

Thresholds for Mercury in Waste in Canada

General

Exceedance of the thresholds triggers requirements for environmentally sound management as a hazardous waste in the relevant jurisdiction.

Jurisdiction	Legislation/Regulation/Guideline	Leachate Limit	Content Limit	Notes
<i>Federal</i>				
Canada	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations	0.1mg/L	N/A	Substance thresholds in Schedule 6 of the regulations are used to classify waste as hazardous, or as hazardous recyclable material. Leachate concentration is determined using US EPA Method 1311, Toxicity Characteristic Leaching Procedure .
<i>Provincial and Territorial</i>				
British Columbia	Hazardous Waste Regulation	0.1mg/L	N/A	Leachable toxic waste that exceeds the leachate quality standards specified in Table 1, Schedule 4 of the regulations is defined as hazardous waste. Leachate concentration is determined using US EPA Method 1311, TCLP.
Alberta	Alberta User Guide for Waste Managers	0.2mg/L	N/A	Waste is hazardous and a recyclable is a hazardous recyclable waste if its leachate contains any substance listed in Table 2 of the Schedule in excess of the concentrations listed in that Table Leachate concentration is determined using US EPA Method 1311, TCLP.

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Saskatchewan	Hazardous Substances and Waste Dangerous Goods Regulations	0.1mg/L*	0.01% (100ppm)	<p>Mercury and mercury compounds are designated as hazardous substances under the Hazardous Substances and Waste Dangerous Good Regulations.</p> <p>If a hazardous substance is present in waste above 0.01%, the waste is considered a waste dangerous good.</p> <p>*Industrial waste landfills in Saskatchewan can accept mercury waste only if the mercury in the leachate is below 0.1mg/L. Any waste generating leachate with mercury above this cannot be accept at non-hazardous waste landfills.</p> <p>Leachate concentration is determined using US EPA Method 1311, TCLP.</p>
Manitoba	Hazardous Waste Regulation	0.1mg/L	N/A	<p>Depending on the substance being considered, the regulation defines hazardous waste according to waste type, concentration limit or leachate limit.</p> <p>The leachate limit for mercury is included in Schedule C, Category 4 – Hazardous Waste.</p> <p>Leachate concentration is determined using US EPA Method 1311, TCLP.</p>

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Ontario	General Waste Management Regulation	0.1mg/L	N/A	<p>A waste which produces a leachate that meets or exceeds the leachate limits in Schedule 4, Leachate Quality Criteria, is defined as a leachate toxic waste.</p> <p>Leachate concentration is determined using US EPA Method 1311, TCLP.</p>
Quebec	Regulation respecting hazardous materials	0.1mg/L	N/A	<p>Any material which produces a leachate that exceeds the maximum leachate concentrations specified in the regulations is defined as leachable material.</p> <p>The test method is prescribed in the Liste des méthodes d'analyses relatives à l'application des règlements découlant de la Loi sur la qualité de l'environnement (available in French only), which includes US EPA Method 1311, TCLP.</p>
Newfoundland	Guidance Document – Leachable Toxic Waste	0.1mg/L	N/A	<p>A waste which generates leachate concentrations that exceed the standards in Attachment 3 is defined as leachable toxic waste.</p> <p>Leachate concentration is determined using US EPA Method 1311, TCLP.</p>

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Northwest Territories	Guideline for Hazardous Waste Management	0.1mg/L	N/A	<p>A waste which generates leachate concentrations that exceed the leachate disposal standards in Schedule I is defined as hazardous leachable waste.</p> <p>Leachate concentration can be determined using both US EPA Method 1311, TCLP or Leachate Extraction Procedure 164-GP-1-MP Canadian General Standards Board.</p>
Yukon	Contaminated Sites Regulation	N/A	15ug/g	<p>Contaminant concentrations in soil are compared to Schedules 1 and 2 of the regulations to determine if it is to be managed as a hazardous waste.</p>
			40ug/g	<p>15ug/g applies for soil for Agricultural, Parks and Residential land uses.</p> <p>40ug/g applies soil for Commercial land use.</p> <p>The type of analysis required is not specific in the regulations.</p>
Nunavut	Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities	0.1mg/L	N/A	<p>A waste which generates leachate concentrations that exceed the criteria in Table 1 is considered to be a hazardous waste.</p> <p>The recommended leachate testing procedure is US EPA Method 1311, TCLP.</p>

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Metal Mining Effluent

The [Environmental Code of Practice for Metal Mines](#) published by the Government of Canada contains recommendations on best practices throughout the mine lifecycle, including tailings management. In Canada, tailings from metal mines undergo disposal in an environmentally sound manner in dedicated tailings management facilities. These facilities include tailings ponds to allow for settling of suspended solids. Tailings disposal under a water cover is also a recommended practice to prevent or control metal leaching.

Any effluent that is released from a metal mine is subject to the federal [Metal and Diamond Mining Effluent Regulations](#). Due to the Canadian climate, water levels in a tailings pond can increase resulting from melting snow and precipitation. To maintain a tailings pond at the required water level, effluent may be released into the environment, but only through a final discharge point that is monitored and reported in accordance with the Regulations. Schedule 4 of the Regulations prescribes effluent limits for certain substances. Effluent must also be within a prescribed pH range and not be acutely lethal to fish.

In Schedule 5 of the Regulations, metal mines are obligated to conduct effluent and water quality monitoring studies, which consist of effluent characterization, sub-lethal toxicity testing and water quality monitoring. Effluent characterization includes a requirement to measure mercury concentration in the effluent. Water quality monitoring includes a requirement to measure mercury concentrations in water samples taken from the area of exposure near the mine. Schedule 5 also requires a study on mercury in fish tissue to determine any effects of the mine effluent on fish populations.