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

**16984-48-8**

### Drinking water

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

### Ground water

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

### Surface water

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

### Soil

#### Oral

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

#### Inhalation

<table>
<thead>
<tr>
<th>Carcinogen Group</th>
<th>Unit Risk Factor</th>
<th>Reference Concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>((\text{ug/m}^3))</td>
<td>((\text{ug/m}^3))</td>
<td></td>
</tr>
</tbody>
</table>

*Reference Doses for Group C chemicals are shown with uncertainty factor of 10 for possible carcinogenicity included. These are the Reference Doses used to derive criteria for all media. In the Basis and Background documents for these criteria, these Reference Doses may or may not be shown with this uncertainty factor incorporated.*
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
- ORL - Oral exposure route
- INHL - Inhalation exposure route
- B(a)P - Benz[a]pyrene
- 1,2,3-c-dipyrene

1986 Cancer Guidelines:
- Group A - Human carcinogen
- Group B - Probable human carcinogen
- Group C - Possible human carcinogen
- Group D - Not classifiable as to human carcinogenicity
- Group E - Evidence on non-carcinogenicity for humans

2. References:
- IRIS - Integrated Risk Information System
- HEAST- Health Effects Assessment Summary Tables
- NCEA - National Center for Environmental Assessment/EPA Provisional Value
- DEP- NJ Department of Environmental Protection
- NR02- EPA National Recommended Water Quality Criteria 2002

^ = 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
^ 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.
+ See text on cadmium. For RfD for cadmium, "(w)" stands for water. "(f)" stands for food.
* The criterion for lead remains unchanged. The criteria for nickel are based on data from 2002 Calculation Matrix updated by the current fish consumption rate of 17.5 g/day.

Soil - Footnotes
1. The Reference Doses for the Group C chemicals incorporate an additional uncertainty factor of 10 for possible carcinogenicity.
2. Toxicity factors were developed by the NJDWQI 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.