infrastructure Canada.
15.	Are systems or strategies in place to collect or dispose of AC pipes? If so, please provide details on these processes. If not, why not?	ECCC, Transport Canada (TC)	The response will be provided by ECCC and Transport Canada.
16.	Waste containing asbestos may be exported with limited obligations for importing countries to give prior informed consent and could end up in jurisdictions without adequate legislation to protect workers and the public from asbestos exposure.	ECCC, TC	The response will be provided by ECCC and Transport Canada.

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	Water pipes that might contain lead have been raised as an issue in the United States, as some are being sent to other jurisdictions for processing. <sup>39</sup> Are AC pipes being transported from Canada to other jurisdictions for disposal? If so, are there screening or tracking processes in place for the movement of AC pipes? If not, why not?		
17.	Asbestos is included in Part 3 of Schedule 11 of the Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations as a "Constituent of Potentially Hazardous Waste." Schedule 3 requires the code for these constituents must be included in a notification for export permit but export permits and prior informed consent from receiving jurisdictions are not required for constituents, only for "hazardous waste." How has this been implemented?	ECCC, TC	The response will be provided by ECCC and Transport Canada.
18.	Asbestos is not included as "hazardous waste" under the Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations, meaning waste containing asbestos may be exported with limited obligations for importing countries to give prior informed	ECCC, TC	The response will be provided by ECCC and Transport Canada.

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	consent and could end up in jurisdictions without adequate legislation to protect workers and the public from asbestos exposure. Asbestos is dangerous in even small quantities. Have steps been taken to designate asbestos as "hazardous waste?" If not, why not?		