

Glossary

acute	In toxicology, a toxicity test, exposure, or response to a chemical substance that is completed or manifest in a short period of time, usually less than 30 days.
additive interaction	In toxicology, chemicals that are structurally similar, have similar mechanisms of toxicity, and affect the same target tissue or organ in the body, may be assumed to have additive toxicity.
aliphatic	In relation to petroleum hydrocarbons, aliphatic hydrocarbons are those that do not contain aromatic rings; rather they are linear or branched molecules.
aromatic	In relation to petroleum hydrocarbons, aromatic hydrocarbons are those that have a molecular structure characterized by the presence of one or more aromatic ring structures composed of six carbon atoms with double bonds, as in the case of benzene.
benchmark	In ecological risk assessment, a target concentration to which predicted concentrations of chemical substances can be compared to determine whether of risks are assessed.
bioavailability	The fraction of the total amount of a chemical in environmental media (i.e., water, sediment, soil or biological tissues ingested as food), which can be absorbed by an organism either directly from the media as a result of external exposure, or after being ingested.
biomagnification	The sequence of processes resulting in higher concentrations of chemical contaminant substances in organisms at higher levels in the food chain (at higher trophic levels).
bioturbation	The mixing of sediment by living organisms.
chronic	In toxicology, a toxicity test, exposure, or response to a chemical substance that is completed or manifest over a long period of time, usually more than 90 days, and commonly extending to one or more life spans.
condensate	A low-density mixture of hydrocarbon liquids that are present in raw natural gas produced from many natural gas or oil fields, or which condense out of the raw gas if the temperature is reduced below the hydrocarbon dew point temperature of the raw gas.

diluted bitumen	A hydrocarbon consisting of bitumen diluted with condensate in order to reduce its viscosity, rendering it suitable to be transported via a pipeline. In addition to condensate, other substances can be used as the diluent (e.g., naphtha and synthetic oil).
ecosystem	A spatially definable unit that includes all of the organisms in a given area, interacting with the physical environment, so that a flow of energy leads to clearly defined trophic structure, biological diversity, and material cycles (i.e., exchange of materials between living and nonliving parts) within the unit.
exposure point concentration (EPC)	A conservative estimate of the average concentration of a chemical substance in water, sediment, soil, or food (i.e., biological tissues) that an organism may be exposed to in the environment.
fauna	Animal species.
flora	Plant species.
hazard index (HI)	Where chemical substances have additive interactions, the hazard quotient values for two or more substances may be summed to estimate a hazard index for a class of substances having similar chemical structure, mode of toxic action, and target tissue or organ. Where a hazard index value is less than unity, it is concluded that there is not a significant risk present.
hazard quotient (HQ)	A quotient derived by dividing the exposure point concentration in water, or sediment by a benchmark value representing a safe concentration. Where a hazard quotient value is less than unity, it is concluded that there is not a significant risk present.
incremental lifetime cancer risk (ILCR)	For carcinogenic COPC, potential human health risks were expressed as incremental lifetime cancer risk compared to a benchmark of 10^{-5} (i.e., 1 in 100,000) representing the increased risk of a person within a given population developing cancer over his or her lifetime.
invertebrate	Animals that are not vertebrates (i.e., lacking a vertebral column; animals that are not fish, amphibians, reptiles, birds or mammals).
order of magnitude	The expression refers to a range of values that are roughly within a factor of ten (e.g., lying between 3 and 30, or 100 and 1,000).
the Project	the Enbridge Northern Gateway Project.
synthetic oil	A hydrocarbon that is the result of processing or upgrading a heavy crude feedstock to obtain a hydrocarbon with more desirable characteristics.

trace element

Defined in the context of the Ecological Risk Assessment as being an element present in the liquid hydrocarbons at a concentration greater than 1 mg/kg, that is not of low inherent toxicity, or a major mineral forming element.