

The Environmental Protection Agency proposed Effluent Standards on December 27, 1973 in Part II of Volume 38, Number 24, pages 35388 to 35395 in the Federal Register.

ENVIRONMENTAL PROTECTION
AGENCY
[40 CFR Part 129]
WATER PROGRAM
FINAL TOXIC POLLUTANT EFFLUENT
STANDARDS

Notice is hereby given that the Environmental Protection Agency, pursuant to the authority contained in section 307(a) of the Federal Water Pollution Control Act (the Act) as amended by the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251 et seq.) proposes a new Part 129, setting forth effluent standards for toxic pollutants included in the list of toxic pollutants required by section 307(a)(1).

Section 307(a)(2) provides as follows:

Within one hundred and eighty days after the date of publication of any list, or revision thereof, containing toxic pollutants or combination of pollutants under paragraph (1) of this subsection, the Administrator, in accordance with Section 553 of title 5 of the United States Code, shall publish a proposed effluent standard (or a prohibition) for such pollutant or combination of pollutants which shall take into account the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms and the nature and extent of the effect of the toxic pollutant on

such organisms, and he shall publish a notice for a public hearing on such proposed standard to be held within thirty days. As soon as possible after such hearing, but not later than six months after the publication of the proposed effluent standard (or prohibition), unless the Administrator finds, on the record, that a modification of such proposed standard (or prohibition) is justified based upon a preponderance of evidence adduced at such hearings, such standard (or prohibition) shall be promulgated.

These regulations establish effluent standards for the toxic pollutants listed below:

1. Aldrin (1, 2, 3, 4, 10, 10-hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-1, 4-endo-exo-5, 8-dimethanonaphthalene).

Dieldrin (1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4-endo-exo-5, 8-dimethanonaphthalene).

2. Benzidine and its salts (4, 4'-diaminobiphenyl).

3. Cadmium and all cadmium compounds.

4. Cyanide and all cyanide compounds.

5. DDD (TDE) [1, 1-dichloro-2, 2-bis-(p-chlorophenyl) ethane and some o, p'-isomers].

DDE [1, 1-dichloro-2, 2-bis (p-chlorophenyl) ethylene].

DDT [1, 1, 1-trichloro-2, 2-bis (p-chlorophenyl) ethane and some o, p'-isomer].

6. Endrin (1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-1, 4-endo-exo-5, 8-dimethanonaphthalene).

7. Mercury and all mercury compounds.

8. Polychlorinated biphenyls (PCB's), mixtures of chlorinated biphenyl compounds with various percentages of chlorination.

9. Toxaphene (chlorinated camphene). The criteria and rationale employed to select these pollutants were summarized in the Federal Register Notice of September 7, 1973, vol. 38, No. 173, page 24342.

The rule making process may be summarized as follows:

1. Proposed Standards were published in December 27, 1973.
2. A ninety day extended public comment for written statements was provided.
3. Notice of a pre-conference public hearing was given in the December 27, 1973 proposal which was to be held on January 25, 1974 for those adversely affected parties which filed objections by January 18, 1974.
4. The hearing was initiated by Judge Sweeny on April 8, 1974 and continued until May 24, 1974.
5. The hearing was conducted under the Administrations Procedures Acts and in accordance with rules promulgated by EPA vs 40 CFR 104.
6. Modifications to the Standards proposed on December 27, 1973 are to be made based upon a preponderance of evidence found on the record. The record consists of approximately 13,600 pages containing the EPA statements of Basis and Purpose and its attachments, objector affidavits, EPA rebuttal and/or clarification affidavits, testimony of the cross examination of expert witnesses and the written public comments.
7. Briefs of the record filed by the objectors and the record were provided to the Deputy Administrator of EPA for final decision upon any modifications made to the standards proposed December 27, 1973.

A summary of the comment and objections from the 39 objectors represented during the course of the public hearing and the 143 written comments from the public can be examined in the following categories:

- A. Points needing clarification in the preamble.
- B. The appropriateness of the Standards' applicability to various categories of sources is questionable.
- C. Corrections to definitions of terms are needed.
- D. The effective date of the standard is difficult with which to comply.
- E. Documentation of effects of toxic pollutants in fresh and salt water was not clear.
- F. Documentation of the fate of the toxic pollutants discharged into actual receiving waters was not satisfactory.
- G. The safety factor usage was not appropriate to the level of risk involved for the toxic pollutants.
- H. The cost of compliance was not clearly noted or taken into account.
- I. The availability of treatment technology to meet the standards is questionable and the documentation unsatisfactory.
- J. Hydrodynamic considerations dealing with quantification of lakes, estuaries and coastal waters are simplistic and do not adequately reflect the actual situation.
- K. The hydrodynamic considerations of an upper limit of 10,000 cfs and a lower limit of 10 cfs are not adequately justified.
- L. The use of the seven day once in ten year low flow as a stream design flow basis is not documented satisfactory.
- M. Monitoring and analytical techniques need to be clarified and more completely documented.
- N. Other material/industry unique problems which should be clarified.

The objectors participating in the hearing are listed below from those who prepared affidavits pointing to the specific areas of objections:

Benzidine Task Force

Allied Chemical Corporation

University of Georgia

Hercules, Incorporated

American Iron & Steel Institute

Republic Steel Corporation

Wheeling, Pittsburgh Steel Corporation

Shell Chemical Corporation

Monsanto Company

Diamond Shamrock Chemical Company

National Coal Association

American Petroleum Institute

National Association of Metal Finishers

Gulf Western Industries, Incorporated

Kennecott Copper Corporation

Electronic Industries Association

American Smelting & Refining Company

Texaco Incorporated

General Electric

Michigan Department of Natural Resources

St. Joe Minerals Corporation

American Mining Congress

Velsicol Chemical Corporation

Reynolds Metals Company

American Cyanamid

Westinghouse

Kaiser Aluminum & Chemical Corporation

Electrical Utilities Company

Natural Resources Defense Council

DuPont

Scott Paper Company

Inland Steel Company

Olin Corporation

Metal Finishing Suppliers' Association, Incorporated

The 143 written comments were received from the following:

1. Johnson and Higgins
2. Vepco
3. B.F. Goodrich Chemical Company
4. Synthetic Organic Chemical Manufacturers Association
5. Synthetic Organic Chemical Manufacturers Association
6. National Association of Metal Finishers
7. Dry Colors Manufacturers' Association
8. Hercules Incorporated
9. G.W. New Jersey Zinc Company
10. Shell Oil Company
11. Diamond Shamrock Chemical Company
12. Environmental Defense Fund
13. General Electric Company
14. General Electric Company

15. Natural Resources Defense Council
16. Velsicol Chemical Corporation
17. Shell Chemical Company
18. St. Joe's Mineral Corporation
19. American Cyanamid Company
20. Monsanto Industrial Chemicals Company
21. American Petroleum Institute
- 22.
23. Union
24. Scott Paper Company
25. American Smelting and Refining Company
26. Allied Chemical Corporation
27. Allied Chemical Corporation
28. Westinghouse Electric Corporation
29. Reynolds Aluminum
30. American Iron and Steel Institute
31. Inland Steel Company
32. Phillips Petroleum Company
33. Republic Steel
34. E. I. DuPont de Nemours and Company
35. Texaco Incorporated
36. The Anaconda Company
37. State of Michigan
- 38.
39. Sprague Electric Company
40. National Zinc Company Incorporated

41. American Mining Congress
42. Metropolitan Sanitary District of Greater Chicago
43. Metropolitan Sanitary District of Greater Chicago
44. Central Regional Laboratory E. P. A.
45. National Steel Corporation
46. United States Steel Corporation
47. E. I. du Pont de Nemours and Company
48. Environmental Defense Fund
49. State of Michigan
50. Olin Corporation
51. St. Joe's Mineral Corporation
52. Private Citizen
53. Atwood Vacuum Machine Company
54. Wheeling Pittsburgh Steel Corporation
55. C. F. & I. Steel Corporation
56. International Harvester Company
57. The Bunker Hill Company
58. National Council of the Paper Industry for Air & Stream Improvement
59. E. P. A.
60. Cornell Dubilier Electronics
61. Olin Corporation
62. The Wilderness society
63. Aeroux Industries Incorporated
64. Vepco
65. Region II E. P. A.
66. Committee Correspondence

67. Benzidine Task Force
68. Olin Brass
69. County Sanitation Districts of Los Angeles County
70. Phelps Dodge Refining Corporation
71. Eastman Kodak Company
72. Lancy Laboratories
73. Sprague Electric Company
74. Certified Ballast Manufacturer's Association
75. Phillips Petroleum Company
76. Freeport Kaolin Company
77. Commonwealth of Pennsylvania
78. Aluminum Company of America
79. Rachael Carson Trust for the Living Environment, Inc.
80. United States Steel Corporation
81. Assistant Secretary of Defense
82. Association of Metropolitan Sewerage Agencies
83. National Electrical Manufacturers Association
84. Vistron Corporation
85. The Standard Oil Company
86. The Mead Corporation
87. E. P. A.
88. Bunker Hill Company
89. Olin Chemicals
90. P. H. Glatfelter Company
91. Manufacturing Chemists Association
92. Reynolds Aluminum

94. The Commonwealth of Massachusetts
95. Penn Central Transportation Company
96. Southeastern Pennsylvania Transportation Authority
97. State of California
98. State of Indiana
99. United States Department of the Interior
100. Synthetic Organic Chemicals Manufacturers Association
101. Fedders Corporation
102. Envirotech
103. State of Connecticut
104. Public Health Service H. E. W.
105. Louis T. Klauder and Associates
106. Gulf Oil Company
107. Synthetic Organic Chemical Manufacturers Association
108. Cities Service Company
109. State of New Mexico
110. New Mexico Citizens for Clean Air and Water
111. Consolidated Packaging Corporation
112. Longview Fibre Company
113. Ford Motor Company
114. Air Conditioning and Refrigeration Institute
115. Salt River Project
116. E. I. DuPont de Nemours & Company
117. Youngstown Sheet and Tube Company
118. Rohm and Haas Company
119. Union Camp Corporation

120. C.F. & I. Steel Corporation
121. New Jersey Public Interest Research Group
122. Region VI E. P. A.
123. Consolidation Coal Company
124. Air Transport Association of America
125. General Counsel of the Department of Commerce
126. Uniroyal Incorporated
127. Amtrak
128. Tennessee Valley Authority
129. State of Washington
130. Public Health Service H. E. W.
131. Resources and Ecology Projects, Incorporated
132. Private Citizen
133. Department of Transportation
134. Campaign Clean Water
135. Ohio E. P. A.
136. National Association of Chemical Distributors
137. Private Citizen
138. J.R. Simplot Company
139. Natural Resources Defense Council, Incorporated
140. City of Los Angeles
141. Texas Water Quality Board
142. Tom's River Chemical Corporation
143. Office of Environmental Affairs

The analysis and disposition of the objections and comments by the above categories is given below:

To Be Added

Based upon the objections and comments provided during the times specified the following significant changes are made in the Standards proposed on December 27, 1973.

To Be Added

The modifications given in this standard which are based upon the record must refer to the technical feasibility of meeting the standards at a stated time (not to exceed 3 to 4 years) and as appropriate to consideration of the economic impact of implementing these limitations. These standards are designed to be tailored to differing conditions as specified by the waters into which the discharge is made and as such make it difficult to evaluate the economic impact in general unless a facility by facility examination is made. In order to satisfy the urgency of promulgating these standards this examination was not usually feasible.

Therefore the following evaluation of the economic impact must be viewed as a best effort conducted under these constraints. The economic impact has been estimated for the following industrial categories as:

Alkalies and Chlorine

Cadmium

Mercury

Benzidine Manufacturing

Benzidine

Coal Mining

Cadmium

Mercury

Electroplating

To Be Added

Cadmium

Cyanide

Ferrous Metals

Cadmium

Cyanide

Mercury

Fertilizer Manufacturing

Cadmium

Hospitals

Benzidine

Inorganic Chemicals

Cadmium

Mercury

Laboratories

MONS 056732

Lumber and Wood Products

Mercury

Metal Mining

Cadmium

Cyanide

Non-Ferrous Metals

Cadmium

Cyanide

Mercury

Oil and Gas Extraction

To Be Added

Cadmium

Mercury

Organic Chemicals

Cadmium

Cyanide

Mercury

PCB Manufacturing

PCB

PCB Users

PCB

It is anticipated that these standards promulgated here will be reviewed and if appropriate revised by three years. The Agency is evaluating arsenic, lead, copper, Heptachlor, Guthion, 2, 4, 5-T, Phthalates, bis-2-chloro isopropyl ether, and bis-2-chloro methyl ether as additional candidate substances as toxic pollutants and is requesting

consideration in proposing amendments to the list of toxic pollutants which was published September 7, 1973.

1. Toxicity to man and other organisms;
2. Carcinogenicity, mutagenicity, and teratogenicity data;
3. Transport paths of the material in the environment;
4. Bioaccumulation and bioconcentration;
5. Chemical, physical, and biological transformations in the environment;
6. Reliability and accuracy of analytical procedures;
7. Chemical characteristics;
8. Production and industrial or commercial utilization;
9. Sources of the pollutant to water;
10. Environmental incidents attributable to the material (fish kills, etc.)
11. Presence of the material in the environment, residue levels in various organisms, ambient concentrations in rivers, lakes, etc.;
12. State and Federal regulatory requirements concerning the material;
13. Classes and characteristics of waters into which the material is discharged.

Signed,

Quarles

Chapter I of Title 40, Code of Federal Regulations, is amended by adding a new Part 129, as follows:

Subpart A - General

Sec.

- 129.01 Applicability.
- 129.01a Definitions.
- 129.01b Abbreviations.
- 129.01c Compliance.
- 129.01d Effective Date.

Subpart B - Effluent Standard for Aldrin-Dieldrin

- 129.02 Applicability.
- 129.02a Definitions.
- 129.02b Determination of weights and concentrations.
- 129.02c Effluent standard for Aldrin-Dieldrin.

Subpart C - Effluent Standard for Benzidine

- 129.03 Applicability.
- 129.03a Definitions.
- 129.03b Determination of weights and concentrations.
- 129.03c Effluent standard for Benzidine.

Subpart D - Effluent Standard for Cadmium

- 129.04 Applicability.
- 129.04a Definitions.
- 129.04b Determination of weights and contractions.
- 129.04c Effluent standard for Cadmium.

Subpart E - Effluent Standard for Cyanide

129.05 Applicability.

129.05a Definitions.

129.05b Determination of weights and concentrations.

129.05c Effluent standard for Cyanide.

Subpart F - Effluent Standard for DDT

129.06 Applicability.

129.06a Definitions.

129.06b Determination of weights and concentrations.

129.06c Effluent standard for DDT.

Subpart G - Effluent Standard for Endrin

129.07 Applicability.

129.07a Definitions.

129.07b Determination of weights and concentrations.

129.07c Effluent standard for Endrin.

Subpart H - Effluent Standard for Mercury

129.08 Applicability.

129.08a Definitions.

129.08b Determination of weights and concentration.

129.08c Effluent standard for Mercury.

Subpart I - Effluent Standard for Polychlorinated Biphenyls (PCB's)

129.09 Applicability.

129.09a Definitions.

129.09b Determination of weights and concentrations.

129.09c Effluent standard for PCB's.

Subpart J, Effluent Standard for Toxaphene

129.10 Applicability.

129.10a Definitions.

12910b Determination of weights and concentration.

12910c Effluent standard for Toxaphene.

Authority: Sec. 2, 86 Stat. 816.

Subpart A - General

§129.01 Applicability.

The provisions of the following subparts apply to owners or operators of specified facilities constituting point sources discharging into navigable waters.

§129.01a Definitions.

All terms not derived herein shall have the meaning given them in the Act. As used in this part, the term:

(a) "Act" means the Federal Water Pollution Control Act, as amended (33 U.S.C.A. section 1317 Supp. 1972, Pub. L. 92-500).

(b) "Administrator" shall mean the Administrator of the Environmental Protection Agency, or any employee of the Agency to whom the Administrator may by order delegate the authority to carry out his functions under section 307(a) of the Act or any person who shall by operation of law be authorized to carry out such functions.

(c) "Effluent standard" means any effluent standard, which may include a prohibition by the Administrator of any discharge or proof by the discharger to the Regional Administrator by in situ bioassay and/or appropriate hydrodynamic studies that there are not existing discharges of toxic pollutants in toxic amounts, established for any toxic pollutant under §307(a) of the Act.

(d) The term "navigable waters" includes:

- (1) All navigable water of the United States;
- (2) Tributaries of navigable waters of the United States;
- (3) Interstate waters;
- (4) Intrastate lakes, reivers, and streams which are utilized by interstate travelers for recreational or other purposes;
- (5) Intrastate lakes, reivers, and streams from which fish or shellfish are taken and sold in interstate commerce;
- (6) Intrastate lakes, rivers, and streams which are utilized for industrial purposes by industries in interstate commerce.

(e) "Design Low Flow" means the probable low rate of flow occurring during a period of 30 consecutive days, once in 5 years unless the water body has a flow control system which the managing authority will certify to the discharger as being the low rate of flow which can be maintained 90% of the time.

(f) "Actual Low Flow" means the flow of the water body at the point of discharge including no flow which would therefore prohibit the facility to continue to discharge in compliance with the standards of this subpart.

(g) "Stream" means any water body having a flow gradient from an upper elevation to a lower elevation, or any body of water except an estuary, including still or impounded water, in which water is retained for less than 120 days. Provided that this term shall not include bodies of water which have been designed and/or approved for the purpose of conveyance or treatment of the toxic pollutant.

(h) "Lakes and impoundments" means all bodies of water, except the Great Lakes, the Great Salt Lake Utah, and special lakes, in which the flow velocity is impeded by a natural or man-made barrier in such a way that water is stored for 120 days or more. Provided that this term shall not include impoundments, sumps, retention ponds or similar structures constructed for the storage, retention or disposal of toxic effluents.

(i) "The Great Lakes" means Lake Ohio, Lake Superior, Lake Michigan, Lake Ontario, and Lake Huron.

(j) "Estuary" means any water body between the baseline from which the territorial sea is measured and the landward limit of tidal influence where the salinity is 1 part per thousand or less at high tide.

(k) "Embayments" means those bodies of water with limited geographic and

hydraulic connection to the lake or impoundment as a whole described as existing from the mouth of the feeding river to the baseline of the lake shore particularly in the Great Lakes and which moves primarily in response to seiche activity.

(l) "Coastal waters" means those waters of the open sea lying seaward of the baseline from which the territorial sea is measured under the Convention of the Territorial Sea and the Contiguous Zone (15 UST 1606; TIAS 5639).

(m) "Special lakes" means those lakes and impoundments which may be described as meromictic lakes or seepage lakes which fail to mix vertically each year because of permanent density stratification due to the concentration of dissolved materials in the lower layer or are fed by ground water or bogs and which have no surface outflow or intermittent surface outflow/

(n) "Ephemeral Streams" means streams that carry water only after rains or periods of snow melt and includes intermittent streams which carry water most of the time but cease to flow occasionally because evaporation and seepage into their beds and banks exceed available stream flow.

(o) "NPDES permit" means a permit for the discharge of pollutants into navigable waters under the National Pollutant Discharge Elimination System established by section 402 of the Act and 40 CFR Parts 124 and 125.

(p) "Immediate vicinity" means that the effluent shall be discharged in such a way that it is diffused into the receiving water to the required concentration within a distance from the discharge point of no more than half the depth vertically, and this diffusion must occur while the effluent is carried a distance of no more than 10 depths in the streamwise direction.

(q) "Agricultural fertilizer manufacturing" means the manufacture of nitrogenous and phosphatic basic fertilizers, mixed fertilizers and other agricultural chemicals including:

Ammonia liquor.

Ammonium nitrate and sulfate.

Ammonium phosphate.

Anhydrous ammonia.

Aqua ammonia, made in ammonia plants.

Calcium meta-phosphate.

Compost.

Defluorinated phosphate.

Diammonium phosphate.

Fertilizer, mixed; made in plants not manufacturing fertilizer materials.

Fertilizers, mixed; made in plants producing phosphatic fertilizer materials.

Fertilizers, natural (organic), except compost.

Nitric acid.

Nitrogen solutions (fertilizer).

Phosphoric acid.

Plant foods, mixed; made in plants producing nitrogenous fertilizer.

Plant foods, mixed; made in plants producing phosphatic fertilizer.

Potting soil, mixed.

Superphosphates, ammoniated and not ammoniated.

Urea.

(r) "Alkalies and chlorine manufacturing" means the manufacturing of:
Alkalies.

Chlorine, compressed or liquified.

Potassium carbonate.

Potassium hydroxide (caustic potash).

Sodium bicarbonate.

Sodium carbonate (soda ash) (sal soda).

Sodium hydroxide (caustic soda).

(s) "Bituminous coal and lignite mining" means bituminous coal and lignite production or developing bituminous coal or lignite mines, including underground mining, auger mining, strip mining, or culm bank mining. Both mining operations and preparation at cleaning plants and washeries are included whether or not such operations are performed in conjunction with the mines served.

(t) "Capacitor manufacturing" means the manufacture of industrial or commercial capacitors (fixed and variable) or electronic capacitors.

(u) "Cyclic organic chemical manufacturing" means the manufacturing of coal tar crudes and cyclic organic intermediate dyes, color lakes and toners.

(v) "Electroplating" means the electroplating of metals and formed products.

(w) "Facility employing polychlorinated biphenyls in process or products" means any facility using PCB's in plasticizers for paints, inks, copying paper, adhesives or sealants, in pattern waxes for investment casting, or in industrial fluids for heat transfer, hydraulic fluid, vacuum pump oils or cutting oils.

(x) "Ferrous metal production" means the smelting and refining of ferrous metals from ore, pig, or scrap; in the rolling, drawing, and alloying of ferrous metals; the manufacture of castings and other basic products of ferrous metals; the manufacture of nails, spikes, and insulated

(y) "Hospitals" means establishments which are primarily engaged in providing diagnostic services and extensive medical treatment including surgical services and other hospital services, as well as continuous nursing services.

(z) "Industrial inorganic chemicals manufacturing" means the manufacture of basic industrial inorganic chemicals, excluding manufacture of alkalis and chlorine, industrial gases, inorganic pigments, agricultural pesticides, medicinal chemicals, drugs and medicines, and soaps and cosmetics. This definition includes the manufacture of any of the following chemicals:

Aluminum compounds.

Ammonium compounds, except for fertilizer.

Barium compounds.

Bauzite, refined.
Beryllium oxide.
Boron compounds.
Bromine elemental.
Caesium metal.
Calcium compounds.
Calcium metal.
Carbon, activated.
Cerium salts.
Chlorosulfonic acid.
Chromium compounds, inorganic.
Cobalt chloride.
Cobalt sulfate.
Copper chloride.
Copper iodide.
Copper oxide.
Copper sulfate.
Cyanides.
Ferric chloride.
Fluorine, elemental.
Hydrochloric acid.
Hydrocyanic acid.
Hydrofluoric acid.
Hydrogen peroxide.
Hydrogen sulfide.
Indium chloride.
Iodine.

Iron sulfide.

Lead oxide.

Lead silicate.

Lithium compounds.

Lithium metals.

Magnesium compound, inorganic.

Manganese dioxide.

Mercury.

Mercury compounds.

Nickel compounds, inorganic.

Perchloric acid.

Phosphorus oxychloride.

Potassium compounds.

Rubidium.

Scandium.

Silica gel.

Silicofluorides.

Silver compounds, inorganic.

Sodium compounds, inorganic.

Strontium carbonate.

Strontium nitrate.

Strontium oxide.

Sulfur.

Sulfur chloride.

Sulfur dioxide.

Sulfur hexafluoride.

Sulfuric acid.

Thiocyanates, inorganic.

Tin compounds, inorganic.

Zinc chloride.

(aa) "Industrial organic chemicals manufacturing" means the manufacture of:

(1) Non-cyclic organic chemicals such as ascectic, chloroacetic, adipic, formic, oxalic and tartaric acids and their metallic salts;

(2) Solvents such as amyl, butyl, and ethyl alcohols; methanol; amyl, butyl and ethyl acetates; ethyl ether, ethylent glycol ether and di-ethylene glycol ether; acetone, carbon disulfide and chlorinated solvents such as carbon tetrachloride, perchloroethylene and trichloroethylene;

(3) Polyhydric alcohols such as ethylene-glycol, sorbitol, pentaerythritol, synthetic glycerin;

(4) Synthetic perfume and flavoring materials such as coumarin, methyl salicylate, saccharin, citral, citronellal, synthetic vanillin;

(5) Rubber processing chemicals such as accelerators and anti-oxidants, both cyclic and acyclic;

(6) Plasticizers, both cyclic and acyclic, such as esters of phosphoric acid, phthalic anhydride, adipic acid, oleic acid, lauric acid, sebacic acid, and stearic acid;

(7) Synthetic tanning agents such as saphthalene sulfonic acid condensates;

(8) Chemical warfare gases; and

(9) Esters and amines of polyhydric alhols and fatty and other acids.

(bb) "Laboratories" means any of the following:

(1) Medical laboratories primarily engaged in providing professional

analytic or diagnostic services to the medical profession or to the patient on prescription of a physician.

(2) Dental laboratories primarily engaged in making dentures and artificial teeth or order for the dental profession.

(3) Commercial testing laboratories primarily engaged in product testing.

(4) Research and development laboratories engaged in laboratory or

(cc) "Lumber and wood products manufacturing" includes any of the following, but does not include the manufacture of furniture:

(1) Logging camps engaged in cutting timber and pulpwood; merchant sawmills, lath mills, shingle mills, cooperage stock mills, planing mills, and plywood mills and veneermills engaged in producing lumber and wood basic materials;

(2) Manufacturing of finished articles made entirely or mainly of wood or wood or wood substitutes.

(dd) "Metal mining" means mining, developing mines, or exploring for metallic minerals (ores). This classification includes all ore dressing and beneficiating operations although performed at mills, operated in conjunction with the mines served or at mills such as custom mills, operated separately.

(ec) "Non-ferrous metal smelting and refining" means the smelting and refining of non-ferrous metals from ore, pig, or scrap, the rolling, drawing and alloying of non-ferrous metals; and the manufacture of nails, spikes, and insulated wire and cable.

(ff) "Oil and gas extraction" means:

(1) Production of crude petroleum and natural gas, including operating oil and gas fields; exploration for crude petroleum and natural gas, drilling, completing and equipping wells; operation of separators, emulsion breakers, desilting equipment; and all other activities in the preparation ;

(2) Production of natural gasoline and cyclic condensate, including production of liquid hydrocarbons from oil and gas field gases.

(gg) "Paper and allied products production" means the manufacture of pulps from wood and other cellulose fibers, and from rags; the manufacture of paper and paperboard; and the manufacture of paper and paperboard into converted products such as paper coated off the paper machine, paper bags, paper boxed, and envelopes.

(hh) "Pesticide formulating" means the formulation or preparation of insecticides, fungicides, and herbicides, from technical chemicals or from concentrates. Activities involving the production of the concentrates which require further processing before use are not included in this definition.

(ii) "Pesticide manufacturing" means the manufacture of insecticides, fungicides, and herbicides from technical chemicals including the production of concentrates which require further processing before use.

(jj) "Petroleum refining" means the production of gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants and other products from crude petroleum and its fractionation products, through straight

distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes.

(kk) "Photo finishing laboratory" means an establishment engaged in developing films or motion picture films and in making photographic prints and enlargements for the trade or for the general public.

(ll) "Storage or primary battery manufacturing" means the manufacture of storage batteries or primary batteries, dry or wet.

(mm) "Textile manufacturing" means the manufacture or processing of natural or synthetic fibers by any of the following operations, singly or in combination:

- (1) Preparation of fiber and subsequent manufacturing of yarn, thread, braids, twine, and cordage;
- (2) Manufacture of broad woven fabric, narrow woven fabric, knit fabric, and carpets and rugs from yarn;
- (3) Dyeing and finishing fiber, yarn, fabric and knit apparel;
- (4) Coating, waterproofing, or otherwise treating fabric;
- (5) Integrated manufacture of knit apparel and other finished articles from yarn; and
- (6) Manufacture of felt goods, lace goods, nonwoven fabrics, and miscellaneous textiles.

(nn) "Transformer manufacturing" means the manufacture of power, distribution, instrument and specialty transformers or radio frequency or voice transformers.

§129.01b Abbreviations.

The abbreviations used in this part have the following meanings:

lb - pound (or pounds).

cfs - cubic feet per second.

m³/s - cubic meters per second.

ft³ - cubic feet.

m³ - cubic meters.

µg/l - micrograms per liter.

§129.01c Compliance.

(a) Compliance with the defined effluent standards set forth herein shall be determined using the test methods identified in 40 CFR Part 136 (38 FR 28758 et seq., October 16, 1973), unless modifications or alternatives are given for the specific source category and/or the toxic pollutant under the subpart dealing with determinations of weights and measures. The sample volume requirements for the determination of organochlorine pesticides are increased to the range of 500-1000 ml in order to achieve a level of sensitivity below the lowest critical acute limit. This is feasible for samples where the interference from undesirable co-extractives can be tolerated. Where a discharger subject to any effluent standard under this Part is required to obtain an NPDES permit, such permit shall contain conditions requiring such sampling, monitoring, and reporting as are necessary to assure compliance with this part.

(b) For the purpose of determining compliance with these standards, background amounts or concentrations of any pollutant subject to these standards, except as ground in run off waters from the property of the facility, in all waters considered as intake or input waters to the facility's effluent, such as influent surface waters, public water supplies, or well waters shall not be included in the determination of the allowable amount or concentration determined in the measurements of the amount or concentration of such pollutant discharged.

(c) Compliance for discharges of these pollutants into flow or size limiting streams, lakes, estuaries, or coastal waters shall be agreed if the effluent standards as provided in the following subparts for each pollutant are met, with the proviso that it may be demonstrated by the discharger to the Regional Administrator that there is no discharge of the listed pollutants which violates Water Quality Standards, unless these bodies of water have been designed and/or approved for the purposes of effluent conveyance or treatment of the pollutants.

(d) For the purpose of computing flow (in cubic feet per second) which is integral to the determination of the allowable amount and concentration of the pollutant to be discharged, the receiving water flow shall be determined as follows:

(1) Streams. The design or actual low flows shall be determined at the outfall of the facility discharging the pollutant.

(2) Lakes and impoundments. The average annual flow shall be determined at the outlet and where more than one outlet exists the flow shall be determined as the cumulative average annual average flow for all the outlets, except for the Great Lakes.

(3) Estuaries. The flow of an estuary shall be determined by the summation of the design low flows of all the tributaries entering the estuary plus the 30 day average waste stream flow, the sum being multiplied by the ratio of the salinity of the ocean at the mouth of the estuary to the salinity, determined as the difference in receiving water salinities at the water surface above the point of discharge and at the mouth of the estuary. In estuaries which have little or no tributary inflow the flow shall be defined as the sum of the 30 day average waste stream flow, plus the product of the tidal exchange ratio times the tidal prism upstream from the point of discharge being divided by the deviation of the tidal cycle.

(4) Coastal Waters and The Great Lakes. The flow shall be computed as the product of 0.25 times the square of the depth of water (feet) measured at the point of the discharge jet at mean lower low water, unless the discharger can demonstrate to the Regional Administrator that the effluent is to be discharged in such a manner that the entrained flow will be different and can therefore be used.

(5) Embayments. The flow of an embayment shall be determined by the summation of the design low flows of all the tributaries entering the embayment plus the 30 day average waste stream flow, plus the product

of the seiche flushing rate times the volume of the bay landward from the point of discharge being divided by the period of seiche.

(e) Guidelines for determining compliance. In order to provide the most positive regulatory control which will guarantee the prohibition of the discharge or toxic pollutants in toxic amounts, the following steps would be deemed as adequate proof of compliance.

(1) One year from the date of promulgation of this notice, dischargers for which these standards are applicable as defined in subparts which follow shall :

- i) demonstrated achieving the limits specific in the subparts below, or,
- ii) completed a rigorous inventory of actual quantities of the toxic pollutants which are handled and stored and are being discharged showing the concentrations and weights per day discharged from each facility, and
- iii) provided this inventory to the Regional Administration along with documented proof that all reasonable steps, such as modification of existing malfunctioning processes and operating procedures, have been taken to minimize, if not prohibit, the discharge of toxic pollutants in toxic amounts, and
- iv) supplied to the Regional Administrator, for approval, steps and dates which are being taken to meet the limits.

(2) Two years from the date of promulgation of this notice those dischargers which for reasons of technical feasibility as provided for in Section 129.01d which have been unable to prove that they have reached the effluent year including,

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standards provided herein, shall have:

i) taken aggressive action on the approved steps specified during the first year including

aa) accomplished necessary plant process redesign, or

bb) studied the feasibility of substitution for toxic pollutants

ii) designed, if appropriate, a waste treatment facility and made necessary arrangements for site preparation.

(3) At the end of the third year from the date of promulgation of this notice, dischargers who have been unable to prove that they have reached the standards as specified herein, shall have:

i) provided proof to the Administrator that capital has been dedicated to reduce the toxic pollutants discharged and that facility construction and/or substitution of toxic pollutions has been initiated which will satisfy the requirements of these standards,

ii) provided the Administrator with evidence not later than 48 months after the date of publication of this notice may be set with a guaranteed full attainment of the standards as specified in this notice.

(4) At the end of the fourth year from publication of this notice, the discharger shall have:

i) made all necessary adjustment leading towards prohibiting the discharger of toxic pollutants in toxic amounts.

ii) provided the Administrator with evidence of compliance with the concentration and weight limitations as specified in these standards with the proviso that the discharger will adhere to these requirements even

when facilities expand in production capacity or other developments which would if not controlled, result in larger dischargers of toxic pollutants.

Section 129.01d Effective Date

The effluent standard set forth herein shall be effective one year after promulgation with compliance determined as specified in Section 129.01c, unless the discharger can prove to the Regional Administrator that he is not discharging toxic pollutants in toxic amounts, and/or the discharger can document actual feasibility limitations in reaching the specified standards in the time required which may therefore provide a basis for the Regional Administrator to enter into consent decree proceedings taking into account the specific facility and the local environmental conditions and factors.

Subpart B - Effluent Standard for
Aldrin-Dieldrin

§ 129.02 Applicability.

The provisions of this subpart apply to aldrin or dieldrin pesticides manufacturing and formulating facilities constituting a point source discharging into navigable waters.

§ 129.02a Definitions

As used in this subpart the term:

(a) "Aldrin" means the compound aldrin as identified by the chemical name 1, 2, 3, 4, 10, 10-hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-1, 4-endo-exo-5, 8-dimethanonaphthalene.

(b) "Dieldrin" means the compound dieldrin as identified by the chemical name 1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4-endo-exo-5, 8-dimethanonaphthalene.

§ 129.02b Determination of weights and concentrations.

The standards set forth in this subpart shall apply to the total combined weight or concentration of both aldrin and dieldrin exchanging any associated element of compound.

§ 129.02c Effluent standard for Aldrin-Dieldrin.

The element discharge of any facility subject to the provisions of this part shall meet the following conditions:

- (a) (1) Into Special lakes, there shall be no discharge
- (2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measurable flow conditions return.

(b) The daily average aldrin-dieldrin concentration shall not exceed:

(1) 0.5 ug/l for discharges into fresh water bodies
(5.5 ug/l for discharges into salt water bodies)
which have a flow greater than or equal to 10 times
the waste stream flow with the provision that an
immediate diffusion is assured:

(2) A proportionately reduced concentration of that set
forth in paragraph (a)(1) of this section for discharges
into water bodies which have less than 10 times the waste
waste stream flow which after diffusion would assure
no more than the resulting receiving water concentration
as specified in paragraph (a)(1) of this section.

(c) The total daily weight of aldrin-dieldrin discharged into
a/an:

(1) Streams, lakes and impoundments, embayments, or the Great
Lakes shall not exceed .00043 times the receiving water body
design flow in m³/sec to give kg/day or .000027 times the
receiving water body flow as defined in cfs to give pounds/days unless
there is more than one discharge point in the immediate vicinity at which
time no facility shall discharge in excess of .12 kg/day or .27 pound/day
regardless of receiving water flow.

(2) Estuary or coastal water from any facility subject to this subpart
shall not exceed .00605 times the receiving water body design flow in
m³/sec to give kg/day or .0000378 times the receiving water body flow
as defined in cfs to give pounds/day unless there is more than one discharge

point in the immediate vicinity at which time no facility shall discharge in excess of .17 kg/day or. 38 pounds/day regardless of receiving water flow.

Subpart C - Effluent Standard for Benzidine

§ 129.03 Applicability.

The provisions of this subpart applies to any benzidine manufacturing plants, textile mills, hospitals, or laboratories constituting a point source discharging into navigable waters.

§ 129.03a Definitions.

As used in this subpart, the term Benzidine means the compound benzidine and its salts as identified by the chemical name 4,4-diaminobiphenyl.

§ 129.03b Determination of weights and concentrations.

The standards set forth in this subpart shall apply to the total combined weight or concentration of benzidine abd its salts, excluding any associated element or compound.

§ 129.03c Compliance.

Compliance shall be determined by use of the mass balance or material balance approach.

§ 129.03d Effluent standard for Benzidine.

The effluent discharge of any facility subject to provisions of this part shall meet the following conditions:

- (a) (1) Into Special lakes, there shall be no discharge.
- (a) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measurable flow conditions return.

(b) The daily average benzidine concentration shall not exceed:

(1) 2500 ug/l for discharges into fresh water bodies (2500 ug/l for discharges into salt water bodies) which have a flow greater than or equal to 10 times the waste stream flow with the provision that an immediate diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph (a)(1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph (a)(1) of this section.

(c) The total daily weight of benzidine discharged into a/an:

(1) Stream, lakes and impoundments, embayments, or the Great Lakes shall not exceed .00157 times the receiving water body design flow in m^3/sec to give kn/day or .0000972 times the receiving water body flow as defined in cfs to give pounds/days unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of .44 kg/day or .972 pounds of receiving water flow.

Subpart D - Effluent Standard for
Cadmium

§ 129.04 Applicability.

The provisions of this subpart apply to any ferrous metal production, non-ferrous metal smelting and refining, petroleum refining, oil and gas extraction, industrial inorganic chemicals, industrial organic chemicals, bituminous coal and lignite mining, alkalies and chlorine, storage or primary battery, electroplating, metal mining or agricultural fertilizer manufacturing facility constituting a point source discharging into navigable waters.

§ 129.04a Definitions.

As used in this subpart, the term:

(a) Cadmium means the element cadmium and all compounds of cadmium. Where weights are specified, such weights apply only to total cadmium excluding the weight of any associated elements or compounds.

(b) Cadmium means the element cadmium and all compounds of cadmium. Where concentrations are specified: such concentrations apply only to total dissolved cadmium.

§ 129.04b Determination of weights and concentrations.

The standards set forth in this subpart shall apply to the total combined weight of cadmium and to the total concentration of cadmium excluding any associated element or compound.

§ 129.04c Effluent standard for Cadmium.

The effluent discharge of any facility subject to provision of this part shall meet the following conditions:

- (a) (1) Into Special lakes, there shall be no discharge
- (2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measurable flow conditions return.

(b) The daily average cadmium concentration shall not exceed

(1) $40 \frac{\mu\text{g}}{\text{l}}$ for discharges into fresh water bodies with CaCO_3 100 mg/l or 300 for discharges into fresh water bodies with CaCO_3 greater than 100 mg/l (320 $\mu\text{g}/\text{l}$ for discharges into salt water bodies) which have a flow greater than or equal to 10 times the waste stream flow with the provision that an immediate diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph (a)(1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph (a)(1) of this section.

(c) The total daily weight of Cadmium discharged into a/an:

(1) Stream, lakes and impoundments, embayments, or the Great Lakes with CaCO_3 less than or equal to 100 mg/l shall not exceed 0.03461 times the receiving water body design flow in m^3/sec to give kg/day or 0.00216 times the receiving water body flow as defined in cfs to give pounds/days unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 9.8 kg/day or 21.6 pounds/day regardless of receiving water flow.

(2) Stream, lakes and impoundments, embayments, or the Great Lakes with CaCO_3 greater than 100 mg/l shall not exceed 0.259 times the receiving water body design flow in m^3/sec to give kg/day or 0.0162 times the receiving water body flow as defined in cfs to give pounds/days unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 73.4 kg/day or 162 pounds/day regardless of receiving water flow.

(3) Estuary or coastal water from any facility subject to this subpart shall not exceed 0.432 times the receiving water body design flow in m^3/sec to give kg/day or 0.027 times the receiving water body flow as defined in cfs to give

pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 122 kg/day or 270 pounds/day regardless of receiving water flow.

Subpart E - Effluent Standard for Cyanide

§129.05 Applicability

The provisions of this subpart apply to any petroleum refining, industrial organic chemicals, electroplating, non-ferrous metal smelting and refining, or photo-finishing laboratory facility constituting a point source discharging into navigable waters.

§129.05a Definitions.

Cyanide means any cyanide compound that will produce free cyanide ion or molecular hydrogen cyanide (HCN) in the effluent. The recommended analytical method should detect only simply cyanides after all interferences have been eliminated or their effects minimized by appropriate removal techniques. The recommended method for petroleum refining facilities should be the Roberts Method. The recommended method for ferrous plant furnace facilities shall be the Caruso method.

§129.05b Determinations of weights and concentrations.

The standards set forth in this subpart shall apply to the total combined weight or concentration of cyanide, excluding any associated element or compound.

§129.05c Effluent standard for cyanide.

The effluent discharge of any facility subject to provisions of this part shall meet the following conditions:

(a) (1) Into Special lakes, there shall be no discharge.

(2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measurable flow conditions return.

(b) The daily average cyanide concentration shall not exceed:

(1) 100 ug/l for discharges into fresh water bodies (100 ug/l for discharges into salt water bodies) which have a flow greater than or equal to 10 times the waste stream flow with the provision that an immediate diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph

(a) (1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph

(a) (1) of this section.

Subpart F - Effluent Standard for DDT

§129.06 Applicability.

The provisions of this subpart apply to any DDT manufacturing or formulating facility constituting a point source discharging into navigable waters.

§129.06 a Definitions.

As used in this subpart, the term: DDT means the compound of DDT, DDD, and DDE as identified by the chemical names (DDT) 1, 1, 1-trichloro-2, 2-bis (p-chlorophenyl) ethane and o, p'-isomer, (DDD) (TDE) 1, 1-dichloro-2, 2-bis (p-chlorophenyl) ethane and o, p'-isomer, (DDE) 1, 1-dichloro-2, 2-bis(p-chlorophenyl) ethylene.

§129.06b Determination of weight and concentrations.

The standards set forth in this subpart shall apply to the total combined weight or concentration of DDT, DDD, and DDE, excluding any associated element or compound.

§129.06c Effluent standard for DDT.

The effluent discharge of any facility subject to provisions of this part shall meet the following conditions:

- (a) (1) Into Special lakes, there shall be no discharge
- (2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measureable flow conditions return.
- b. The daily average DDT concentration shall not exceed:
 - (1) 0.2 ug/l for discharges into fresh water bodies (0.6 ug/l for discharges into salt water bodies) which have a flow greater than or equal to 10 times

the waste stream flow with the provision that an immediate diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph (a) (1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph (a) (1) of this section.

(c) The total daily weight of DDT discharged into a/an:

(1) Stream, lakes and impoundment, embayments, or the Great Lakes shall not exceed 0.0002593 times the receiving water body design flow in m^3/sec to give kg/day or 0.0000162 times the receiving water body flow as defined in cfs to give pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 0.73 kg/day or 0.162 pounds/day regardless of receiving water flow.

(2) Estuary or coastal water from any facility subject to this subpart shall not exceed 0.000519 times the receiving water body design flow in m^3/sec to give kg/day or 0.0000324 times the receiving water body flow as defined in cfs to give pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 0.1469 kg/day or 0.324 pounds/day regardless of receiving water flow.

Subpart G - Effluent Standard for Endrin

§129.07 Applicability.

The provisions of this subpart apply to any endrin manufacturing or formulating facility constituting a point source discharging into navigable waters.

§129.07a Definitions.

As used in this subpart:

(a) Endrin means the compound endrin as identified by the chemical name 1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8a-octahydro-1, 4-endo-endo-5, 8-dimethanonaphthalene.

(b) In amendment of 40 CFR part 136; the limit of detection for endrin is 0.1 ug/l if based on a 1000 ml sample.

§129.07b Determination of weights and concentrations.

The standards set forth in this subpart shall apply to the total combined weight or concentrations of endrin, excluding any associated element of compound.

§129.07c Effluent standard for endrin.

The effluent discharge of any facility subject to provisions of this part shall meet the following conditions:

- (a) (1) Into Special lakes, there shall be no discharge.
- (2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measurable flow-conditions return.

(b) The daily average endrin concentration shall not exceed:

(1) 0.3 ug/l for discharges into fresh water bodies (0.6 ug/l for discharges into salt water bodies) which have a flow greater than or equal to 10 times the waste stream flow with the provision that an immediate diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph (a) (1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph (a) (1) of this section.

(c) The total daily weight of Endrin discharged into a/an:

(1) Stream lakes and impoundments, embayments, or the Great Lakes shall not exceed 0.000173 times the receiving water body design flow in m^3 /sec to give kg/day or 0.0000108 times the receiving water body flow as defined in cfs to give pounds/days unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 0.0789 kg/day or 0.108 pounds/day regardless of receiving water flow.

(2) Estuary or coastal water from any facility subject to this subpart shall not exceed 0.000343 times the receiving water body design flow in m^3 /sec to give kg/day or 0.00000218 times the receiving water body flow as defined in cfs to give pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 0.0097 kg/day or 0.0216 pounds/day regardless of receiving water flow.

Subpart H - Effluent Standard for Mercury

§129.08 Applicability.

The provisions of this subpart apply to any paper and allied product, oil and gas extraction, industrial organic chemical, industrial inorganic chemical, alkalies and chlorine, ferrous metal production, non-ferrous metal smelting and refining, lumber and wood products except furniture, bituminous coal and lignite mining, storage or primary battery manufacturing, or metal mining facility constituting a point source discharging into navigable water.

§129.08a Definitions.

As used in this subpart, the term:

(a) Mercury means the element mercury and all compounds of mercury.

Where weights are specified, such weights apply only to total mercury excluding the weight of any associated elements or compounds.

(b) Mercury means the element mercury and all compounds of mercury and all compounds of mercury. Where concentrations are specified, such concentrations apply only to total dissolved mercury.

§129.08b Determination of weights and concentrations.

The standards set forth in this subpart shall apply to the total combined weight of mercury and to the total dissolved concentration of mercury, excluding any associated element or compound.

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§120.08c Effluent standard for mercury.

The effluent discharge of any facility subject to provisions of this part shall meet the following conditions:

(a) (1) Into Special lakes, there shall be no discharge.

(2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measureable flow conditions return.

(b) The daily average mercury concentration shall not exceed:

(1) 20 ug/l for discharges into fresh water bodies (100 ug/l for discharges into salt water bodies) which have a flow greater than or equal to 10 times the waste stream flow with the provision that an immediate diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph

(a) (1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph (a) (1) of this section.

(c) The total daily weight of Mercury discharged into a/an:

(1) Stream, lakes and impoundments, embayments, or the Great Lakes shall not exceed 0.00432 times the receiving water body design flow in $\frac{m^3}{sec}$ to give kg/day or 0.00027 times the receiving water body flow as defined in cfs to give pounds/days unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 1.224 kg/day or 2.7 pounds/day regardless of receiving water flow.

(2) Estuary or coastal water from any facility subject of this subpart shall not exceed 0.008653 times the receiving water body design flow in

m³/sec to give kg/day or 0.00054 times the receiving water body flow as defined in cfs to give pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 2.449 kg/day or 5.4 pound/day regardless of receiving water flow.

Subpart I - Effluent Standards for Polychlorinated Biphenyls (PCB's)

§129.09 Applicability.

The provisions of this subpart apply to any polychlorinated biphenyl manufacturing, recovering and regenerating facility; pesticide manufacturing, capacitor manufacturing, and transformer manufacturing facilities constituting a point source discharging into navigable waters.

§129.09a Definitions.

As used in this subpart, the term: Polychlorinated biphenyls (PCB's)

(a) For salt water bodies, means materials containing the biphenyl group which have been chlorinated to varying degrees. There are 210 possible different PCB compounds.

(b) For fresh water bodies, means that group of PCB's identified by gas chromatographic retention times greater than 60, relative to p,p'-DDE = 10 under the standard conditions recommended in the EPA PCB test method shall apply in this subpart.

§129.09b Determination of weights and concentrations.

The standards set forth in this subpart shall apply to the total combined weight or concentration of PCB's, excluding any associated element or compound.

§129.09c Effluent standard for PCB's

The effluent discharge of any facility subject to provisions of this part shall meet the following conditions:

(a) (1) Into Special lakes, there shall be no discharge.

(2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measurable flow conditions return.

∠ (b) The daily average PCB concentration shall not exceed:

(1) 280 ug/l for discharges into fresh water bodies (10 ug/l for discharges into salt water bodies) which have a flow greater than or equal to 10 times the waste stream flow with the provision that an immediate 1:10 diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph (a)(1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph (a)(1) of this section.

(c) The total daily weight of PCB's discharged into a/an:

(1) Stream, lakes and impoundments, embayments, or the Great Lakes shall not exceed .000173 times the receiving water body design flow in m³/sec to give kg/day or .0000108 times the receiving water body flow as defined in cfs to give pounds/days unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of .0489 kg/day or .108 pounds/day regardless of receiving water flow.

(2) Estuary or coastal water from any facility subject to this subpart

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150,000

0.000108

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1.05
1.8
864
1.55
1.94

shall not exceed .000865 times the receiving water body design flow in m³ /sec to give kg/day or .000054 times the receiving water body flow as defined in cfs to give pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of .2449 kg/day or .54 pounds/day regardless of receiving water flow.

Subpart J- Effluent Standard for Toxaphene

§129.10 Applicability.

The provisions of this subpart apply to any toxaphene manufacturing or formulating facility constituting a point source discharging into navigable waters.

§129.10a Definitions.

As used in this subpart, the term: Toxaphene means a material consisting of technical grade chlorinated camphene with the approximate formula of

$$\begin{matrix} \text{C} & \text{H} & \text{Cl} \\ 10 & 10 & 8 \end{matrix}$$
 containing 87-89% chlorine and which is normally a mixture.

§129.10b Determination of weights and concentrations.

The standards set forth in the subpart shall apply to the total combined weight or concentration of toxaphene, excluding any associated element or compound.

§129.10c Effluent standard for toxaphene.

The effluent discharge of any facility subject to provisions of this part shall

meet the following conditions:

(a) (1) Into Special lakes, there shall be no discharge.

(2) When the actual flow of ephemeral streams ceases, discharge of the listed pollutant shall be prohibited until measurable flow conditions return.

(b) The daily average toxaphene concentration shall not exceed:

(1) 1.0 ug/l for discharges into fresh water bodies (1.0 ug/l for discharges into salt water bodies) which have a flow greater than or equal to 10 times the waste stream flow with the provision that an immediate diffusion is assured; or

(2) A proportionately reduced concentration of that set forth in paragraph (a) (1) of this section for discharges into water bodies which have less than 10 times the waste stream flow which after diffusion would assure no more than the resulting receiving water concentration as specified in paragraph (a) (1) of this section.

(c) The total daily weight of toxaphene discharged into a/an:

(1) Stream, lakes and impoundments, embayments, or the Great Lakes shall not exceed 0.00173 times the receiving water body design flow in m^3 /sec to give kg/day or 0.000108 times the receiving water body flow as defined in cfs to give pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 0.489 kg/day or 1.08 pounds/day regardless of receiving water flow.

(2) Estuary or coastal water from any facility subject to this subpart shall not exceed 0.0692 times the receiving water body design flow in m^3 /sec to give kg/day or 0.000432 times the receiving water body flow as defined in cfs to give pounds/day unless there is more than one discharge point in the immediate vicinity at which time no facility shall discharge in excess of 1.959 kg/day or 4.32 pounds/day regardless of receiving water flow.