# Toxicity Factors for Ammonia

These are the human health toxicity data that were used by the Department to derive its health based criteria.

<table>
<thead>
<tr>
<th><strong>7664-41-7</strong></th>
</tr>
</thead>
</table>

## Drinking water

<table>
<thead>
<tr>
<th>Carcinogen Group</th>
<th>Oral Slope Factor: ((\text{mg/kg/day})^{-1})</th>
<th>Oral Reference Dose: ((\text{mg/kg/day}))</th>
<th>Basis:</th>
</tr>
</thead>
</table>

## Ground water

<table>
<thead>
<tr>
<th>Carcinogen Group</th>
<th>Oral Slope Factor: ((\text{mg/kg/day})^{-1})</th>
<th>Oral Reference Dose: ((\text{mg/kg/day}))</th>
<th>Basis: DEP/See B&amp;B text</th>
</tr>
</thead>
</table>

## Surface water

<table>
<thead>
<tr>
<th>Carcinogen Group</th>
<th>Oral Slope Factor: ((\text{mg/kg/day})^{-1})</th>
<th>Oral Reference Dose: ((\text{mg/kg/day}))</th>
<th>Basis:</th>
</tr>
</thead>
</table>

## Soil

<table>
<thead>
<tr>
<th>Oral</th>
<th>Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogen Group</td>
<td>Carcinogen Group:</td>
</tr>
<tr>
<td>Slope Factor: ((\text{mg/kg/day})^{-1})</td>
<td>Unit Risk Factor ((\text{ug/m}^3)^{-1})</td>
</tr>
<tr>
<td>Reference Dose: ((\text{mg/kg/day}))</td>
<td>Reference Concentration: ((\text{ug/m}^3)^3)</td>
</tr>
<tr>
<td>Basis:</td>
<td>Basis:</td>
</tr>
</tbody>
</table>
Soil - Footnotes
1. Carcinogen Classification - All classifications are based on IRIS unless stated otherwise
1999 Cancer Draft Guidelines:
KNOWN - Known carcinogen
CANTDET - Can not determine carcinogenic classification
LIK - Likely to be a human carcinogen
NLIK - Not likely to be a carcinogen
INAD - Inadequate data
ORL - Oral exposure route
INHL - Inhalation exposure route
2. Toxicity factors were developed by the NJDEP under the A-280 process for the following chemicals, but MCLs were not adopted for unrelated reasons, such as lack of a standardized analytical method for drinking water. Ethylene glycol, formaldehyde, hexane, methyl ethyl ketone, and 2,4,6-trichlorophenol. 
3. The New Jersey MCL for 1,4-Dichlorobenzene was adopted from USEPA, but New Jersey did not necessarily agree with the USEPA RfD, so it is not included on this table

Ground Water - Footnotes
b = existing drinking water Maximum Contaminant Level Goal (MCLG) (CFR Part 141 - National Primary Drinking Water Regulations). For beryllium see Section IV-d of the Basis and Background.
c = developed by the Department for calculating ISCs. For details on developing specific RfD, slope factor, or carcinogen class equivalent to USEPA categorization, see support document available by request to the Department.
d = Slope factor and carcinogen group of arsenic are those listed in IRIS under arsenic (inorganic); RfDs of chromium, mercury, and nickel are those listed in IRIS under chromium (VI), mercuric chloride, and nickel (soluble salts), respectively. The RfD for thallium was developed by the Department based on the RfD of thallium(I) sulfate in IRIS.
e = derived by multiplying the IRIS slope factor of B(a)P of 7.3 (mg/kg-day)-1 with the "estimated order of potential potency" for the individual Group B2 PAHs recommended in USEPA "Provisional Guidance for Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons", Office of Research and Development, EPA/600/R-93/089. The relative potencies based on that of benzo(a)pyrene as 1.0 are as follows: benz(a)anthracene, 0.1; benzo(b)fluoranthene, 0.1; benzo(k)fluoranthene, 0.01; chrysene, 0.001; dibenz(a,h)anthracene, 1.0; indeno(1,2,3-c,d)pyrene, 0.1.
f = Group D categorization of mercury based on USEPA National Primary Drinking Water Regulations; Final Rule. 56 FR 3537, Jan 30, 1991. For detailed discussion on Group D categorization of mercury, see Section IV-o in this Basis and Background.
** = The carcinogen group assigned to acrolein in IRIS is the descriptor, "data are inadequate for an assessment of human carcinogenic potential" which is equivalent to Group D.

Surface Water - Footnotes
a = Group D categorization of mercury based on USEPA National Primary Drinking Water Regulations; Final Rule. 56 FR 3537, Jan 30, 1991. For detailed discussion on Group D categorization of mercury, see Section IV-o in this Basis and Background.

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New Jersey Dept. of Environmental Protection - Toxicity Factors 9/16/2008 Page 2 See additional footnote explanations on last page