TABLE C-1-10

TOTAL HAZARD INDEX: NONCARCINOGENS

Description

For non-cancer health effects, hazard quotient for all COPCs, regardless of target organs, are summed to calculate a total *hazard index*. Uncertainties associated with this equation include the following:

(1) The assumption that different COPCs affect the same target organ to produce an adverse health effect, ignoring potential antagonistic or synergistic effects or disparate effects on different target organs, may overestimate the total hazard index.
(2) Total hazard index assumes that a single individual in the exposure scenario is exposed to site-related contaminants at estimated exposure concentrations by all pathways that make up the scenario. It is unlikely, however, that a single individual will be exposed by each pathway in the exposure media. This assumption may overestimate the total hazard index.

Equation

$$Total\ Hazard\ Index = \sum_j HI_j$$

$$HI = \sum_i HQ_i$$

Variable	Description	Units	Value
Total Hazard Index	Total individual hazard index for all COPCs across all exposure pathways	unitless	
HI_j	Hazard Index for exposure pathway *j*	unitless	**Varies** This variable is COPC- and site-specific. The value for this variable will vary for each exposure pathway. Uncertainties associated with this variable are site-specific.
HQ_i	Hazard Quotient for COPC *i*	unitless	**Varies** This variable is COPC- and site-specific, and is calculated by using the equation in Table C-1-8. The value for this variable will vary for each exposure pathway. Uncertainties associated with this variable are site-specific.