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This English translation of the Order for Enforcement of the Act on Confirmation, etc. of Release Volumes of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof has been translated (through the revisions of Cabinet Order No. 328 of October 27, 2004 (Effective April 1, 2005) in compliance with the Standard Bilingual Dictionary (August 2006 edition).

This is an unofficial translation. Only the original Japanese texts of laws and regulations have legal effect, and the translations are to be used solely as reference material to aid in the understanding of Japanese laws and regulations.

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## **Order for Enforcement of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof**

(Cabinet Order No. 138 of March 29, 2000)

Last revised by: Cabinet Order No. 328 of October 27, 2004

The Cabinet shall establish this Cabinet Order based on the provisions of Article 2, paragraph 2, paragraph 3, paragraph 5, and paragraph 6 and Article 21 of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Act No. 86 of 1999).

### **Article 1 (Class I Designated Chemical Substances)**

Class I Designated Chemical Substances set forth in Article 2,

paragraph 2 of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (hereinafter referred to as the “Act”) shall be as specified in appended table 1.

### **Article 2 (Class II Designated Chemical Substances)**

Class II Designated Chemical Substances set forth in Article 2, paragraph 3 of the Act shall be as specified in appended table 2.

### **Article 3 (Types of Business)**

Types of business specified by Cabinet Order as set forth in Article 2, paragraph 5 of the Act shall be as follows:

- (i) Metal mining
- (ii) Crude petroleum and natural gas production
- (iii) Manufacturing
- (iv) Production, transmission and distribution of electricity
- (v) Manufacture of gas
- (vi) Heat supply
- (vii) Sewerage
- (viii) Railway transport
- (ix) Warehousing (limited to the business of keeping agricultural products or storing gas or liquid in storage tanks)
- (x) Petroleum wholesale trade
- (xi) Iron scrap wholesale trade (limited to the business of collecting substances enclosed in an automobile air-conditioner or removing an automobile air-conditioner that has been installed in an automobile body)
- (xii) Motor vehicles wholesale trade (limited to the business of collecting substances enclosed in an automobile air-conditioner)
- (xiii) Fuel stores
- (xiv) Laundries
- (xv) Photographic studios
- (xvi) Automobile maintenance services
- (xvii) Machinery repair shops
- (xviii) Commodity inspection services
- (xix) Surveyor certification (excluding general surveying certification)
- (xx) Domestic waste disposal business (limited to waste disposal business)
- (xxi) Industrial waste disposal business (including special controlled industrial waste-disposal businesses)
- (xxii) Institution of higher education (including attached facilities and excluding one only pertaining to humanities)

(xxiii) Research institutes for natural sciences

#### **Article 4 (Requirements for a Business Operator Handling a Class I Designated Chemical Substance)**

Requirements specified by Cabinet Order as set forth in parts of the Act other than the respective items of Article 2, paragraph 5 of the Act shall be as follows:

(i) The person shall fall under any of the following categories:

(a) The natural or juridical person owns a place of business where the amount of any Class I Designated Chemical Substance handled in the course of business activities in the current fiscal year (including substances contained in products [which means products prescribed in Article 2, paragraph 5, item 1 of the Act; the same shall apply in (b)] handled in the course of business activities in the current fiscal year) that is not a Specific Class I Designated Chemical Substance (which means any of the Class I Designated Chemical Substances set forth in item 26, item 42, item 60, item 69, item 77, item 179, item 232, item 252, item 294, item 295, item 299 and item 343 of appended table 1; the same shall apply in (b)) (where such Class I Designated Chemical Substance is any of those listed in 1) to 16) inclusive of below, such amount shall be the amount of the substances respectively specified therein contained in said Class I Designated Chemical Substance; referred to as "Amount of a Class I Designated Chemical Substance" in the following Article) is one ton or more:

- 1) Class I Designated Chemical Substance set forth in item 1 of appended table 1—Zinc
- 2) Class I Designated Chemical Substance set forth in item 25 of appended table 1—Antimony
- 3) Class I Designated Chemical Substance set forth in item 64 of appended table 1—Silver
- 4) Class I Designated Chemical Substance set forth in item 68 of appended table 1—Chromium
- 5) Class I Designated Chemical Substance set forth in item 100 of appended table 1—Cobalt
- 6) Class I Designated Chemical Substance set forth in item 108 of appended table 1—Cyan
- 7) Class I Designated Chemical Substance set forth in item 175 of appended table 1—Mercury
- 8) Class I Designated Chemical Substance set forth in item 176 of appended table 1—Tin
- 9) Class I Designated Chemical Substance set forth in item 178 of appended table 1—Selenium
- 10) Class I Designated Chemical Substance set forth in item 207 of appended

table 1—Copper

11) Class I Designated Chemical Substance set forth in item 230 of appended table 1—Lead

12) Class I Designated Chemical Substance set forth in item 243 of appended table 1—Barium

13) Class I Designated Chemical Substance set forth in item 283 of appended table 1—Fluorine

14) Class I Designated Chemical Substance set forth in item 304 of appended table 1—Boron

15) Class I Designated Chemical Substance set forth in item 311 of appended table 1—Manganese

16) Class I Designated Chemical Substance set forth in item 346 of appended table 1—Molybdenum

(b) The natural or juridical person owns a place of business where the amount of any Specific Class I Designated Chemical Substance handled in the course of business activities in the current fiscal year (where such Specific Class I Designated Chemical Substance is any of those set forth in 1) to 5) inclusive of below, such amount shall be the amount of the substances respectively specified therein contained in said Specific Class I Designated Chemical Substance; referred to as "Amount of a Specific Class I Designated Chemical Substance" in the following Article) is 0.5 tons or more:

1) Specific Class I Designated Chemical Substance set forth in item 60 of appended table 1—Cadmium

2) Specific Class I Designated Chemical Substance set forth in item 69 of appended table 1—Chromium

3) Specific Class I Designated Chemical Substance set forth in item 232 of appended table 1—Nickel

4) Specific Class I Designated Chemical Substance set forth in item 252 of appended table 1—Arsenic

5) Specific Class I Designated Chemical Substance set forth in item 294 of appended table 1—Beryllium

(c) In the case of a natural or juridical person who engages in a type of business set forth in item 1 or item 2 of the preceding Article, the natural or juridical person has installed a facility specified by an Ordinance of the Ministry of Economy, Trade and Industry set forth in Article 13, paragraph 1 of the Mine Safety Act (Act No. 70 of 1949).

(d) In the case of a natural or juridical person who engages in a type of business set forth in item 7 of the preceding Article, the natural or juridical person has installed a sewage disposal facility.

(e) In the case of a natural or juridical person who engages in a type of business

set forth in item 20 or item 21 of the preceding Article, the natural or juridical person has installed the general waste-disposal facility prescribed in Article 8, paragraph 1 of the Waste Management and Public Cleansing Act (Act No. 137 of 1970) or the industrial waste-disposal facility prescribed in Article 15, paragraph 1 of the same Act.

(f) The natural or juridical person has the specific facility prescribed in Article 2, paragraph 2 of the Act on Special Measures against Dioxins (Act No. 105 of 1999).

(ii) The number of regularly working employees is 21 or more.

**Article 5 (Requirements Specified by Cabinet Order as Set Forth in Article 2, Paragraph 5, Item 1 of the Act)**

Requirements specified by Cabinet Order as set forth in Article 2, paragraph 5, item 1 of the Act shall be that the percentage of the Amount of a Class I Designated Chemical Substance to the amount of the product is one percent or more or that the percentage of the Amount of a Specific Class I Designated Chemical Substance to the amount of the product is 0.1 percent or more, and that the product does not fall under any of the following items:

(i) A product that does not become a state other than solid nor become powder or granules in the process of handling by the business operator

(ii) A product that is handled with a Class I Designated Chemical Substance enclosed

(iii) A product that is mainly provided for use in the daily lives of general consumers

(iv) Recycled resources (which means recycled resources prescribed in Article 2, paragraph 4 of the Act on the Promotion of Effective Utilization of Resources [Act No. 48 of 1991]; the same shall apply in item 4 of the following Article)

**Article 6 (Requirements Specified by Cabinet Order as Set Forth in Article 2, Paragraph 6 of the Act)**

Requirements specified by Cabinet Order as set forth in Article 2, paragraph 6 of the Act shall be that the percentage of the amount of a Class II Designated Chemical Substance to the amount of the product (in the case of a Class II Designated Chemical Substance set forth in item 9 of appended table 2, the amount of indium contained therein; in the case of a Class II Designated Chemical Substance set forth in item 44 of the same table, the amount of thallium contained therein; and in the case of a Class II Designated Chemical Substance set forth in item 50 of the same table, the amount of tellurium contained therein) is one percent or more and that the product does not fall under any of the following items:

(i) A product that does not become a state other than solid nor become powder or granules in the process of handling by the business operator

- (ii) A product that is handled with a Class II Designated Chemical Substance enclosed
- (iii) A product that is mainly provided for use in the daily lives of general consumers
- (iv) Recycled resources

**Article 7 (Council, etc. Specified by Cabinet Order)**

The council, etc. that is specified by Cabinet Order shall be the councils, etc. listed in the right column of the following table for the ministers respectively set forth in the left column of the same table:

Minister of Health, Labour and Welfare	Pharmaceutical Affairs and Food Sanitation Council
Minister of Economy, Trade and Industry	Chemical Substances Council
Minister of the Environment	Central Environmental Council

**Article 8 (Amounts of Fees, etc.)**

The amount of the fee set forth in Article 19 of the Act (hereinafter simply referred to as "Fee" in this Article) shall be the fee specified in the following items for the methods of implementation of the disclosure respectively set forth in those items:

- (i) Delivery of data output on paper—20 yen per sheet
- (ii) Delivery of data copied onto a flexible disk cartridge (limited to one that is 90 millimeters wide and that conforms to the Japanese Industrial Standards X6223; the same shall apply in the following Article)—80 yen per cartridge plus 260 yen per 0.5 megabytes of data
- (iii) Delivery of data copied onto an optical disk (limited to one whose data can be reproduced using a reproducing unit for an optical disk that is 20 millimeters in diameter and conforms to the Japanese Industrial Standards X0606 and X6281; the same shall apply in the following Article) 200 yen per disk plus 260 yen per 0.5 megabytes of data (in the case of delivering an optical disk onto which all of the Matters Recorded in the File for the fiscal year pertaining to a disclosure request prescribed in Article 10, paragraph 2 of the Act [hereinafter referred to as a "Disclosure Request"] have been copied, 900 yen per 200 megabytes of data)
- (iv) Method of having data copied onto a file in a computer pertaining to use by the person receiving the disclosure, by using an electronic data processing system (which means an electronic data processing system that has connected a computer pertaining to use by the competent minister [including the input-output equipment; hereinafter the same shall apply in this item] and a computer pertaining to use by the person receiving the disclosure by an electric telecommunication line) (limited to cases where a Disclosure Request has been made by using an electronic data processing system prescribed in Article 3, paragraph 1 of the Act on Use of Information and Communications Technology in

Administrative Procedures, etc. [Act No. 151 of 2002] pursuant to the provisions of the same paragraph) 100 yen per case plus 140 yen per 0.5 megabytes of data (in the case of having all of the Matters Recorded in the File for the fiscal year pertaining to a Disclosure Request copied onto a file, 880 yen per 200 megabytes of data)

- (2) The fee shall be paid by adhering revenue stamps onto a document stating the matters set forth in the respective items of Article 10, paragraph 2 of the Act; provided, however, that the fee may be paid in cash specified by an ordinance of the competent ministry.
- (3) A person who has received disclosure of Matters Recorded in the File may request forwarding of a copy of the Matters Recorded in the File by paying the cost required for the forwarding in addition to the fee. In this case, said cost shall be paid by postal stamps or equivalent vouchers specified by the competent minister.

#### **Article 9 (Method of Notification or Request by Using a Magnetic Disk)**

Pursuant to the provisions of an ordinance of the competent ministry, a person who intends to give notification under Article 5, paragraph 2 of the Act or to make a request set forth in Article 6, paragraph 1 or paragraph 8 of the Act (hereinafter referred to as a "Notification, etc." in this Article) by using a magnetic disk (which means a flexible disk cartridge or an optical disk; the same shall apply hereinafter) shall submit a magnetic disk recording the matters pertaining to said Notification, etc. to the prefectural governor in the case of a notification under Article 5, paragraph 2 of the Act and to the competent minister in the case of a request set forth in Article 6, paragraph 1 or paragraph 8 of the Act.

#### **Article 10 (Method of Disclosure by Using a Magnetic Disk)**

When the competent minister makes a disclosure under Article 11 of the Act by using a magnetic disk, he/she shall deliver to the person who has made the Disclosure Request a magnetic disk onto which the Matters Recorded in the File that pertain to the Disclosure Request have been copied.

#### **Supplementary Provisions (Extract)**

##### **Article 1 (Effective Date)**

This Cabinet Order shall come into force as from the day of enforcement of the Act (March 30, 2000).

##### **Article 2 (Transitional Measure)**

Until the day on which two years have elapsed from the day of enforcement of the provisions set forth in Article 1, item 3 of the Supplementary Provisions of the Act,

the term “one ton” in Article 4, item 1 (a) shall be deemed to be replaced with “five tons.”

**Supplementary Provisions (Cabinet Order No. 313 of June 7, 2000) (Extract)**

**Article 1 (Effective Date)**

This Cabinet Order shall come into force as from the day of enforcement of the Act for Partial Revision of the Cabinet Act (Act No. 88 of 1999) (January 6, 2001).

**Supplementary Provisions (Cabinet Order No. 56 of March 22, 2001) (Extract)**

**Article 1 (Effective Date)**

This Cabinet Order shall come into force as from April 1, 2001.

**Supplementary Provisions (Cabinet Order No. 441 of December 28, 2001)**

This Cabinet Order shall come into force as from the day of enforcement of the provisions set forth in Article 1, item 3 of the Supplementary Provisions of the Act (excluding the provisions of Article 5, paragraph 1) (January 12, 2002).

**Supplementary Provisions (Cabinet Order no. 386 of December 18, 2002) (Extract)**

**Article 1 (Effective Date)**

This Cabinet Order shall come into force as from April 1, 2003.

**Supplementary Provisions (Cabinet Order No. 28 of January 31, 2003) (Extract)**

**Article 1 (Effective Date)**

This Cabinet Order shall come into force as from the day of enforcement of the Act on Use of Information and Communications Technology in Administrative Procedures, etc. (February 3, 2003).

**Supplementary Provisions (Cabinet Order No. 47 of March 19, 2004)**

This Cabinet Order shall come into force as from March 29, 2004.

**Supplementary Provisions (Cabinet Order No. 328 of October 27, 2004)**

**Article 1 (Effective Date)**

This Cabinet Order shall come into force as from April 1, 2005.



## **Article 2 (Transitional Measure)**

Any permissions, approvals, or other dispositions (limited to affairs under the jurisdiction of the Ministry of Economy, Trade and Industry prescribed in Article 12, paragraph 2 of the Act for Establishment of the Ministry of Economy, Trade and Industry prior to the revision by Article 2 of the Act for Partial Revision of the Mine Safety Act and the Act for Establishment of the Ministry of Economy, Trade and Industry [said Act for Establishment (Act No. 99 of 1999) shall be hereinafter referred to as the "Old Act for Establishment of the Ministry of Economy, Trade and Industry"] that relate to the affairs set forth in Article 4, paragraph 1, item 59 of the Old Act for Establishment of the Ministry of Economy, Trade and Industry; hereinafter referred to as "Dispositions, etc.") granted or made prior to the enforcement of this Cabinet Order by the Directors-General of Regional Bureaus of Economy, Trade and Industry pursuant to the provisions of the respective Cabinet Orders prior to the revision shall be deemed to be Dispositions, etc. made by the Directors-General of Industrial Safety and Inspection Departments who have jurisdiction over the jurisdictional district of the respective Directors-General of Regional Bureaus of Economy, Trade and Industry, and any applications, notifications and other acts (limited to affairs under the jurisdiction of the Ministry of Economy, Trade and Industry prescribed in Article 12, paragraph 2 of the Old Act for Establishment of the Ministry of Economy, Trade and Industry that relate to the affairs set forth in Article 4, paragraph 1, item 59 of the Old Act for Establishment of the Ministry of Economy, Trade and Industry; hereinafter referred to as "Applications, etc.") made or conducted prior to the enforcement of this Cabinet Order with the Directors-General of Regional Bureaus of Economy, Trade and Industry pursuant to the provisions of the respective Cabinet Orders prior to the revision shall be deemed to be Applications, etc. made with the Directors-General of Industrial Safety and Inspection Departments who have jurisdiction over the jurisdictional district of the respective Directors-General of Regional Bureaus of Economy, Trade and Industry.

### **Appended table 1 (Re: Article 1)**

1. zinc compound (water-soluble)
2. acrylamide

3. acrylic acid
4. ethyl acrylate
5. 2-(dimethylamino)ethyl acrylate
6. methyl acrylate
7. acrylonitrile
8. acrolein
9. bis-(2-ethylhexyl)adipate
10. adiponitrile
11. acetaldehyde
12. acetonitrile
13. 2, 2'-azobisisobutyronitrile
14. o-anisidine
15. aniline
16. 2-aminoethanol
17. N-(2-aminoethyl)-1,2-ethanediamine; diethylenetriamine
18. 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-3-cyano-4-[(trifluoromethyl)sulfinyl]pyrazole; fipronil
19. 3-amino-1H-1,2,4-triazole; amitrole
20. 2-amino-4-[hydroxyl (methyl) phosphinoyl]butyric acid; glufosinate
21. m-aminophenol

22. allyl alcohol
23. 1-allyloxy-2,3-epoxypropane
24. n-alkylbenzenesulfonic acid and its salts (alkyl C=10-14)
25. antimony and its compounds
26. asbestos
27. 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
28. isoprene
29. 4,4'-isopropylidenediphenol; bisphenol A
30. polymer of 4,4'-isopropylidenediphenol and 1-chloro-2,3-epoxypropane (liquid); bisphenol A type epoxy resin (liquid)
31. 2,2'-[isopropylidenebis[(2,6-dibromo-4,1-phenylene)oxy]]diethanol
32. 2-imidazolidinethione
33. 1,1'-[iminodi(octamethylene)]diguanidine; iminoctadine
34. ethyl 2-[4-(6-chloro-2-quinoxalinyloxy)phenoxy]propionate; quizalofop-ethyl
35. S-ethyl 2-(4-chloro-2-methylphenoxy)thioacetate; phenothiol; MCPA-thioethyl
36. O-ethyl O-(6-nitro-m-tolyl) sec-butylphosphoramidothioate; butamifos
37. O-ethyl O-4-nitrophenyl phenylphosphonothioate; EPN
38. N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine; pendimethalin
39. S-ethyl hexahydro-1H-azepine-1-carbothioate; molinate
40. ethylbenzene
41. ethyleneimine

42. ethylene oxide
43. ethylene glycol
44. ethylene glycol monoethyl ether
45. ethylene glycol monomethyl ether
46. ethylenediamine
47. ethylenediaminetetraacetic acid
48. zinc N,N'-ethylenebis(dithiocarbamate); zineb
49. manganese N,N'-ethylenebis(dithiocarbamate); maneb
50. complex compounds of manganese N,N'-ethylenebis(dithiocarbamate) and zinc N,N'-ethylenebis(dithiocarbamate); mancozeb
51. 1,1'-ethylene-2,2'-bipyridinium dibromide; diquat dibromide
52. 4'-ethoxyacetanilide; phenacetin
53. 5-ethoxy-3-trichloromethyl-1,2,4-thiadiazole; echlomezol
54. epichlorohydrin
55. 2,3-epoxy-1-propanol
56. 1,2-epoxypropane; propylene oxide
57. 2,3-epoxypropyl phenyl ether
58. 1-octanol
59. p-octylphenol
60. cadmium and its compounds

61.  $\epsilon$ -caprolactam
62. 2,6-xylenol
63. xylene
64. silver and its water-soluble compounds
65. glyoxal
66. glutaraldehyde
67. cresol
68. chromium and chromium(III) compounds
69. chromium(VI) compounds
70. chloroacetyl chloride
71. o-chloroaniline
72. p-chloroaniline
73. m-chloroaniline
74. chloroethane
75. 2-chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine; atrazine
76. 2-chloro-2'-ethyl-N-(2-methoxy-1-methylethyl)-6'-methylacetanilide; metolachlor
77. chloroethylene; vinyl chloride
78. 3-chloro-N-(3-chloro-5-trifluoromethyl-2-pyridyl)- $\alpha$ ,  $\alpha$ ,  $\alpha$ -trifluoro-2,6-dinitro-p-toluidine; fluazinam
79. 1-({2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-yl}methyl)-1H-1,2,4-triazole; difenoconazole

80. chloroacetic acid
81. 2-chloro-2',6'-diethyl-N-(2-propoxyethyl)acetanilide; pretilachlor
82. 2-chloro-2',6'-diethyl-N-(methoxymethyl)acetanilide;alachlor
83. 1-chloro-2,4-dinitrobenzene
84. 1-chloro-1,1-difluoroethane; HCFC-142b
85. chlorodifluoromethane; HCFC-22
86. 2-chloro-1,1,1,2-tetrafluoroethane; HCFC-124
87. chlorotrifluoroethane; HCFC-133
88. chlorotrifluoromethane; CFC-13
89. o-chlorotoluene
90. 2-chloro-4,6-bis(ethylamino)-1,3,5-triazine; shimazine; CAT
91. 3-chloropropene; allyl chloride
92. 4-chlorobenzyl N-(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1-yl)thioacetimidate;  
imibenconazole
93. chlorobenzene
94. chloropentafluoroethane; CFC-115
95. chloroform
96. chloromethane; methyl chloride
97. (4-chloro-2-methylphenoxy)acetic acid; MCP; MCPA
98. 2-chloro-N-(3-methoxy-2-thienyl)-2',6'-dimethylacetanilide; thenylchlor

99. divanadium pentaoxide
100. cobalt and its compounds
101. 2-ethoxyethyl acetate; ethylene glycol monoethyl ether acetate
102. vinyl acetate
103. 2-methoxyethyl acetate; ethylene glycol monomethyl ether acetate
104. salicylaldehyde
105.  $\alpha$ -Cyano-3-phenoxybenzyl N-(2-chloro- $\alpha,\alpha,\alpha$ -trifluoro-p-tolyl)-D-valinate; fluvalinate
106.  $\alpha$ -Cyano-3-phenoxybenzyl 2-(4-chlorophenyl)-3-methylbutyrate; fenvalerate
107.  $\alpha$ -Cyano-3-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; cypermethrin
108. inorganic cyanide compounds (except complex salts and cyanates)
109. 2-(diethylamino)ethanol
110. S-4-chlorobenzyl N,N-diethylthiocarbamate; thiobencarb
111. N,N-diethyl-3-(2,4,6-trimethylphenylsulfonyl)-1H-1,2,4-triazole-1-carboxamide; cafenstrole
112. tetrachloromethane
113. 1,4-dioxane
114. cyclohexylamine
115. N-cyclohexyl-2-benzothiazolesulfenamide
116. 1,2-dichloroethane
117. 1,1-Dichloroethylene; vinylidene dichloride

118. cis-1,2-dichloroethylene
119. trans-1,2-dichloroethylene
120. 3,3'-dichloro-4,4'-diaminodiphenylmethane
121. dichlorodifluoromethane; CFC-12
122. 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)benzamide; propyzamide
123. dichlorotetrafluoroethane; CFC-114
124. 2,2-dichloro-1,1,1-trifluoroethane; HCFC-123
125. 2',4-dichloro- $\alpha,\alpha,\alpha$ -trifluoro-4'-nitro-m-toluenesulfonanilide; flusulfamide
126. 2-[4-(2,4-dichloro-m-toluoyl)-1,3-dimethyl-5-pyrazolyloxy]-4-methylacetophenone;  
benzofenap
127. 1,2-dichloro-3-nitrobenzene
128. 1,4-dichloro-2-nitrobenzene
129. 3-(3,4-dichlorophenyl)-1,1-dimethylurea; diuron; DCMU
130. 3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea; linuron
131. 2,4-dichlorophenoxyacetic acid; 2,4-D; 2,4-PA
132. 1,1-dichloro-1-fluoroethane; HCFC-141b
133. dichlorofluoromethane; HCFC-21
134. 1,3-dichloro-2-propanol
135. 1,2-dichloropropane
136. 3',4'-dichloropropionanilide; propanil; DCPA



137. 1,3-dichloropropene; D-D
138. 3,3'-dichlorobenzidine
139. o-dichlorobenzene
140. p-dichlorobenzene
141. 2-[4-(2,4-dichlorobenzoyl)-1,3-dimethyl-5-pyrazolyloxy]acetophenone; pyrazoxyfen
142. 4-(2,4-dichlorobenzoyl)-1,3-dimethyl-5-pyrazolyl 4-toluenesulfonate; pyrazolynate
143. 2,6-dichlorobenzonitrile; dichlobenil; DBN
144. dichloropentafluoropropane; HCFC-225
145. dichloromethane; methylene dichloride
146. 2,3-dicyano-1,4-dithiaanthraquinone; dithianon
147. diisopropyl 1,3-dithiolan-2-ylidenemalonate; isoprothiolane
148. O-ethyl S,S-diphenyl phosphorodithioate; edifenphos; EDDP
149. S-2-(ethylthio)ethyl O,O-dimethyl phosphorodithioate; thiometon
150. O-ethyl O-4-(methylthio)phenyl S-n-propyl phosphorodithioate; sulprofos
151. O,O-diethyl S-2-(ethylthio)ethyl phosphorodithioate; ethylthiometon; disulfoton
152. O,O-diethyl S-(6-chloro-2,3-dihydro-2-oxobenzoxazoliny)l)methyl phosphorodithioate; phosalone
153. O-2,4-dichlorophenyl O-ethyl S-propyl phosphorodithioate; prothiofos
154. S-(2,3-dihydro-5-methoxy-2-oxo-1,3,4-thiadiazol-3-yl)methyl O,O-dimethyl phosphorodithioate; methidathion; DMTP
155. O,O-dimethyl S-1,2-bis(ethoxycarbonyl)ethyl phosphorodithioate; malathon; malathion

156. O,O-dimethyl S-(N-methylcarbamoyl)methyl phosphorodithioate; dimethoate
157. dinitrotoluene
158. 2,4-dinitrophenol
159. diphenylamine
160. 2-(di-n-butylamino)ethanol
161. 2,3-dihydro-2,2-dimethyl-7-benzo[b]furyl N-(dibutylamino)thio-N-methylcarbamate; carbosulfan
162. dibromotetrafluoroethane; halone-2402
163. 2,6-dimethylaniline
164. 3,4-dimethylaniline
165. S-4-phenoxybutyl N,N-dimethylthiocarbamate; phenothiocarb
166. N,N-dimethyldodecylamine N-oxide
167. dimethyl 2,2,2-trichloro-1-hydroxyethylphosphonate; trichlorfon; DEP
168. 1,1'-dimethyl-4,4'-bipyridinium salts (except paraquat dichloride)
169. 1,1'-dimethyl-4,4'-bipyridinium dichloride; paraquat; paraquat dichloride
170. S-benzyl N-(1,2-dimethylpropyl)-N-ethylthiocarbamate; esprocarb
171. 3,3'-dimethylbenzidine; o-tolidine
172. N,N-dimethylformamide
173. ethyl 2-[(dimethoxyphosphinothioyl)thio]-2-phenylacetate; phenthoate; PAP
174. 3,5-diiodo-4-octanoyloxybenzotrile; ioxynil octanoate

175. mercury and its compounds
176. organic tin compounds
177. styrene
178. selenium and its compounds
179. dioxins
180. 2-thioxo-3,5-dimethyltetrahydro-2H-1,3,5-thiadiazine; dazomet
181. thiourea
182. thiophenol
183. O-1-(4-chlorophenyl)-4-pyrazolyl O-ethyl S-propyl phosphorothioate; pyraclofos
184. O-4-cyanophenyl O,O-dimethyl phosphorothioate; cyanophos; CYAP
185. O,O-diethyl O-2-isopropyl-6-methyl-4-pyrimidinyl phosphorothioate; diazinon
186. O,O-diethyl O-6-oxo-1-phenyl-1,6-dihydro-3-pyridazinyl phosphorothioate; pyridaphenthion
187. O,O-diethyl O-2-quinoxalinylyl phosphorothioate; quinalphos
188. O,O-diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate; chlorpyrifos
189. O,O-diethyl O-5-phenyl-3-isoxazolyl phosphorothioate; isoxathion
190. O-2,4-dichlorophenyl O,O-diethyl phosphorothioate; dichlofenthion; ECP
191. O,O-dimethyl S-2-[1-(N-methylcarbamoyl)ethylthio]ethyl phosphorothioate; vamidothion
192. O,O-dimethyl O-3-methyl-4-nitrophenyl phosphorothioate; fenitrothion; MEP
193. O,O-dimethyl O-3-methyl-4-(methylthio)phenyl phosphorothioate; fenthion; MPP

194. O-3,5,6-trichloro-2-pyridyl O,O-dimethyl phosphorothioate; chlorpyrifos-methyl
195. O-4-bromo-2-chlorophenyl O-ethyl S-propyl phosphorothioate; profenofos
196. S-benzyl O,O-diisopropyl phosphorothioate; iprobenfos; IBP
197. decabromodiphenyl ether
198. 1,3,5,7-tetraazatricyclo[3.3.1.1<sup>3,7</sup>]decane; hexamethylenetetramine
199. tetrachloroisophthalonitrile; chlorothalonil; TPN
200. tetrachloroethylene
201. tetrachlorodifluoroethane; CFC-112
202. tetrahydromethylphthalic anhydride
203. tetrafluoroethylene
204. tetramethylthiuram disulfide; thiram
205. terephthalic acid
206. dimethyl terephthalate
207. copper salts (water-soluble, except complex salts)
208. trichloroacetaldehyde
209. 1,1,1-trichloroethane
210. 1,1,2-trichloroethane
211. trichloroethylene
212. 2,4,6-trichloro-1,3,5-triazine
213. trichlorotrifluoroethane; CFC-113

214. trichloronitromethane; chloropicrin
215. 2,2,2-trichloro-1,1-bis(4-chlorophenyl)ethanol; kelthane; dicofol
216. (3,5,6-trichloro-2-pyridyl)oxyacetic acid; triclopyr
217. trichlorofluoromethane; CFC-11
218. 1,3,5-tris(2,3-epoxypropyl)-1,3,5-triazine-2,4,6(1H,3H,5H)-trione
219. 2,4,6-trinitrotoluene
220.  $\alpha,\alpha,\alpha$ -trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine; trifluralin
221. 2,4,6-tribromophenol
222. tribromomethane; bromoform
223. 3,5,5-trimethyl-1-hexanol
224. 1,3,5-trimethylbenzene
225. o-toluidine
226. p-toluidine
227. toluene
228. 2,4-toluenediamine
229. 2-(2-naphthoxy)propionanilide; naproanilide
230. lead and its compounds
231. nickel
232. nickel compounds
233. nitrilotriacetic acid

234. p-nitroaniline
235. nitroglycol
236. nitroglycerin
237. p-nitrochlorobenzene
238. N-nitrosodiphenylamine
239. p-nitrophenol
240. nitrobenzene
241. carbon disulfide
242. nonylphenol
243. barium and its water-soluble compounds
244. picric acid
245. 2,4-bis(ethylamino)-6-methylthio-1,3,5-triazine; simetryn
246. bis(8-quinolinolato)copper; oxine-copper
247. 3,6-bis(2-chlorophenyl)-1,2,4,5-tetrazine; clofentezine
248. S,S'-methylene O,O,O',O'-tetraethyl bis(phosphorodithioate); ethion
249. zinc bis(N,N'-dimethyldithiocarbamate); ziram
250. N,N'-ethylenebis(thiocarbamoylthiozinc)bis(N,N-dimethyldithiocarbamate);  
polycarbamate
251. bis(hydrogenated tallow)dimethylammonium chloride
252. arsenic and its inorganic compounds
253. hydrazine

254. hydroquinone
255. 4-vinyl-1-cyclohexene
256. 2-vinylpyridine
257. 1-(4-biphenyloxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanol; bitertanol
258. piperazine
259. pyridine
260. pyrocatechol
261. phenyloxirane
262. o-phenylenediamine
263. p-phenylenediamine
264. m-phenylenediamine
265. p-phenetidine
266. phenol
267. 3-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate;  
permethrin
268. 1,3-butadiene
269. di-n-octyl phthalate
270. di-n-butyl phthalate
271. di-n-heptyl phthalate
272. bis(2-ethylhexyl)phthalate

273. n-butyl benzyl phthalate
274. 2-tert-butylimino-3-isopropyl-5-phenyltetrahydro-4H-1,3,5-thiadiazin-4-one;  
buprofezin
275. N-tert-butyl-N'-(4-ethylbenzoyl)-3,5-dimethylbenzohydrazide; tebufenozide
276. methyl N-[1-(N-n-butylcarbamoyl)-1H-2-benzimidazolyl]carbamate; benomyl
277. butyl (R)-2-[4-(4-cyano-2-fluorophenoxy)phenoxy]propionate; cyhalofop-butyl
278. tert - butyl 4 - ([(1, 3 - dimethyl - 5 - phenoxy - 4 - pyrazolyl) methylidene] aminoxy) methyl) benzoate; fenpyroximate
279. 2-(4-tert-butylphenoxy)cyclohexyl 2-propynyl sulfite; propargite; BPPS
280. 2-tert-butyl-5-(4-tert-butylbenzylthio)-4-chloro-3(2H)-pyridazinone; pyridaben
281. N - (4 - tert - Butylbenzyl) - 4 - chloro - 3 - ethyl - 1 - methylpyrazole - 5 -  
carboxamide; tebufenpyrad
282. N-(tert-butyl)-2-benzothiazolesulfenamide
283. hydrogen fluoride and its water-soluble salts
284. polymer of N,N'-propylenebis(dithiocarbamic acid) and zinc; propineb
285. bromochlorodifluoromethane; halone-1211
286. bromotrifluoromethane; halone-1301
287. 2bBromopropane
288. bromomethane; methyl bromide
289. hexakis(2-methyl-2-phenylpropyl)distannoxane; fenbutatin oxide
290. 1,4,5,6,7,7-hexachlorobicyclo[2.2.1]-5-heptene-2,3-dicarboxylic acid; chlorendic acid



291. 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepine 3-oxide; endosulfan
292. hexamethylenediamine
293. hexamethylene diisocyanate
294. beryllium and its compounds
295. benzylidene trichloride
296. benzylidene dichloride
297. benzyl chloride
298. benzaldehyde
299. benzene
300. 1,2,4-benzenetricarboxylic 1,2-anhydride
301. 2-(2-benzothiazolyloxy)-N-methylacetanilide; mefenacet
302. pentachloronitrobenzene; quintozene; PCNB
303. pentachlorophenol
304. boron and its compounds
305. phosgene
306. polychlorinated biphenyls; PCBs
307. poly(oxyethylene) alkyl ether (alkyl C=12-15)
308. poly(oxyethylene) octylphenyl ether
309. poly(oxyethylene) nonylphenyl ether
310. formaldehyde

311. manganese and its compounds
312. phthalic anhydride
313. maleic anhydride
314. methacrylic acid
315. 2-ethylhexyl methacrylate
316. 2,3-epoxypropyl methacrylate
317. 2-(diethylamino)ethyl methacrylate
318. 2-(dimethylamino)ethyl methacrylate
319. n-butyl methacrylate
320. methyl methacrylate
321. methacrylonitrile
322. (Z)-2'-methylacetophenone 4,6-dimethyl-2-pyrimidinylhydrazone; ferimzone
323. N-methylaniline
324. methyl isothiocyanate
325. 2-isopropylphenyl N-methylcarbamate; isoprocarb; MIPC
326. 2-isopropoxyphenyl N-methylcarbamate; propoxur; PHC
327. 2,3-dihydro-2,2-dimethyl-7-benzo[b]furanyl N-methylcarbamate; carbofuran
328. 3,5-dimethylphenyl N-methylcarbamate; XMC
329. 1-naphthyl N-methylcarbamate; carbaryl; NAC
330. 2-sec-butylphenyl N-methylcarbamate; fenobucarb; BPMC

331. methyl

3-chloro-5-(4,6-dimethoxy-2-pyrimidinylcarbamoylsulfamoyl)-1-methylpyrazole-4-carboxylate; halosulfuron - methyl

332. 3-methyl-1,5-di(2,4-xylyl)-1,3,5-triazapenta-1,4-diene; amitraz

333. N-methyldithiocarbamic acid; carbam

334. 6-methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one

335.  $\alpha$ -methylstyrene

336. 3-methylpyridine

337. S-1-methyl-1-phenylethyl 1-piperidinecarbothioate; dimepiperate

338. methyl-1,3-phenylene diisocyanate; m-tolylene diisocyanate

339. 2-(1-methylpropyl)-4,6-dinitrophenol

340. 4,4'-methylenedianiline

341. methylenebis(4,1-cyclohexylene)diisocyanate

342. O-3-tert-butylphenyl N-(6-methoxy-2-pyridyl)-N-methylthiocarbamate; pyributicarb

343. 9-methoxy-7H-furo[3,2-g][1]benzopyran-7-one; methoxsalen

344. 2-methoxy-5-methylaniline

345. mercaptoacetic acid

346. molybdenum and its compounds

347. 2-chloro-1-(2,4-dichlorophenyl)vinyl diethyl phosphate; chlorfenvinphos; CVP

348. 2-chloro-1-(2,4-dichlorophenyl)vinyl dimethyl phosphate; dimethylvinphos

349. 1,2-dibromo-2,2-dichloroethyl dimethyl phosphate; naled; BRP
350. dimethyl 2,2-dichlorovinyl phosphate; dichlorvos; DDVP
351. dimethyl (E)-1-methyl-2-(N-methylcarbamoyl)vinyl phosphate; monocrotophos
352. tris(2-chloroethyl) phosphate
353. tris(dimethylphenyl) phosphate
354. tri-n-butyl phosphate

**Appended table 2 (Re: Article 2)**

1. acetamide
2. p-anisidine
3. 2-amino-5-nitrobenzotrile
4. 2-aminopyridine
5. hydrochloride salt of 4-[(4-aminophenyl)(4-imino-2,5-cyclohexadien-1-ylidene)methyl]-2-methylbenzeneamine; magenta
6. p-aminophenol
7. 3'-amino-4'-methoxyacetanilide
8. 4-allyl-1,2-dimethoxybenzene
9. indium and its compounds
10. N-ethylaniline
11. 2-thylamino-4-isopropylamino-6-methylthio-1,3,5-triazine; ametryn
12. O-ethyl O-2-(isopropoxycarbonyl)phenyl N-isopropylphosphoramidothioate; isofenphos

13. 5-ethyl-5-phenyl-2,4,6(1H,3H,5H)-pyrimidinetrione; phenobarbital
14. 1,2-epoxybutane
15. 4-oxilanyl-1,2-epoxycyclohexane
16. tetramethyl orthosilicate; tetramethoxysilane
17. 2,4-xylenol
18. 2-(4-chloro-6-ethylamino-1,3,5-triazin-2-yl)amino-2-methylpropionitrile;  
cyanazine
19. 5-chloro-N-{2-[4-(2-ethoxyethyl)-2,3-dimethylphenoxy]ethyl}-6-ethylpyrimidine-4  
-amine; pylimidifen
20. 1-chloronaphthalene
21. O-6-chloro-3-phenyl-4-pyridazinyl S-n-octyl thiocarbonate; pyridate
22. p-chlorophenol
23. 2-chloropropionic acid
24.  $\alpha$ -cyano-3-phenoxybenzyl 2,2-dichloro-1-(4-ethoxyphenyl)cyclopropanecarboxylate;  
cycloprothrin
25. (S)- $\alpha$ -cyano-3-phenoxybenzyl  
3-(2,2-dichlorovinyl)-2,2-dimethyl-cis-cyclopropanecarboxylate; alpha-cypermethrin
26. 1-(3,5-dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea; teflubenzuron
27. 2,2-dichloro-N-[2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl]acetamide;  
chloramphenicol
28. 2,4'-dichloro- $\alpha$ -(5-pyrimidinyl)benzhydryl alcohol; fenarimol
29. 2-(2,4-dichlorophenyl)-1-(1H-1,2,4-triazol-1-yl)-2-hexanol; hexaconazole
30. disodium 4-amino-3-

- [4'-(2,4-diaminophenylazo)-1,1'-biphenyl-4-ylazo]-5-hydroxy-6-phenylazo-2,7-naphthalenedisulfonate; C.I. Direct Black 38
31. disodium 8-(3, 3'-dimethyl-4'-{4-[(p-tolyl)sulfonyloxy]phenylazo}-1,1'-biphenyl-4-ylazo)-7-hydroxy-1,3-naphthalenedisulfonate; C.I. Acid Red 114
32. disodium 2,2'-vinylenebis[5-(4-morpholino-6-anilino-1,3,5-triazin-2-ylamino)benzenesulfonate]; C.I. Fluorescent 260
33. mixture of 2,4-dinitro-6-octylphenyl crotonate and 2,6-dinitro-4-octylphenyl crotonate (octyl=1-methylheptyl,1-ethylhexyl,1-propylpentyl); dinocap; DPC
34. 4,6-dinitro-o-cresol
35. m-dinitrobenzene
36. 2,3-dihydro-6-propyl-2-thioxo-4(1H)-pyrimidinone; propylthiouracil
37. divinylbenzene
38. 5,5-diphenyl-2,4-imidazolidinedione
39. 1,4-dibromobutane
40. 1,3-dibromopropane
41. dibenzyl ether
42. 2,3-dimethylaniline
43. 1,1-dimethylhydrazine
44. thallium and its water-soluble compounds
45. thioacetamide
46. iron carbonyl
47. 1,1,2,2-tetrachloroethane

48. tetrasodium 3,3'-[(3,3'-dimethoxy-1,1'-biphenyl-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-2,7-naphthalenedisulfonate]; C.I. Direct Blue 15
49. 2,3,5,6-tetrafluoro-4-methylbenzyl(Z)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate; tefluthrin
50. tellurium and its compounds (except tellurium hydride)
51. trichloroacetonitrile
52. sodium 3-(N-{4-[(4-{dimethylamino}phenyl)(4-{N-ethyl[(3-sulfonatophenyl)methyl]amino}phenyl)methylene]-2,5-cyclohexadien-1-ylidene}-N-ethylammonio)benzenesulfonate; C.I. Acid Violet 49
53. sodium 1,1'-biphenyl-2-olate
54. propylene dinitrate
55. m-nitroaniline
56. 5'-[N,N-bis(2-acetyloxyethyl)amino]-2'-(2-bromo-4,6-dinitrophenylazo)-4'-methoxyacetanilide
57. biphenyl
58. phenanthrene
59. p-(phenylazo)aniline
60. diisobutyl phthalate
61. 1-tert-Butyl-3-(2,6-diisopropyl-4-phenoxyphenyl)thiourea; diafenthuron
62. tert-butyl hydroperoxide
63. 1,3-propanesultone
64. N-propyl-N-[2-(2,4,6-trichlorophenoxy)ethyl]imidazole-1-carboxamide; prochloraz

65. 2-propyn-1-ol
66. 2-(4-bromodifluoromethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether;  
halfenproxp-Bromophenol
67. p-bromophenol
68. 3-bromo-1-propene; allyl bromide
69. hexadecyltrimethylammonium bromide
70. hexahydro-1,3,5-trinitro-1,3,5-triazine; cyclonite
71. benzothiazole
72. ammonium pentadecafluorooctanoate
73. methyl 2-(4,6-dimethoxy-2-pyrimizinyloxy)-6-[1-(methoxyimino)ethyl]benzoate;  
pyriminobac-methyl
74. methylhydrazine
75. 2-methyl-1,1'-biphenyl-3-ylmethyl(Z)-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,  
2-dimethylcyclopropanecarboxylate; bifenthrin
76. methyl 3-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl)-2-thenoate;  
thifensulfuron methyl
77. 4,4'-methylenebis(N,N-dimethylaniline)
78. methylenebis(4,1-phenylene) diisocyanate
79. 4,4'-methylenebis(2-methylcyclohexaneamine)
80. (Z)-2-chloro-1-(2,4,5-trichlorophenyl)vinyl dimethyl phosphate; tetrachlorvinphos;  
CVMP
81. tris(2-ethylhexyl) phosphate