(B) Water quality criteria and values derived pursuant to §132.4(c); and

(3) For methodologies, policies, and procedures. The Great Lakes State or Tribe has adopted methodologies, policies, and procedures as protective as the corresponding methodology, policy, or procedure in §132.4. The Great Lakes State or Tribe may adopt provisions that are more protective than those contained in this part. Adoption of a more protective element in one provision may be used to offset a less protective element in the same provision as long as the adopted provision is as protective as the corresponding provision in this part; adoption of a more protective element in one provision, however, is not justification for adoption of a less protective element in another provision of this part.

(h) A submission by a Great Lakes State or Tribe will need to include any provisions that EPA determines, based on EPA’s authorities under the Clean Water Act and the results of consultation under section 7 of the Endangered Species Act, are necessary to ensure that water quality is not likely to jeopardize the continued existence of any endangered or threatened species listed under section 4 of the Endangered Species Act or result in the destruction or adverse modification of such species’ critical habitat.

(i) EPA’s approval of the elements of a State’s or Tribe’s submission will constitute approval under section 118 of the Clean Water Act, approval of the submitted water quality standards pursuant to section 303 of the Clean Water Act, and approval of the submitted modifications to the State’s or Tribe’s NPDES program pursuant to section 402 of the Clean Water Act.

§ 132.6 Application of part 132 requirements in Great Lakes States and Tribes.

(a) Effective September 5, 2000, the requirements of Paragraph C.1 of Procedure 2 in Appendix F of this Part and the requirements of paragraph F.2 of Procedure 5 in appendix F of this Part shall apply to discharges within the Great Lakes System in the State of Indiana.

(b) Effective September 5, 2000, the requirements of Procedure 3 in appendix F of this Part shall apply for purposes of developing total maximum daily loads in the Great Lakes System in the State of Illinois.

(c) Effective September 5, 2000, the requirements of Paragraphs C.1 and D of Procedure 6 in appendix F of this Part shall apply to discharges within the Great Lakes System in the States of Indiana, Michigan and Ohio.

(d) Effective November 6, 2000, §132.4(d)(2) shall apply to waters designated as “Class D” under section 701.9 of Title 6 of the New York State Codes, Rules and Regulations within the Great Lakes System in the State of New York. For purposes of this paragraph, chronic water quality criteria and values for the protection of aquatic life adopted or developed pursuant to §132.4(a) through (c) are the criteria and values adopted or developed by New York State Department of Environmental Conservation (see section 703.5 of Title 6 of the New York State Codes, Rules and Regulations) and approved by EPA under section 303(c) of the Clean Water Act.

(e) Effective November 6, 2000, the criteria for mercury contained in Table 4 of this part shall apply to waters within the Great Lakes System in the State of New York.

(f) Effective December 6, 2000, the chronic aquatic life criterion for endrin in Table 2 of this part shall apply to the waters of the Great Lakes System in the State of Wisconsin designated by Wisconsin as Warm Water Sportfish and Warm Water Forage Fish aquatic life use.

(g) Effective February 5, 2001, the chronic aquatic life criterion for selenium in Table 2 of this part shall apply to the waters of the Great Lakes System in the State of Wisconsin designated by Wisconsin as Limited Forage Fish aquatic life use.

(h) Effective December 6, 2000, the requirements of procedure 3 in appendix F of this part shall apply for purposes of developing total maximum daily loads in the Great Lakes System in the State of Wisconsin.

(i) Effective December 6, 2000, the requirements of paragraphs D and E of procedure 5 in appendix F of this part.

§ 132.6 Application of part 132 requirements in Great Lakes States and Tribes.

(a) Effective September 5, 2000, the requirements of Paragraph C.1 of Procedure 2 in Appendix F of this Part and the requirements of paragraph F.2 of Procedure 5 in appendix F of this Part shall apply to discharges within the Great Lakes System in the State of Indiana.
shall apply to discharges within the Great Lakes System in the State of Wisconsin.

(j) Effective December 6, 2000, the requirements of paragraph D of procedure 6 in appendix F of this part shall apply to discharges within the Great Lakes System in the State of Wisconsin.


### TABLES TO PART 132

#### TABLE 1—ACUTE WATER QUALITY CRITERIA FOR PROTECTION OF AQUATIC LIFE IN AMBIENT WATER

EPA recommends that metals criteria be expressed as dissolved concentrations (see appendix A, I.A.4 for more information regarding metals criteria).

(a)  

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CMC (μg/L)</th>
<th>Conversion factor (CF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic (III)</td>
<td>a,b 339.8</td>
<td>1.000</td>
</tr>
<tr>
<td>Chromium (VI)</td>
<td>a,b 16.02</td>
<td>0.982</td>
</tr>
<tr>
<td>Cyanide</td>
<td>=22</td>
<td>n/a</td>
</tr>
<tr>
<td>Dieldrin</td>
<td>=0.24</td>
<td>n/a</td>
</tr>
<tr>
<td>Endrin</td>
<td>=0.086</td>
<td>n/a</td>
</tr>
<tr>
<td>Lindane</td>
<td>=0.95</td>
<td>n/a</td>
</tr>
<tr>
<td>Mercury (II)</td>
<td>a,b 1.694</td>
<td>0.85</td>
</tr>
<tr>
<td>Parathion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- CMC=CMCt.
- CMC should be considered free cyanide as CN.
- CCC=CCCt.

(b)  

<table>
<thead>
<tr>
<th>Chemical</th>
<th>m</th>
<th>b</th>
<th>Conversion factor (CF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium</td>
<td>a,b</td>
<td>1.128</td>
<td>-3.6867 0.85</td>
</tr>
<tr>
<td>Chromium (III)</td>
<td>a,b</td>
<td>0.819</td>
<td>+3.7256 0.316</td>
</tr>
<tr>
<td>Copper</td>
<td>a,b</td>
<td>0.9422</td>
<td>-1.700 0.960</td>
</tr>
<tr>
<td>Nickel</td>
<td>a,b</td>
<td>0.846</td>
<td>+0.255 0.998</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
<td>1.005</td>
<td>-4.869</td>
<td>n/a</td>
</tr>
<tr>
<td>Zinc</td>
<td>a,b</td>
<td>0.8473</td>
<td>+0.884 0.978</td>
</tr>
</tbody>
</table>

**Notes:**
- a CMC=exp (m [pH]+b). The CMC should be rounded to two significant digits.
- A×10^x: The base e exponential function.

#### TABLE 2—CHRONIC WATER QUALITY CRITERIA FOR PROTECTION OF AQUATIC LIFE IN AMBIENT WATER

EPA recommends that metals criteria be expressed as dissolved concentrations (see appendix A, I.A.4 for more information regarding metals criteria).

(a)  

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CCC (μg/L)</th>
<th>Conversion factor (CF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic (III)</td>
<td>a,b 147.9</td>
<td>1.000</td>
</tr>
<tr>
<td>Chromium (VI)</td>
<td>a,b 10.98</td>
<td>0.862</td>
</tr>
<tr>
<td>Cyanide</td>
<td>=5.2</td>
<td>n/a</td>
</tr>
<tr>
<td>Dieldrin</td>
<td>=0.056</td>
<td>n/a</td>
</tr>
<tr>
<td>Endrin</td>
<td>=0.036</td>
<td>n/a</td>
</tr>
<tr>
<td>Mercury (II)</td>
<td>a,b 0.9081</td>
<td>0.85</td>
</tr>
<tr>
<td>Parathion</td>
<td>=0.013</td>
<td>n/a</td>
</tr>
<tr>
<td>Selenium</td>
<td>a,b 5</td>
<td>0.922</td>
</tr>
</tbody>
</table>

**Notes:**
- CCC=CCCt.
- CCC=CCCt. 
- CCC should be considered free cyanide as CN.

(b)  

<table>
<thead>
<tr>
<th>Chemical</th>
<th>m</th>
<th>b</th>
<th>Conversion factor (CF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium</td>
<td>a,b</td>
<td>0.7852</td>
<td>-2.715 0.850</td>
</tr>
<tr>
<td>Chromium (III)</td>
<td>a,b</td>
<td>0.819</td>
<td>+0.6848 0.860</td>
</tr>
<tr>
<td>Copper</td>
<td>a,b</td>
<td>0.8545</td>
<td>-1.702 0.960</td>
</tr>
<tr>
<td>Nickel</td>
<td>a,b</td>
<td>0.846</td>
<td>+0.0584 0.997</td>
</tr>
<tr>
<td>Pentachlorophenol</td>
<td>1.005</td>
<td>-5.134</td>
<td>n/a</td>
</tr>
<tr>
<td>Zinc</td>
<td>a,b</td>
<td>0.8473</td>
<td>+0.884 0.986</td>
</tr>
</tbody>
</table>

**Notes:**
- CCC=exp (m [pH]+b). The CMC should be rounded to two significant digits.

#### TABLE 3—WATER QUALITY CRITERIA FOR PROTECTION OF HUMAN HEALTH

<table>
<thead>
<tr>
<th>Chemical</th>
<th>HNV (μg/L)</th>
<th>HCV (μg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzo(a)pyrene</td>
<td>2.9E-3</td>
<td>2.0E-3</td>
</tr>
<tr>
<td>Chlorobenzene</td>
<td>4.7E2</td>
<td>3.2E3</td>
</tr>
<tr>
<td>Chlorodane</td>
<td>1.4E-3</td>
<td>1.4E-3</td>
</tr>
<tr>
<td>Chloroform</td>
<td>8.0E2</td>
<td>4.8E4</td>
</tr>
<tr>
<td>DDT</td>
<td>2.0E-3</td>
<td>1.5E-4</td>
</tr>
</tbody>
</table>
### Table 3—Water Quality Criteria for Protection of Human Health—Continued

<table>
<thead>
<tr>
<th>Chemical</th>
<th>HNV (µg/L)</th>
<th>HCV (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drinking</td>
<td>Non-drinking</td>
</tr>
<tr>
<td>Dieldrin</td>
<td>4.1E–4</td>
<td>6.5E–6</td>
</tr>
<tr>
<td>2,4-Dimethylphenol</td>
<td>4.5E2</td>
<td>8.7E3</td>
</tr>
<tr>
<td>2,4-Dinitrophenol</td>
<td>5.5E1</td>
<td>2.8E3</td>
</tr>
<tr>
<td>Hexachlorobenzene</td>
<td>4.6E–2</td>
<td>4.5E–4</td>
</tr>
<tr>
<td>Hexachloroethane</td>
<td>4.7E–1</td>
<td>5.0E–1</td>
</tr>
<tr>
<td>Mercury¹</td>
<td>1.8E–3</td>
<td>1.8E–3</td>
</tr>
<tr>
<td>Methylene chloride</td>
<td>1.6E3</td>
<td>4.7E1</td>
</tr>
<tr>
<td>Toluene</td>
<td>5.6E3</td>
<td>8.6E–9</td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>2.9E1</td>
<td>6.8E–5</td>
</tr>
</tbody>
</table>

¹Includes methylmercury.

### Table 4—Water Quality Criteria for Protection of Wildlife

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Criteria (µg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDT and metabolites</td>
<td>1.1E–5</td>
</tr>
<tr>
<td>Mercury (including methylmercury)</td>
<td>1.3E–3</td>
</tr>
<tr>
<td>2,3,7,8-TCDD</td>
<td>1.2E–9</td>
</tr>
</tbody>
</table>

### Table 5—Pollutants Subject to Federal, State, and Tribal Requirements

- Alkalinity
- Ammonia
- Bacteria
- Biochemical oxygen demand (BOD)
- Chlorine
- Color
- Dissolved oxygen
- Dissolved solids
- pH
- Phosphorus
- Salinity
- Temperature
- Total and suspended solids
- Turbidity

### Table 6—Pollutants of Initial Focus in the Great Lakes Water Quality Initiative

A. Pollutants that are bioaccumulative chemicals of concern (BCCs):
- Chlordane
- 4,4′-DDD; p,p′-DDD; 4,4′-TDE; p,p′-TDE
- 4,4′-DDE; p,p′-DDE
- 4,4′-DDT; p,p′-DDT
- Dieldrin
- Hexachlorobenzene
- Hexachlorobutadiene; hexachloro-1,3-butadiene
- Hexachlorocyclohexanes; BHCs
- alpha-Hexachlorocyclohexane; alpha-BHC
- beta-Hexachlorocyclohexane; beta-BHC
- delta-Hexachlorocyclohexane; delta-BHC
- Lindane; gamma-hexachlorocyclohexane; gamma-BHC
- Mercury
- Mirex
- Octachlorostyrene
- PCBs; polychlorinated biphenyls
- Pentachlorophenol
- Photomirex
- 2,3,7,8-TCDD; dioxin
- 1,2,3,4-Tetrachlorobenzene
- 1,2,3,4-Tetrachlorobenzene Toxaphene

B. Pollutants that are not bioaccumulative chemicals of concern:
- Acenaphthene
- Acenaphthylene
- Acidic; 2-propenal
- Acrylonitrile
- Aldrin
- Aluminum
- Anthracene
- Antimony
- Arsenic
- Asbestos
- 1,2-Benzanthracene; benz[a]anthracene
- Benzene
- Benzidine
- Benzo[a]pyrene; 3,4-benzopyrene
- 3,4-Benzofluoranthene; benzo[a]fluoranthene
- 1,12-Benzofluoranthene; benzo[k]fluoranthene
- 1,12-Benzoperylene; benzene
- Benzo[a]pyrene; 3,4-benzopyrene
- Benzo[b]fluoranthene
- Benzo[b]fluoranthene
- Beryllium
- Benzo[a]pyrene; 3,4-benzopyrene
- 1,2-Benzopyrene; benzene
- Beryllium
- Bis(2-chloroethoxy) methane
- Bis(2-chloroethyl) ether
- Bis(2-chloroisopropyl) ether
- Bromoform; tribromomethane
- 4-Bromophenyl phenyl ether
- Butyl benzyl phthalate
- Cadmium
- Carbon tetrachloride; tetrachloromethane
- Chlorobenzene
- p-Chloro-m-cresol; 4-chloro-3-methylphenol
- Chlorodibromomethane
- Chloroform; trichloromethane
- Chlorpyrifos
- chlorpyrifos
- Chlorine
- Chromium
- Chrysene
- Copper
- Cyanide
- 2,4-D; 2,4-Dichlorophenoxyacetic acid
- DEHP; di(2-ethylhexyl) phthalate
- Diazinon
- 1,2,5,6-Dibenzanthracene
- dibenz[a,h]anthracene
- Dibutyl phthalate; di-n-butyl phthalate
APPENDIX A TO PART 132—GREAT LAKES
WATER QUALITY INITIATIVE METHODOLOGIES FOR DEVELOPMENT OF
AQUATIC LIFE CRITERIA AND VALUES

METHODOLOGY FOR DERIVING AQUATIC LIFE CRITERIA: TIER I

Great Lakes States and Tribes shall adopt provisions consistent with (as protective as) this appendix.

I. Definitions

A. Material of Concern. When defining the material of concern the following should be considered:

1. Each separate chemical that does not ionize substantially in most natural bodies of water should usually be considered a separate material, except possibly for structurally similar organic compounds that only exist in large quantities as commercial mixtures of the various compounds and apparently have similar biological, chemical, physical, and toxicological properties.

2. For chemicals that ionize substantially in most natural bodies of water (e.g., some phenols and organic acids, some salts of phenols and organic acids, and most inorganic salts and coordination complexes of metals and metalloid), all forms that would be in chemical equilibrium should usually be considered one material. Each different oxidation state of a metal and each different non-ionizable covalently bonded organometallic compound should usually be considered a separate material.

3. The definition of the material of concern should include an operational analytical component. Identification of a material simply as “sodium,” for example, implies “total sodium,” but leaves room for doubt. If “total” is meant, it must be explicitly stated. Even “total” has different operational definitions, some of which do not necessarily measure “all that is there” in all samples. Thus, it is also necessary to reference or describe the analytical method that is intended. The selection of the operational analytical component should take into account the analytical and environmental chemistry of the material and various practical considerations, such as labor and equipment requirements, and whether the method would require measurement in the field or would...