



Introduction to 6PPD and 6PPD-q: The Race to Find Alternatives

CHANGING N(1,3dimethylbutyl)-N'-phenyl-p-phenylenediamine (6PPD) has been used as a critical component in the manufacturing of tires and other rubber products for over 50 years; however, has only recently been linked, through its oxidation product, 6PPD-quinone (6PPD-q), to major fish kills of ecologically, socially, and economically important fish species in North America.

Since its discovery in 2020, 6PPD-q has been identified as acutely toxic to salmonids such as Lake Trout, Coho Salmon, and Rainbow Trout, with lethality in some species observed at water concentrations below 100 parts per trillion. 6PPD-q has been detected widely in water bodies adjacent to roads and highways, and in soil, sediment, dust, and other media.

This presentation will introduce the use of 6PPD and the timeline of 6PPD-q discovery, focusing on the environmental fate and transport of these compounds through various environmental media and toxicological relevance to fisheries and public health.

The presentation will also provide an update on the current regulatory landscape surrounding 6PPD and 6PPD-q in Canada and abroad, the actions of rubber product manufacturers and industry associations to find alternatives, and potential technologies to mitigate potential risks associated with this emerging contaminant.

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Paul has a thorough understanding of issues relating to emerging contaminants and environmental due diligence and has a keen interest in brownfield and urban redevelopment strategies. Paul uses his technical skills to assist clients with navigating regulatory, municipal conveyance, and transactional due diligence processes, and regularly consults for a broad range of public, residential and commercial real estate, and industrial clients.

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Tiffany Waters is a Risk Assessor and Ecologist with EnVision Consultants Ltd. Tiffany is a QPRA (Qualified Person in Risk Assessment) under O. Reg. 153/04 in Ontario, and at EnVision she is responsible for the completion of human health and ecological risk assessments for brownfield properties. Tiffany has extensive experience completing Environmental Site Assessments under O. Reg. 153/04 and ecological studies such as Environmental Impact Studies, Natural Heritage Evaluations, and Species at Risk screening.