Mr. E. L. Raab
General Electric
100 Woodlawn Ave., Bldg. 8
Pittsfield, Mass. 01201

Mr. L. P. Hart
General Electric Co.
10 John Street
Hudson Falls, N.Y.

Mr. Larry Crowe
General Electric
Redmond Circle
Rome, Ga. 30161



IDS 002329

WATER_PCB-SD0000001882

Mr. Simons
General Electric
Schenectady, N.Y.

Mr. Nelson
General Electric
Schenectady

IDS 002330

WATER_PCB-SD0000001883

Monsanto

MONSANTO INDUSTRIAL CHEMICALS CO.
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
Phone: (314) 694-1000

January 15, 1974

As your supplier of Aroclor*, Inerteen** and Pyranol***, which your company purchases for dielectric fluid applications, we would like to take this opportunity to share with you the information we have of the Environmental Protection Agency's recent actions relating to PCBs in effluent streams.

1. On July 6, 1973, the EPA published in the Federal Register a proposed list of Toxic Pollutants. PCBs were included on the list.

2. On July 16, July 30, August 1, August 3 and November 29, 1973, public hearings were held by the Effluent Standards and Water Quality Information Advisory Committee to consider information pertinent to proposing effluent standards for toxic pollutants.

3. On September 7, 1973 the Toxic Pollutants list was published without change.

4. On December 27, 1973 the EPA published proposed effluent standards for the Toxic Pollutants. Persons adversely affected by the proposed standards may file, by January 18, 1974, objections according to rules published

*Registered Trademark, Monsanto Company
**Registered Trademark, Westinghouse Corporation
***Registered Trademark, General Electric Company

IOS 002331

WATER_PCB-SD0000001884

January 4, 1974. Comments may be submitted in writing within 90 days. A public hearing will commence on January 25, 1974.

Copies of the Federal Register notices which pertain to these actions are attached for your use.

During this period Monsanto has commented both formally and informally to the EPA and to the Advisory Committee. Copies of our comments are attached. In addition, the General Electric Company has submitted comments. Copies of these are also enclosed.

The EPA acknowledges that time limitations established by court order required publication of the proposed standards at this time and that in some cases there may be inadequacies in the underlying data base. Comments and technical data are solicited. Industries involved with PCBs are expected to comment.

We sincerely believe the standard proposed for PCBs is unrealistically low and unwarranted and we are deeply concerned of the adverse effect it will have on the continued use of PCBs with the resulting harmful impact on the power generation and distribution industry at a time when our nation is experiencing a serious energy crisis. We believe that we should all express our concern to the EPA and we strongly urge that your company, either independently or through your trade organizations, submit appropriate comments and participate at the public hearings which will be held in the very near future.

It is our understanding that the January 25th meeting will be a prehearing conference. Any person desiring to testify at subsequent hearings must inform the presiding officer of his intentions at this prehearing conference. Persons adversely affected by the proposed standards who desire to testify should file, by January 18, 1974, objections as outlined in the Federal Register, Vol. 39, No. 3, January 4, 1974; a copy of which is attached.

Correspondence relating to objections and public hearings should be submitted in quadruplicate and filed with the:

Hearing Clerk
U.S. Environmental Protection Agency
Washington, D.C. 20460

Opportunity also exists for submitting comments during the 90-day period ending March 27, 1974 to:

WATER_PCB-SD0000001885

Dr. C. Hugh Thompson
Chairman, Hazardous and Toxic Substances
Regulation Task Force
Office of Water Program Operations
U.S. Environmental Protection Agency
Washington, D.C. 20460

The U.S. Department of Commerce has expressed a strong desire to be of service to industry in this matter and would like to receive copies of correspondence, comments, presentations, etc. This material may be sent to:

Mr. Fred Stein
Office of Environmental Affairs
U.S. Department of Commerce
Room 4424
Main Commerce Building
14th Street and Constitution Avenue, N.W.
Washington, D.C. 20230

We plan to keep you further advised of our activities in this matter and hope you can share with us any information your company may have to offer.

Sincerely,

T. L. Gossage
Marketing Director
Specialty Products
Functional Product Groups

cs
Attachments

WATER_PCB-SD0000001886

Dr. Philip E. Schambra, Council on Environmental Quality, 722 Jackson Place NW., Washington, DC 20006 (202/382-6754).

STEVEN D. JELLINEK,
Acting Staff Director.

[FR Doc.73-23752 Filed 11-5-73;8:45 am]

ENVIRONMENTAL PROTECTION AGENCY

EFFLUENT STANDARDS AND WATER QUALITY INFORMATION ADVISORY COMMITTEE

Notice of Meeting and Agenda

Notice is hereby given of a meeting of the Effluent Standards and Water Quality Information Advisory Committee established under Section 515 of the Federal Water Pollution Control Act ("the Act") (33 U.S.C. 1374; Public Law 92-500) to be held in Room 1112 (Conference Room), Building #2, Crystal Mall, Arlington, Virginia, November 29, 1973, at 9 a.m. This is a regularly scheduled meeting of the Committee.

The agenda for this meeting includes: Developments on Matrix Method; Proposed Limitations for Industries as Published in the FEDERAL REGISTER; Establishment of Effluent Limitations for Items on Toxic Substances List.

The meeting will be open to the public and under the direction of the Committee Chairman. Any member of the public wishing to attend or participate should contact Dr. Martha Sager, Chairman, Effluent Standards and Water Quality Information Advisory Committee, Environmental Protection Agency, Room 821, Crystal Mall, Bldg. #2, Washington, D.C. 20460 (Tel: 703 557-7390).

Dated: October 30, 1973.

MARTHA SAGER,
Chairman, Effluent Standards & Water Quality Information Advisory Committee.

[FR Doc.73-23513 Filed 11-5-73;8:45 am]

NATIONAL AIR QUALITY CRITERIA ADVISORY COMMITTEE

Notice of Meeting

Pursuant to Public Law 92-463, notice is hereby given that a meeting of the National Air Quality Criteria Advisory Committee will be held at 9:00 a.m. on November 16, 1973 in Conference Room A (Room 1112), Crystal Mall Building No. 2, 1921 Jefferson Davis Highway, Arlington, Virginia.

The agenda will include briefings and consultations on (1) the determination and documentation of adverse effects on the public health and welfare of manganese as an atmospheric pollutant; (2) candidate pollutants for review and reports by the National Academy of Sciences; and (3) the EPA Science Advisory Board and the future role of the committee.

The meeting will be open to the public. Any member of the public wishing to attend or submit a paper should contact the Executive Secretary, Mr. Ernst Linde, Scientist Administrator, National Environmental Research Center, Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

The telephone number is 919-549-8411, extension 2266.

STANLEY M. GREENFIELD,
Assistant Administrator for Research and Development.

[FR Doc.73-23512 Filed 11-5-73;8:45 am]

FEDERAL COMMUNICATIONS COMMISSION

[Docket No. 19849 etc.]

BRINDLEE BROADCASTING CO. ET AL.

Application for Construction Permits

In re applications of BRINDLEE BROADCASTING CORPORATION, Arab, Alabama. Requests: 92.7 MHz, #224; 2 kW (H & V); 300 feet, Docket No. 19849, File No. BPH-7961. HELTON & NORRIS ENTERPRISES, INC., Arab Alabama. Requests: 92.7 MHz, #224; 3 kW (H & V); 300 feet, Docket No. 19850, File No. BPH-8054. MARSHALL COUNTY BROADCASTING COMPANY, INC., Arab, Alabama. Requests: 92.7 MHz, #224; 3 kW (H & V); 300 feet, Docket No. 19851, File No. BPH-8224; for construction permits.

1. The Commission, by the Chief of the Broadcast Bureau, acting under delegated authority, has before it the captioned applications which are mutually exclusive in that each of the applicants has requested authority to operate on the same FM broadcast channel allocated to the same community. Accordingly, a comparative hearing must be held.

2. Section 73.210 of our rules provides that the main studio of a commercial FM broadcast station must either be located in the proposed city of license or that good cause must be shown for locating the main studio outside the community. However, the Commission's Report and Order in Docket No. 19028, 27 F.C.C. 2d 851 (1971), states that it is not necessary for the Commission to consider and approve an FM main studio location at an AM main studio site in the case of commonly owned AM and FM stations licensed to serve the same principal community, since prior Commission approval is already required for an AM main studio location outside the community of license other than at the AM transmitter site, and since an AM main studio location at the AM transmitter site is presumed to be consistent with the main studio rules and the public interest. Both Marshall County Broadcasting Company, Inc. (Marshall), and Helton & Norris Enterprises, Inc. (Helton), propose to locate their studio sites outside of the city of Arab. Since Marshall proposes to locate its FM studio at its AM studio site, its proposal is consistent with the rules and the public interest. Helton, which is not an AM licensee, proposes to locate its main studio at its FM transmitter site, four miles northeast of the Arab city limits. However, Helton has submitted a showing that its studio site is only five miles from downtown Arab, in an area which appears to be readily accessible by highway and which has ample parking. We find that Helton's showing in regard to its proposed studio site is adequate and therefore no issue concerning this matter will be specified.

3. The applicants are qualified to construct and operate as proposed. However, because the proposals are mutually exclusive, they must be designated for hearing in a consolidated proceeding on the issues specified below.

4. Accordingly, *It is ordered*, That pursuant to section 309(e) of the Communications Act of 1934, as amended, the applications ARE DESIGNATED FOR HEARING IN A CONSOLIDATED PROCEEDING, at a time and place to be specified in a subsequent Order, upon the following issues:

1. To determine which of the proposals would, on a comparative basis, best serve the public interest.

2. To determine, in light of the evidence adduced pursuant to the foregoing issues, which of the applications for a construction permit should be granted.

5. *It is further ordered*, That the applicants shall file a written appearance stating an intention to appear and present evidence on the specified issues, within the time and in the manner required by § 1.221(c) of the rules.

6. *It is further ordered*, That the applicants shall give notice of the hearing within the time and in the manner specified in § 1.594 of the rules, and shall seasonably file the statement required by § 1.594(g).

Adopted: October 29, 1973.

Released October 30, 1973.

FEDERAL COMMUNICATIONS COMMISSION,
[SEAL] WALLACE E. JOHNSON,
Chief, Broadcast Bureau.

[FR Doc.73-23560 Filed 11-5-73;8:45 am]

FEDERAL POWER COMMISSION

[Docket No. E-8400]

ALABAMA POWER CO.

Notice of Filing of Proposed Service Agreement

OCTOBER 30, 1973.

Take notice that Alabama Power Company by letter dated September 11, 1973, pursuant to Section 35.12 of the Federal Power Commission's Regulations, on September 14, 1973, filed a service agreement dated July 23, 1973, with Clarke-Washington Electric Membership Corporation to cover a new delivery point located in Thomasville in Clarke County, Alabama. Said service is proposed to be rendered pursuant to Alabama Power Company's FPC Rate Schedule REA-1.

Any person desiring to be heard or to protest said filing should file a petition to intervene, or protest with the Federal Power Commission, 825 North Capitol Street NE., Washington, D.C. 20426, in accordance with §§ 1.8 and 1.10 of the Commission's rules of practice and proce-

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graph (a)(2) of this section and such other pertinent information as may be available, that:

(i) Existing facilities, qualified staff, and other resources available to the applicant during the fiscal year in question, either directly or through affiliation agreements and contractual arrangements, are adequate and appropriate for assisting the Federal Government in such drug abuse treatment and rehabilitation programs as may be available for persons who are in the catchment area, or that the applicant has reasonable prospects for obtaining, during the fiscal year in question, such additional resources as may be necessary for the provision of such assistance; and

(ii) Utilization of the applicant's existing or anticipated resources for assisting the Federal Government in such drug abuse treatment and rehabilitation programs as may be available for residents of the area would not necessitate curtailment of drug abuse treatment and rehabilitation services provided or to be provided directly by the applicant or curtailment of other mental health services provided or to be provided by the applicant.

(3) *Assurances.* Upon a determination that it is feasible for the applicant to assist the Federal Government in treatment and rehabilitation programs for drug addicts and other persons with drug abuse and other drug dependence problems in accordance with paragraph (c)(2) of this section the Secretary shall provide a written notification to the applicant which shall briefly state the bases for the Secretary's determination. The notification will be accompanied by a form for providing the required assurance. The applicant shall promptly execute the assurance and return it to the Secretary. The assurance imposes a continuing obligation upon the applicant not to refuse a request from an agency or department of the Federal Government to enter into an agreement under which the applicant's facilities may be used, to the maximum extent practicable, in drug abuse treatment and rehabilitation programs provided by such departments or agencies for persons who are in the catchment area served by the applicant: *Provided, however,* That the Secretary may, upon a written request from the applicant which shall be supported by pertinent information, determine that it is not feasible for the applicant to comply with its assurance in a particular fiscal year or that it is not practicable for the applicant to enter into a specific agreement which has been proposed by a department or agency of the Federal Government.

[FR Doc.73-13739 Filed 7-5-73;8:45 am]

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 129]

WATER POLLUTION PREVENTION AND CONTROL

Proposed List of Toxic Pollutants

Notice is hereby given that the Acting Administrator, Environmental Protection Agency, proposes to establish a list of toxic pollutants in accordance with section 307(a)(1) of the Federal Water Pollution Control Act, as amended, (33 U.S.C.A. section 1317(a)) (Supp. 1973), (the Act) which provides in part:

> The Administrator shall, within ninety days after the date of enactment of this title, publish (and from time to time thereafter revise) a list which includes any toxic pollutant or combination of such pollutants for which an effluent standard (which may include prohibition of the discharge of such pollutants or combination of such pollutants) will be established under this section.

The proposed list consists of the following pollutants:

LIST OF TOXIC POLLUTANTS

1. Aldrin (1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8 - endo-exodimethanonaphthalene) 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 (para-para'-diaminobiphenyl)
3. Cadmium and all cadmium compounds
4. Cyanide and all cyanide compounds
5. DDD (TDE) 1,1 - dichloro - 2,2 - bis(para-chlorophenyl) -ethane DDE (dichlorodiphenyldichloroethylene) 1,1 - dichloro-2,2-bis (para-chlorophenyl)-ethylene DDT (dichlorodiphenyltrichloroethane) 1,1,1 - trichloro-2,2-bis(para-chlorophenyl) -ethane
6. Endrin (1,2,3,4,10,10 - hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a - octahydro-1,4-endo-endo-5,8-dimethanonaphthalene)
7. Mercury and all mercury compounds
8. Polychlorinated biphenyls (PCB's)
9. Toxaphene (chlorinated camphene).

Evaluation of other water pollutants is continuing and the list will be revised from time to time as data become available and as the Administrator deems appropriate. The pollutants included on this initial list are toxic in very low concentrations. The single exception is the industrial chemical, benzidine, which was included because of its ubiquity and known carcinogenic properties.

The term "toxic pollutant" is defined in section 502(13) of the Act as "those pollutants or combinations of pollutants, including disease causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such organisms or their offspring." Thus; the definition is broad and potentially applicable to a large number of substances.

From other provisions of the Act, however, it is clear that the Congress intended that the Administrator be selective in determining which of the potentially large number of candidate substances actually should be listed at various times.

These other provisions include section 101(a)(3), which declares that "it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited" and section 307(a)(1), which states, in part, that the Administrator, in publishing the required list of toxic pollutants, "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." In addition, as indicated above, section 307(a)(1) provides that the Administrator shall revise the list from time to time.

Furthermore, when section 307(a) is viewed in the context of the Act as a whole, which includes a number of other provisions for preventing and controlling water pollution, it seems apparent that the Administrator's mandate under section 307(a) is to focus on those water pollutants which pose the most serious hazards to man and other organisms inhabiting or consuming water. It is also apparent that the Administrator has a mandate to establish priorities for dealing with such pollutants, i.e., to take action initially with respect to those pollutants which, based on available evidence, appear to pose immediate problems and therefore require abatement more rapidly than can be achieved under other provisions of the Act.

In accordance with this mandate, pollutants chosen for inclusion on the initial list meet the following criteria:

1. There is evidence that, either directly or through transformation or bioaccumulation, they are toxic, as defined by section 502(13), at extremely low concentrations in water, and
2. They are discharged in significant amounts from point sources, and
3. Point source discharges are known to have resulted in incidents involving the types of adverse effects cited in section 502 (13), and/or
4. There is a significant potential for the occurrence or recurrence of such incidents as a result of point source discharges, and
5. Standard setting under section 307(a) is necessary because the preventive timing and effectiveness of enforcement action under other provisions of the Act are not commensurate with the nature and seriousness of the problems identified by the above criteria, and
6. Adequate data are available to establish an effluent standard meeting the requirements of the Act.

IDS 002335

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The Environmental Protection Agency invites all interested parties to submit comments on this proposal. Comments shall be submitted in writing, preferably in triplicate, to Dr. C. H. Thompson, Office of Air and Water Programs, Environmental Protection Agency, Washington, D.C. 20460. All relevant comments received on or before August 6, 1973 will be considered. Comments received by the Agency will be available for inspection during normal business hours at the Office of Public Affairs, 401 M Street, S.W., Washington, D.C. 20460. Following consideration of comments, the list will be republished, with any modifications which the Administrator deems appropriate, and will then constitute the list required by section 307(a).

Dated: July 3, 1973.

ROBERT W. FRI,
Acting Administrator.

[FR Doc.73-13870 Filed 7-6-73;10:15 am]

IDS 002336

WATER_PCB-SD0000001889

APPENDIX IV

REGULATIONS, LEGISLATION AND OTHER FEDERAL AGENCY ACTIONS FOR WHICH COMMENTS WERE ISSUED BETWEEN JUNE 1, 1973 AND JUNE 15, 1973

Agency	Title	General Nature of Comments	Source for copies of comments
Interstate Commerce Commission I-ICC-RRR1-6R	Federal-aid Railroad Act of 1973.	EPA supports the intent of the proposed act. However, EPA is concerned over the exclusion from the act of environmental considerations beyond the general statements expressed under the congressional findings and declaration of purpose in title I.	A

APPENDIX V

SOURCES FOR COPIES OF EPA COMMENTS

A. Director, Office of Public Affairs
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

B. Director of Public Affairs
Region I
Environmental Protection Agency
Room 2303
John F. Kennedy Federal Building
Boston, Massachusetts 02203

C. Director of Public Affairs
Region II
Environmental Protection Agency
Room 847
26 Federal Plaza
New York, New York 10007

D. Director of Public Affairs
Region III
Environmental Protection Agency
Curtis Bldg., 6th and Walnut Streets
Philadelphia, Pennsylvania 19106

E. Director of Public Affairs
Region IV
Environmental Protection Agency
Suite 300
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309

F. Director of Public Affairs
Region V
Environmental Protection Agency
1 N. Wacker Drive
Chicago, Illinois 60606

G. Director of Public Affairs
Region VI
Environmental Protection Agency
1600 Patterson Street
Dallas, Texas 75201

H. Director of Public Affairs
Region VI
Environmental Protection Agency
1735 Baltimore Street
Kansas City, Missouri 64108

I. Director of Public Affairs
Region VIII
Environmental Protection Agency
Lincoln Tower, Room 916
1860 Lincoln Street
Denver, Colorado 80203

J. Director of Public Affairs
Region IX
Environmental Protection Agency
100 California Street
San Francisco, California 94102

K. Director of Public Affairs
Region X
Environmental Protection Agency
1200 6th Avenue.
Seattle, Washington 98101

[FR Doc.73-14390 Filed 7-16-73;8:45 am]

EFFLUENT STANDARDS AND WATER QUALITY INFORMATION ADVISORY COMMITTEE

Agenda and Notice of Public Hearings

Notice is hereby given of three public hearings to be held by the Effluent Standards and Water Quality Information Advisory Committee ("the Committee") established pursuant to section 515 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. section 1251 et seq. ("the Act"). The first hearing will be held on July 30, 1973 at 9:30 a.m. in Room D-23, O'Hare Inn, 6600 N. Mannheim Road, Rosemont, Illinois. The second hearing will be held on August 1, 1973 at 9:30 a.m. in Room 1750, Environmental Protection Agency, 26 Federal Plaza, New York, New York. The third hearing will be held on August 3, 1973 at 9:30 a.m. in Room 218, Environmental Protection Agency, 100 California Street, San Francisco, California. The hearings will be open to the public.

On Friday, July 6, 1973, the Acting Administrator of the Environmental Protection Agency published a proposed list of toxic pollutants in the FEDERAL REGISTER at pages 18044-45 in accordance with section 307(a)(1) of the Act. The proposed list consisted of the following pollutants:

LIST OF TOXIC POLLUTANTS

1. Aldrin (1, 2, 3, 4, 10, 10-hexachloro- 1, 4, 4a, 5, 8, 8a hexahydro- 1, 4, 5, 8 - endo-exodimethanonaphthalene) 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 (para-para'-diaminobiphenyl)
3. Cadmium and all cadmium compounds
4. Cyanide and all cyanide compounds
5. DDD(TDE) 1, 1- dichloro-2, 2-bis (para-chlorophenyl)-ethane DDE (dichlorodiphenyldichloroethylene) 1, 1- dichloro-2, 2-bis (para-chlorophenyl) - ethylene DDT (dichlorodiphenyltrichloroethane) 1, 1, 1-trichloro-2, 2-bis (para-chlorophenyl) - ethane
6. Endrin (1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octahydro-1, 4-endo-endo-5, 8-dimethanonaphthalene)
7. Mercury and all mercury compounds
8. Polychlorinated biphenyls (PCB's)
9. Toxaphene (chlorinated camphene)

Pollutants chosen for inclusion on this initial list meet the following criteria:

1. There is evidence that, either directly or through transformation or bioaccumulation, they are toxic, as defined by section 502(13), at extremely low concentrations in water, and
2. They are discharged in significant amounts from point sources, and
3. Point source discharges are known to have resulted in incidents involving the types of adverse effects cited in section 502(13), and/or
4. There is a significant potential for the occurrence or recurrence of such incidents as a result of point source discharges, and
5. Standard setting under section 307(a) is necessary because the prospective timing and effectiveness of abatement action under other provisions of the Act are not commensurate with the nature and seriousness of the problems identified by the above criteria, and
6. Adequate data are available to establish an effluent standard meeting the requirements of the Act.

The purpose of the hearings noticed hereby will be to consider such scientific and technical information as is pertinent to the determinations required to be made by the Administrator when proposing effluent standards for toxic pollutants.

The hearings may be adjourned to subsequent dates in order to obtain further information.

Additional information concerning the hearings may be obtained by writing Dr. Martha Sager, Chairman, Effluent Standards and Water Quality Information Advisory Committee, Environmental Protection Agency, Room 821, Crystal Mall, Building 2, Washington, D.C. 20460. The hearings will be held pursuant to the direction of the Chairman and in accordance with hearing procedures published in the FEDERAL REGISTER on Wednesday, April 11, 1973, at pages 9173-80. Certain persons or organizations may be invited by the Committee to appear and give oral testimony. Others desiring to appear and give oral testimony should contact the Committee at 703-557-7390 or may request the opportunity to appear by telegraphic notice or letter to Dr. Sager at the address listed above. Due to limitations of time, it may be necessary to limit the number of witnesses who may appear and give oral testimony. Witnesses will ordinarily be limited to 15-minute presentations to be followed by 15-minute periods of questions from the Committee.

Although the opportunity to appear and give oral testimony must necessarily be limited because of the short time available to the Committee to hold public hearings and obtain additional information pursuant to the provisions of section 515 of the Act, all persons desiring to submit written statements or testimony to the Committee are encouraged to do so. Such statements or testimony should clearly indicate the pollutant or pollutants concerned and should be addressed to the "Effluent Standards and Water Quality Information Advisory Committee" at the address listed above.

Statements presented at the hearings or otherwise submitted to the Committee will be available to the public pursuant to section 10(b) of the Federal Advisory Committee Act (Public Law 92-463, 86 Stat. 770), subject to the assessment of reasonable reproduction charges. Requests for such information should be directed to Dr. Martha Sager, Chairman, Effluent Standards and Water Quality Information Advisory Committee, Environmental Protection Agency.

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Room 821, Crystal Mall, Building 2, Washington, D.C. 20460.

Dated July 11, 1973.

ROBERT L. SANSOM,
Assistant Administrator for Air and Water Programs.

[FR Doc.73-14586 Filed 7-16-73;8:45 am]

HEARING ON COMPLIANCE SCHEDULES FOR THE STATE OF KENTUCKY

Cancellation Notice

The public hearing scheduled for Thursday, July 26, 1973, in Frankfort, Kentucky (38 FR 16187), is hereby cancelled. This hearing was to be held for the purpose of permitting public participation in the development of compliance schedules for certain air pollution sources subject to Kentucky's plan for implementing national ambient air quality standards. Cancellation is necessitated by the recent court decision in "East Kentucky Rural Electric Cooperative Corp., et. al. v. EPA," Case No. 72-1629 (6th Cir., June 28, 1973), and a related case (72-1632) which vacated the Administrator's approval of the Kentucky implementation plan. A hearing on proposed compliance schedules for Kentucky will be held at a future time which will be announced in the FEDERAL REGISTER.

ALAN G. KIRK II,
Acting Assistant Administrator for Enforcement and General Counsel.

JULY 12, 1973.

[FR Doc.73-14602 Filed 7-16-73;8:45 am]

UNIROYAL CHEMICAL

Notice of Filing of Petition Regarding Pesticide Chemical

Pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408 (d)(1), 68 Stat. 512; 21 U.S.C. 346a(d)(1)), notice is given that a petition (PP 3F1408) has been filed by Uniroyal Chemical, Division of Uniroyal, Inc., Bethany, CT 06525, proposing establishment of tolerances (40 CFR Part 180) for residues of the plant regulator succinic acid 2,2-dimethyl hydrazide in or on the raw agricultural commodities tomatoes at 40 parts per million and cranberries and pears at 20 parts per million.

The analytical method proposed in the petition for determining residues of the plant regulator is a colorimetric procedure in which the residue is hydrolyzed with 50 percent sodium hydroxide. The resulting unsymmetrical dimethyl hydrazine is distilled and reacted with trisodium pentacyanoammine ferrate to form a specific red color at pH 5. The color is measured spectrophotometrically at 490 and 600 nanometers.

Dated: July 11, 1973.

HENRY J. KORP,
Deputy Assistant Administrator for Pesticide Programs.

[FR Doc.73-14580 Filed 7-16-73;8:45 am]

FEDERAL POWER COMMISSION

[Docket No. E-7773]

APPALACHIAN POWER CO.

Change in Time

JULY 6, 1973

On July 2, 1973, the attorney for Bedford, et al. requested that the prehearing conference scheduled for July 10, 1973 at 10 a.m. by notice issued June 1, 1973, be changed to the afternoon.

Upon consideration, notice is hereby given that the time for the commencement of the prehearing conference on July 10, 1973 is changed to 2 p.m.

KENNETH F. PLUMB,
Secretary.

[FR Doc.73-14527 Filed 7-16-73;8:45 am]

[Docket No. E-8294]

ARIZONA PUBLIC SERVICE CO.

Notice of Extension of Agreement

JULY 10, 1973.

Take notice that Arizona Public Service Company (Arizona) on June 11, 1973, tendered for filing an extension of Arizona Public Service Company, Rate Schedule FPC No. 10 to an expiration date of July 31, 1974. Arizona states that the extension is necessary to prepare the physical plant necessary to effectuate the agreement contained in the rate schedule. Arizona also says that all parties to the agreement concur in the extension.

Any person desiring to be heard or protest said application should file a petition to intervene or protest with the Federal Power Commission, 825 North Capitol Street, N.E., Washington, D.C. 20426, in accordance with the Commission's rules of practice and procedure. All such petitions or protests should be filed on or before July 24, 1973. Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a petition to intervene. Copies of this application are on file with the Commission and are available for public inspection.

KENNETH F. PLUMB,
Secretary.

[FR Doc.73-14538 Filed 7-16-73;8:45 am]

[Docket No. CI73-691]

ATLANTIC RICHFIELD CO.

Notice Changing Date and Time of Hearing

JULY 9, 1973.

On July 6, 1973, Atlantic Richfield Company requested that the hearing fixed by the order issued July 2, 1973, be rescheduled. The request states that Transwestern agrees with the request.

Upon consideration, notice is given that the time and date of the hearing in the above matter is changed to July 16, 1973, at 1:30 p.m. in a hearing room of the Federal Power Commission at 825 North Capitol Street, N.E., Washington, D.C. 20426.

KENNETH F. PLUMB,
Secretary.

[FR Doc.73-14539 Filed 7-16-73;8:45 am]

[Docket No. CI73-691]

ATLANTIC RICHFIELD CO.

Notice of Application; Correction

MAY 8, 1973.

In the Notice of Application, issued April 20, 1973 and published in the FEDERAL REGISTER April 26, 1973, 38 FR 10331: Second paragraph, last line: Substitute the number "2,250,000" for the number "75,000."

KENNETH F. PLUMB,
Secretary.

[FR Doc.73-14532 Filed 7-16-73;8:45 am]

[Docket No. CI73-697]

C & K PETROLEUM, INC.

Postponement of Hearing

JULY 6, 1973.

On July 6, 1973, Staff Counsel requested that the hearing scheduled for July 9, 1973, by order issued May 29, 1973, in above-designated matter be postponed because of a conflict in the schedule of Administrative Law Judge Litt. The request states that all parties agree to the request.

Upon consideration, notice is hereby given that the date of the hearing is postponed to July 13, 1973, at 10:00 a.m. in a hearing room of the Federal Power Commission at 825 North Capitol Street, N.E., Washington, D.C. 20426.

KENNETH F. PLUMB,
Secretary.

[FR Doc.73-14540 Filed 7-16-73;8:45 am]

[Docket No. E-8057]

COMISION FEDERAL DE ELECTRICIDAD

Application for Permit To Export Electric Energy

JULY 5, 1973.

Take notice that on February 20, 1973, Comision Federal de Electricidad (Applicant) filed with the Federal Power Commission, pursuant to Executive Order No. 10485, dated September 3, 1953, and the Commission's regulations thereunder, an application for a Presidential Permit authorizing the construction, operation, maintenance and connection of certain electric transmission facilities at the international border between the United States and Mexico. The facilities for which authorization is sought include one 3-phase electric power line operating nominally at 138,000 volts, 60 Hertz and extending across the international border from a point near Laredo, Texas to Nuevo Laredo, Tampico, Mexico. Applicant has indicated to the Commission that the line will be used in the interchange of electric energy with an electric system in Mexico and that any transmission to Mexico will be in accordance with an authorization

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graph (c)(14) in § 52.2123, paragraphs (a)(2) and (c)(16) in § 52.2223, paragraph (d)(3) in § 52.2491, paragraph (b)(9)(i)–(iii) in § 52.2524, paragraph (c)(3) in § 52.2758. As revised these paragraphs read as follows:

• • • • • •

• • • (i) None of the above subparagraphs shall apply to a source which is presently in compliance with applicable regulations and which has certified such compliance to the Administrator by October 1, 1973. The Administrator may request whatever supporting information he considers necessary for proper certification.

(ii) Any compliance schedule adopted by the State and approved by the Administrator shall satisfy the requirements of this paragraph for the affected source.

(iii) Any owner or operator subject to a compliance schedule in this paragraph may submit to the Administrator no later than October 1, 1973, a proposed alternative compliance schedule. No such compliance schedule may provide for final compliance after the final compliance date in the applicable compliance schedule of this paragraph. If promulgated by the Administrator, such schedule shall satisfy the requirements of this paragraph for the affected source.

• • • • • •

[FR Doc.73-18629 Filed 9-6-73;8:45 am]

SUBCHAPTER D—WATER PROGRAMS

PART 129—TOXIC POLLUTANT EFFLUENT STANDARDS

List of Toxic Pollutants

On July 6, 1973, notice was published in the FEDERAL REGISTER (38 FR 18044) that the Environmental Protection Agency was proposing a list of toxic pollutants pursuant to section 307(a)(1) of the Federal Water Pollution Control Act, as amended (33 U.S.C.A. section 1317(a) Supp 1973), (the Act) which provides in part:

> The Administrator shall, within ninety days after the date of enactment of this title, publish (and from time to time thereafter revise) a list which includes any toxic pollutant or combination of such pollutants for which an effluent standard (which may include a prohibition of the discharge of such pollutants or combination of such pollutants) will be established under this section.

That proposed list included aldrin-dieldrin, benzidine, cadmium, cyanide, DDT (DDE, DDD), endrin, mercury, polychlorinated biphenyls, and toxaphene.

Written comments on the proposed rulemaking were invited and received from interested parties and are on file with the Agency. All comments have been considered by the Environmental Protection Agency and certain ones have been adopted. These and other principal changes are discussed below.

Several comments dealt with the manner in which the inorganic components of the list were specified and argued that certain insoluble or innocuous forms of these substances should not be included in broad categories such as "all cadmium compounds." Effluent standards which must be developed for the listed pollutants will include analytical and sampling procedures which will distinguish between the toxic and innocuous forms of the designated pollutants.

A number of commenters expressed the opinion that the proposed selection criteria were vague and inadequate. It was obvious from the comments received that a great deal of confusion existed as to what materials could potentially be selected as toxic pollutants.

Accordingly, EPA has refined these criteria to make them more specific. These criteria entail two major advantages. First, they will provide for more informed public participation, by identifying the kinds of pollutants which the Agency proposes to examine and the types of data which are sought for each pollutant. Second, dischargers will be placed on notice concerning the class of pollutants which may become subject to standards under Section 307(a).

It is our intent that the process of selecting pollutants for the list of toxic pollutants will be a continuing one; as additional evidence is developed, additional pollutants will be added to the list.

Pollutants were chosen for inclusion on the initial list in light of the following criteria:

1. Data from laboratory or field studies indicate that the pollutant could, if discharged into water, constitute a serious environmental threat. The types of data examined in making this judgment are set forth in Part I below.

2. The pollutant is discharged, or has the potential to be discharged, from point sources and constitutes a very serious environmental threat.

3. Data are available to establish effluent standards meeting the requirements of the Act.

4. Standard setting under Section 307(a) is appropriate, and is necessary because the prospective timing and effectiveness of abatement actions under other provisions of the Act are not commensurate with the nature and seriousness of the problems identified by the above criteria.

I. EXPLANATION OF CRITERIA

The first criterion concerns the actual or potential damage that a water discharge of these materials may create by virtue of certain toxicological properties.

Detailed toxicological data are examined to determine whether one or more of these types of effects are known: bioaccumulation, carcinogenic, mutagenic and teratogenic effects, and high acute toxicity. Specifically, the following types of data are reviewed:

1. Available data concerning whether a substance or its chemical or biological transformation product is bioaccumulated through an aquatic mechanism to the extent that they result in:

(a) Reproductive impairment in any important species, or

(b) Concentrations in food sources in excess of applicable Federally established tolerance levels.

2. Data concerning carcinogenic, mutagenic, and teratogenic effects. Materials likely to be carcinogenic, mutagenic, or teratogenic to man are further evaluated as to their chemical, biological, and physical stability in water.

3. Data concerning high order of toxicity as measured by short-term lethality tests. In this connection a classification of a substance as "highly toxic" to man according to classifications established by the Department of Transportation and the Environmental Protection Agency (36 FR 2934, February 12, 1971, 40 CFR 162.3) and the Environmental Protection Agency and the Food and Drug Administration testing procedures (40 CFR 162.8 and 21 CFR 191.10) is particularly relevant. According to the references cited above, substances which have an oral LD50 of 50 mg/kg of body weight or less or have a dermal LD50 of 200 mg/kg of body

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weight of less are defined as highly toxic to mammals and are examined further. The term "oral LD50" means that single oral dose which is lethal to one-half of the test population within 14 days. The term "dermal LD50" means that dose dermally absorbed in 24 hours which is lethal to one-half of the test population within 14 days.

For the protection of aquatic life substances proposed to be classified as "highly toxic" according to the National Academy of Sciences water pollution ranking system may be considered for inclusion in the list. Such substances are those which are toxic to aquatic life as measured by a 96 hour LC50 of 10 mg/l or less. The term "LC50" means that concentration of a substance in water which is lethal to one-half of the test population in the specified time periods. Testing methods such as those found in "Standard Methods for the Examination of Water and Wastewater," 13th Edition, part 231, 1971, or their equivalent will be considered adequate.

The second criterion concerns the seriousness of discharges or potential discharges of the pollutant from point sources. Relevant here are such factors as the nature and extent of toxic effects associated with the pollutant, the extent to which discharges of the pollutant have been identified, and the production, distribution, and use pattern of the pollutant. Data must be available from well documented field studies showing damage to important organisms from discharges of the compound into waters, or technically sufficient to show the material has the potential to be environmentally harmful after being discharged from point sources to the water.

The third criterion concerns setting effluent standards for pollutants on the list. The following are representative of the categories of data useful in standard setting for each material.

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.

The fourth criterion concerns the overall environmental effect of the control measures available, including the use of substitute products and possible effects upon ground water or other environmental media.

II. The Pollutants Selected

The emergency standards promulgated by the Department of Labor for occupational carcinogens (38 FR 10929, May 3, 1973), have forced a shift in the manufacture of benzidine from the previous producers to the end users. The resulting potential for increased water pollution by this known carcinogen and the adverse effects on the environment which may result, require the listing of benzidine. Public comments have indicated that the material should be included, and that discharges should be severely controlled. Other public comments indicated that the material does not meet the selection criteria as proposed July 6, 1973. Benzidine does meet the criteria set forth herein. It was also asserted that the DOL standards would protect both the work place and the environment. However, those standards are designed to prevent occupational exposure, not to control discharges into water.

Mercury is on the list because its organic form is known to bioaccumulate to the extent that it poses a threat to the health of man through concentration in food sources, so as to exceed applicable tolerance levels. Control of point source discharges is urgently needed, and available data are sufficient for standard setting. Public comments noted that the discharge of this material should be severely restricted. Some comments were received recommending deletion of the material from the list because of questions of solubility and demethylation of mercury and its compounds. It should be noted, however, that all forms of mercury in the aquatic environment can be methylated to methylmercury, the most hazardous form.

Aldrin-dieldrin are on the list because of their high order of toxicity to aquatic organisms and their bioaccumulative properties. Control is necessary now and there are adequate data to support effluent standards. Some comments indicated that aldrin-dieldrin should be deleted because of possible conflict with on-going cancellation proceedings under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The Administrator has an obligation to control toxic pollutants under FWPCA which is independent of his authority under FIFRA. These responsibilities cannot be abdicated. Moreover, it is too early to ascertain the precise determinations which will be required under the FWPCA, and the impact on the FIFRA proceedings. Accordingly, deletion of aldrin-dieldrin is not considered to be warranted at this time.

Cadmium is included on the list because of toxicity to aquatic organisms. From our studies, it was determined that there are several hundred dischargers of cadmium, and controls are urgently needed. Public comment supported the inclusion of this material because of its high order of toxicity to aquatic organisms, potential concentrations in the food web, and its widespread discharge.

Some commenters objected to the inclusion of "Cadmium and all cadmium compounds" on the list because some relatively innocuous forms of the element would be included. The final effluent standards will distinguish among the various forms in which the element may occur.

DDT, DDD, and DDE are on the list because of their acute toxicity to aquatic organisms, and their bioaccumulative properties, which are known to cause harmful effects in higher life forms, such as birds. The data are sufficient for the establishment of effluent standards. Public response in favor of inclusion of DDT, DDD, and DDE noted the existence of much data on the harmful effects of these materials. One commenter stated that DDD degrades rapidly, and does not have many of the effects associated with DDT. It was determined, however, that DDD should also be included because of its toxicity and bioaccumulative properties.

Endrin is highly toxic to aquatic life at low concentrations. Considerable data are available on endrin, and control of point sources is necessary at present. Those public comments that supported its inclusion cited considerable data and urged stringent control. One commenter alleged that the sole manufacturing facility is under control, and that further restriction is unnecessary and redundant. However, available technical and scientific data support inclusion. Moreover, the manufacturer of the material is not the only point source, since formulators also contribute endrin contaminated wastes to the environment.

Polychlorinated biphenyls are on the list because of their high order of toxicity to man and aquatic organisms, and because of their bioaccumulative potential. The data are adequate, and the point source discharges require prompt control. Public comments indicated that the materials should be included because of their widespread use, and their demonstrated harm to aquatic life. These commenters urged that discharges be as low as possible. No comments were received recommending deletion of polychlorinated biphenyls.

Toxaphene is on the list because of its high order of toxicity to aquatic life. Considerable data are available concerning this compound, and prompt control of known point sources is required. Public comments in support of the material being included cited much of the available toxicity data. Some commenters argued that this material did not meet the selection criteria published in connection with the proposed list of July 6, 1973. Toxaphene does meet the criteria set forth in this notice.

Since toxaphene has infrequently been reported to be present in the environment, some commenters urged its deletion. However, controls are necessary because the material continues to be manufactured, formulated, and distrib-

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uted in large quantities. Thus, the potential for harmful discharges is considerable.

Cyanide is on the list because of its high order of toxicity to aquatic life. There are many different types of point source discharges and a variety of receiving bodies of water which must be protected from the discharge of this material. The data are adequate to support effluent standards. The public commenters in favor of inclusion cited data on toxicity to aquatic life in very low concentrations. Those commenters who recommended deletion for the most part objected to inclusion of "all cyanide compounds." It was argued that only compounds which dissociate in water to form toxic concentrations of cyanide ion or hydrogen cyanide should be included. The proposed effluent standards will take these comments into account, and may specify special sampling, analysis, and reporting requirements.

III. The Length of the List

Several commenters recommended that the final list include a larger number of pollutants than were included on the proposed list. In addition, a number of commenters requested shortening the list. Most of the latter recommended removal of specific pollutants; these recommendations have been discussed in the preceding section.

As required by section 515 of the Act, EPA notified the Effluent Standards and Water Quality Information Advisory Committee on June 6, 1973, of our intention to propose effluent standards for toxic pollutants under section 307(a). The Committee held hearings on the proposed list in Washington, D.C. (July 16), Chicago, Ill. (July 30), New York, N.Y. (August 1), and San Francisco, Calif. (August 3). The Committee has agreed to provide scientific and technical information concerning the listed pollutants, but has made no recommendations to date concerning the length of the list.

Pursuant to the consent decree entered into by EPA in the case of *NRDC v. Fri*, Civ. Action No. 849-73 (D.D.C.), EPA must publish proposed standards for all pollutants included on this initial list no later than December 3, 1973.

Additional toxic pollutants lists may be published in the future under section 307(a). The Agency will examine a wide range of pollutants in constituting such lists. Among those which will be examined are the following pollutants which were identified in public comments on the initial list:

arsenic	ortho-chlorophenol
selenium	beta-naphthol
chromium	alpha-naphthol
lead	beryllium
asbestos	nickel
sevin	antimony
zinc	heptachlor
chlordane	camphor
lindane	methyl parathion
acridine	parathion
hydroquinone	di-n-butyl phthalate

The Agency will examine other pollutants in addition, including chlorinated hydrocarbons, organophosphates, heavy metals, and materials listed as occupational carcinogens by the Department of Labor (38 FR 10029, May 3, 1973).

Persons interested in assisting the Environmental Protection Agency in setting standards for the pollutants listed in Section IV are invited to submit scientific and technical data, and other information concerning the listed pollutants, to Dr. C. Hugh Thompson, Chairman, Hazardous and Toxic Substance Regulation Task Force, Office of Water Program Operations, Environmental Protection Agency, Washington, D.C. 20460. In particular, the thirteen categories of standard-setting data set forth in Section I above are sought for all pollutants listed in Section IV. The Agency is also interested in obtaining data on technology for waste control treatment and disposal of the pollutants listed in Section IV.

In addition, the Agency will review any data submitted on pollutants proposed to be placed on future lists. The pollutants listed above are merely representative of pollutants identified in public comment which may be candidates for selection. Data on those pollutants, and on other pollutants which may be candidates for selection, should be submitted to the Chairman, Hazardous and Toxic Substance Regulation Task Force, at the address set forth in the preceding paragraph.

Dated August 31, 1973.

JOHN QUARLES,
Acting Administrator.

IV. The List of Toxic Pollutants

Pursuant to section 307(a) of the Federal Water Pollution Control Act, as amended, effluent standards will be established for the pollutants listed below:

1. Aldrin (1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8 endo-exodimethanonaphthalene).
   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 (para-para'-diaminobiphenyl).
3. Cadmium and all cadmium compounds.
4. Cyanide and all cyanide compounds.
5. DDD (TDE) 1,1-dichloro-2,2-bis(para-chlorophenyl)-ethane.
   DDE (dichlorodiphenyldichloroethylene) 1,1-dichloro-2,2-bis(para-chlorophenyl) ethylene.
   DDT (dichlorodiphenyltrichloroethane) 1,1,1-trichloro-2,2-bis(para-chlorophenyl) ethane.
6. Endrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-endo-5,8-dimethanonaphthalene).
7. Mercury and all mercury compounds.
8. Polychlorinated biphenyls (PCB's).
9. Toxaphene (chlorinated camphene).

[FR Doc.73-19018 Filed 9-6-73;8:45 am]

Title 5—Administrative Personnel

CHAPTER I—CIVIL SERVICE COMMISSION

PART 213—EXCEPTED SERVICE

Department of Labor

Section 213.3315 is amended to show that one position of Special Assistant to the Deputy Assistant Secretary, Employment Standards Administration, is excepted under Schedule C.

Effective on September 7, 1973, § 213.3315(a)(36) is added as set out below.

§ 213.3315 Department of Labor.

(a) *Office of the Secretary.*

* * * * *

(36) One Special Assistant to the Deputy Assistant Secretary, Employment Standards Administration.

(5 U.S.C. secs. 3301, 3302; E.O. 10577, 3 CFR 1954-58 Comp. p. 218)

UNITED STATES CIVIL SERVICE COMMISSION,
[SEAL] JAMES C. SPRY,
Executive Assistant to the Commissioners.

[FR Doc.73-19078 Filed 9-6-73;8:45 am]

Title 7—Agriculture

CHAPTER I—AGRICULTURAL MARKETING SERVICE (STANDARDS, INSPECTION, MARKETING PRACTICES), DEPARTMENT OF AGRICULTURE

PART 52—PROCESSED FRUITS AND VEGETABLES, PROCESSED PRODUCTS THEREOF, AND CERTAIN OTHER PROCESSED FOOD PRODUCTS

Subpart—United States Standards for Grades of Canned Ripe Olives

Addition of Segmented Style

Notice is hereby given that the U.S. Department of Agriculture is amending the United States Standards for Grades of Canned Ripe Olives. The amendment which adds a "Segmented Style" is in accordance with the Agricultural Marketing Act of 1946, as amended, and with 5 U.S.C. 553, which allows an agency to dispense with the Notice of Proposed Rule Making procedures under certain circumstances.

NOTE.—Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable state laws and regulations.

Statement of consideration leading to the amendment

There is an increasing market potential for segmented style ripe olives—a style not recognized in the current U.S. grade standards. To permit the marketing of this new style, the rules and regulations (7 CFR 932.100-932.161) of the Marketing Agreement and Order No. 932, as amended (7 CFR, Part 932) regulating the handling of olives grown in California were amended, effective December 12, 1972.

The Olive Administrative Committee, at its July 18, 1973 meeting, voted unanimously to request that the U.S. Standards be amended to provide for the segmented style.

It is hereby found that it is impracticable and contrary to the public interest to give preliminary notice, engage in public rule making procedure, and postpone the effective date of this amendment until 30 days after publication hereof in the FEDERAL REGISTER (5 U.S.C. 553) because:

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R. Director of Public Affairs, Region VII, Environmental Protection Agency, 1735 Baltimore Street, Kansas City, Mo. 64108.

I. Director of Public Affairs, Region VIII, Environmental Protection Agency, Lincoln Tower, room 916, 1860 Lincoln Street, Denver, Colo. 80203.

J. Director of Public Affairs, Region IX, Environmental Protection Agency, 100 California Street, San Francisco, Calif. 94102.

K. Director of Public Affairs, Region X, Environmental Protection Agency, 1200 6th Avenue, Seattle, Wash. 98101.

[FR Doc.73-11992 Filed 6-15-73;8:45 am]

EFFLUENT STANDARDS AND WATER QUALITY INFORMATION ADVISORY COMMITTEE

Agenda and Notice of Public Hearings

Notice is hereby given of a public hearing to be held by the Effluent Standards and Water Quality Information Advisory Committee ("the Committee") established pursuant to section 515 of the Federal Water Pollution Control Act, as amended, 33 U.S.C.A. section 1251 et seq. ("the Act"). On June 6, 1973, the Acting Administrator of the Environmental Protection Agency notified the Committee of his intention to propose effluent standards for toxic pollutants under section 307(a) of the Act. The statute authorizes the Chairman of the Committee to publish a notice of a public hearing within 10 days after receipt of such notice, and to hold a public hearing within 30 days. The hearing noticed hereby will be held on July 16, 1973, at 10 a.m. in the Old Angus Ballroom, Holiday Inn, Crystal City, Arlington, Va. The hearings will be open to the public. Although final determinations have not yet been made with respect to the pollutants which will constitute the list of toxic pollutants required to be published under section 307(a), the Committee is informed that the following pollutants, among others, are being considered at the staff level for inclusion in the list:

1. Aldrin (1,2,3,4,10,10-hexachloro - 1,4,4a, 5,8,8a-hexahydro-1,4,4,5 - endo - exodimethanonaphthalene).
2. Benzidine and its salts (para-diaminodiphenyl).
3. Cadmium ion.
4. Cyanide ion.
5. DDD (TDE) 1,1-dichloro-2,2-bis(parachlorophenyl)-ethane.
6. DDE (dichlorodiphenyldichloroethylene) 1,1,1 - trichloro - 2,2 - bis(chlorophenyl)-ethylene.
7. DDT (dichlorodiphenyltrichloroethane) 1,1,1 - trichloro - 2,2 - bis(chlorophenyl)-ethane.
8. 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.
9. Endrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a - octahydro - 1,4-endo-endo-5, 8-dimethanonaphthalene.
10. Mercury (including elemental, ionic, and organo mercury).
11. Polychlorinated biphenyls (PCB's).
12. Toxaphene (chlorinated camphene).

The purpose of the hearings noticed hereby will be to initiate consideration of such scientific and technical information as is pertinent to the determinations required to be made by the Administrator when proposing effluent standards for toxic pollutants. It is anticipated that the Administrator may publish a notice setting forth a proposed list of toxic pollutants in the FEDERAL REGISTER prior to July 16. If so, such list and notice will be considered at the hearing noticed herein. If the list has not been proposed by that time, the hearing will be held on the basis of this notice. The hearing may be adjourned to subsequent dates in order to obtain further information.

Additional information concerning the hearing may be obtained by writing Dr. Martha Sager, Chairman, Effluent Standards and Water Quality Information Advisory Committee, Environmental Protection Agency, room 821, Crystal Mall, Building 2, Washington, D.C. 20460. The hearing will be held pursuant to the direction of the Chairman and in accordance with hearing procedures published in the FEDERAL REGISTER on Wednesday, April 11, 1973, at pages 9179-80. Certain persons or organizations may be invited by the Committee to appear and give oral testimony. Others desiring to appear and give oral testimony should contact the Committee at 703-557-7390 or may request the opportunity to appear by telegraphic notice or letter to Dr. Sager at the address listed above. Due to limitations of time, it may be necessary to limit the number of witnesses who may appear and give oral testimony. Witnesses will ordinarily be limited to 15-minute presentations to be followed by 15-minute periods of questions from the Committee.

Although the opportunity to appear and give oral testimony must necessarily be limited due to the limitations of time available to the Committee to hold public hearings and obtain additional information pursuant to the provisions of section 515 of the Act, all persons desiring to submit written statements or testimony to the Committee are encouraged to do so. Such statements or testimony should clearly indicate the pollutant or pollutants concerned and should be addressed to the "Effluent Standards and Water Quality Information Advisory Committee" at the address listed above.

Statements presented at the hearing, or otherwise submitted to the Committee will be available to the public pursuant to section 10(b) of the Federal Advisory Committee Act (Public Law 92-463, 86 Stat. 770), subject to the assessment of reasonable reproduction charges. Requests for such information should be directed to Dr. Martha Sager, Chairman, Effluent Standards and Water Quality Information Advisory Committee, Environmental Protection Agency, room 821, Crystal Mall, Building 2, Washington, D.C. 20460.

Dated June 12, 1973.

MARTHA SAGER,
Chairman, Effluent Standards and Water Quality Information Advisory Committee.

[FR Doc.73-12031 Filed 6-15-73;8:45 am]

ETHEPHON

Notice of Extension of Temporary Tolerance

In connection with Pesticide Petition No. 2G1195, Amchem Products, Inc., Ambler, Pa. 19002, was granted temporary tolerances for residues of the plant regulator ethephon ((2-chloroethyl) phosphonic acid) in or on the raw agricultural commodities pineapples and tomatoes at 2 parts per million on April 27, 1972 (notice was published in the FEDERAL REGISTER of Apr. 29, 1972 (37 FR 8706)). These temporary tolerances expired April 27, 1973.

A tolerance was established for residues of ethephon in or on tomatoes at 2 parts per million in connection with Pesticide Petition No. 3F1321, on April 16, 1973 (notice was published in the FEDERAL REGISTER of Apr. 20, 1973 (38 FR 9815)).

The firm has requested a 1-year extension of the temporary tolerance for residues of ethephon in or on pineapples to obtain additional experimental data. It is concluded that this extension of the temporary tolerance for residues of the plant regulator in or on pineapples will protect the public health. It is therefore extended as requested on condition that the plant regulator be used in accordance with the temporary permit being issued concurrently and which provides for distribution under the Amchem Products, Inc. name.

This temporary tolerance expires April 27, 1974.

This action is taken pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408(j), 68 Stat. 516; 21 U.S.C. 346a(j)), the authority transferred to the Administrator of the Environmental Protection Agency (35 FR 15623), and the authority delegated by the Administrator to the Deputy Assistant Administrator for Pesticide Programs (36 FR 9038).

Dated June 5, 1973.

HENRY J. KORP,
Deputy Administrator for Pesticide Programs.

[FR Doc.73-12032 Filed 6-15-73;8:45 am]

PENNWALT CORP.

Notice of Filing of Petition Regarding Pesticide Chemicals

Pursuant to provisions of the Federal Food, Drug, and Cosmetic Act (sec. 408 (d)(1), 68 Stat. 512; 21 U.S.C. 346a(d)(1)), notice is given that a petition (PP 3F1361) has been filed by Pennwalt Corp., P.O. Box 1297, Tacoma, Wash. 98401, proposing establishment of an exemption (40 CFR pt. 180) from the requirement of a tolerance for residues of the cross linked nylon type polymer formed by the reaction of a mixture of sebacoyl chloride and polymethylene polyphenylisocyanate with a mixture of ethylenediamine and diethylenetriamine when used as an inert encapsulating material for formulations of methyl parathion applied to growing alfalfa; corn

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FEDERAL REGISTER

THURSDAY, DECEMBER 27, 1973
WASHINGTON, D.C.

Volume 38 ■ Number 247

PART II

ENVIRONMENTAL PROTECTION AGENCY

■

WATER PROGRAMS

Proposed Toxic Pollutant Effluent Standards

IDS 002343

WATER_PCB-SD0000001896

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 129]

WATER PROGRAM

Proposed 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 proposed 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 proposed 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'-isomer).

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-octahydro - 1,4-endo-endo-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 following is a summary of the basis and purpose of the effluent standards proposed in this Part: The four basic factors considered in setting the standards were toxicological data, hydrodynamic data, ample margins of safety and calculations of the acute and chronic limitations for the standards. The primary basis for toxicological considerations came from the Water Quality Criteria which were proposed in October (38 FR 29646 et seq., Friday, October 26, 1973). These criteria were based in part on a report by the National Academy of Sciences and the National Academy of Engineering entitled "Water Quality Criteria", 1972 which is currently being published by the Environmental Protection Agency. The toxicity of the pollutants on the list, their 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, were considered in the establishment of the Water Quality Criteria upon which these standards are based.

Water Quality Criteria published pursuant to section 304(a) of the Act are those concentrations which are acceptable in the receiving water body. The criteria were developed to protect a variety of water uses including industrial, agricultural, recreational, propagation of fish and wildlife, aesthetics and potable water supplies. The protection of fish and wildlife and potable water supplies was the most sensitive of the fresh water usages. In estuarine and marine waters, the protection of fish and wildlife generally yielded the more restrictive recommended limitations. The criteria, as proposed, were designed for both acute and chronic toxicological protection. Since protection against chronic effects requires more stringent criteria, the proposed Water Quality Criteria were devised from data or calculation designed to afford chronic protection.

Because proposed Water Quality Criteria utilize both acute and chronic toxicity data to derive a single acceptable ambient water concentration, it was necessary to utilize the data upon which the criteria were based to calculate proposed standards which provide for protection against both acute and chronic toxicological effects.

To avoid the effects of acute toxicity it was determined that organisms need not necessarily be protected at all times from concentrations exceeding the proposed Water Quality Criteria, since brief exposures to higher concentrations may be tolerated. It may be assumed that most mobile organisms will not remain in the immediate vicinity of the outfall for as long as the usual 96-hour test period. Thus, for protection in the immediate vicinity of the outfall, a concentration of one tenth the 96-hour LC_{50} was determined to provide an ample margin of safety. (The 96-hour LC_{50} is that concentration derived from laboratory tests in which 50% of a group of test organisms survive after 96 hours of continuous exposure to a pollutant.) In order to achieve a concentration in the vicinity of the outfall which does not exceed the acute threshold, the discharger may either discharge the acute toxicity concentration and provide immediate diffusion through appropriate flow devices or reduce the concentration below the acute threshold.

To avoid the effects of chronic toxicity, an effluent standard is provided which is designed to ensure that, in most cases, the proposed Water Quality Criteria, which are intended to provide protection from chronic effects, are not exceeded over the long term in the receiving waters. This is achieved by limitation of the total weight of the pollutant which can be discharged into receiving waters of given size. To provide an additional margin of safety, the allowable weight discharged per unit of flow was reduced by safety factors designed to compensate, in part, for non-point sources of the pollutant, multiple discharges in a small area, industrial growth, and the difference in water storage times among lakes, estuaries, streams, and coastal waters. The standard for each type of receiving water is expressed as a number which, when multiplied by the rate of receiving water flow, yields the allowable weight of discharge of the pollutant per day from any facility.

These standards are not intended, however, to assure that Water Quality Criteria would be achieved in all receiving waters, since standards sufficiently restrictive to attain water quality criteria in (for example) small streams with extraordinarily large clusters of dischargers, would be overly restrictive for the usual case. These special "worst-case" situations are to be handled by the application of water quality standards through waste load allocations under section 303 of the Act. The resulting allocations may then be used to establish effluent limitations, if necessary, more stringent than the effluent standards set forth herein. Those limitations would then be incorporated into permits issued under section 402 of the Act.

Since there are no proposed Water Quality Criteria for benzidine, a different methodology was required for the derivation of an effluent standard. The methodology employed was designed to determine a level of discharge which would result in an acceptable level of risk exposure to man, the primary affected organism. Effluent standards for benzidine were derived by the extrapolation of laboratory test animal data using conservative statistical methods, and are based upon a calculated level of risk of less than one case of tumor induction per million people exposed over an entire generation to drinking water from supplies derived from waters contaminated with the maximum permitted concentration of benzidine. It is recognized that certain inadequacies exist in the available data on which the benzidine standard is based. Therefore, it is reasonable to assume that these standards could be revised in the future. The Environmental

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Protection Agency is initiating research to gather appropriate oral dose-response data, improve analytical sensitivity, and establish monitoring procedures.

Pursuant to paragraph 3 of Section 307 (a), any effluent standard promulgated under this section will be reviewed and, if appropriate, revised at least every three (3) years.

The standards for protection from chronic effects are applicable to the total of all discharges from any given facility. Thus, multiple outfalls from a single facility will not affect the total weight of any pollutant permitted to be discharged.

As required by section 307(a) of the Act, the proposed standards set forth herein designate specifically the categories of sources to which they will be applicable. Based on available data from permit applications and other information submitted under the National Pollutant Discharge Elimination System, the categories initially selected to be subject to these standards appear to represent the major dischargers of the listed pollutants. In addition to such data, total environmental damage potential was considered in evaluating sources of discharge.

The attached standards are not based upon economic considerations or upon the availability of treatment technology. However, the impact of the standards upon the economy has been examined and does not appear to be great.

Time limitations established by court order, (*NRDC* vs *Fri*, Civ. Action #849-73 (D.D.C.)), have required publication of these standards at this time, even though it is acknowledged that there may in some cases be inadequacies in the underlying data base. Public comment and technical data are solicited to assist in strengthening the standards. Changes made in these standards will be reflected in the final Water Quality Criteria under section 304(a) of the Act.

The effluent standards set forth in proposed form herein, will, if promulgated, apply to all the designated categories of point sources after their effective date. The applicability of these standards is not affected by the issuance of, or submission of an application for a discharge permit under the National Pollutant Discharge Elimination System (NPDES) established by section 402 of the Act. EPA's NPDES regulations (40 CFR Part 125, 38 FR 13528 et seq., Tuesday, May 22, 1973), provide at § 125.22(a)(6) that if a toxic effluent standard or prohibition is established under section 307(a) of the Act for a toxic pollutant which is present in a permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the permit must be modified in accordance with the toxic pollutant standards or prohibitions and the discharger so notified. Although this provision requires that notice be given to permittees of the new toxic pollutant effluent standard and will eliminate inconsistencies between permit conditions and toxic effluent standards, the applicability of the toxic pollutant standard does not depend upon its incorporation into permit conditions.

Section 402(k) of the Act provides that compliance with the terms of an NPDES permit constitutes compliance generally with the requirements of Title III of the Act, except for a standard under section 307 for a toxic pollutant injurious to human health. Thus, such standards will be enforceable against all dischargers designated as subject to such standards. Such standards will be applicable against dischargers holding valid permits and in compliance with such permits, and against dischargers who have applied for permits, but whose applications have not been acted upon. At present, publicly owned treatment works are not designated as a source category for toxic pollutant effluent standards. Review of data which are pertinent to the appropriateness of designating these facilities for control under section 307(a) has not been completed. In the interim, it is noted that controls through programs such as water quality standards, industrial pretreatment and non-point source controls provide the necessary protection.

Prior to adoption of the proposed standards, consideration will be given to any comments, suggestions, or objections thereto which are submitted in writing within 90 days after publication to Dr. C. Hugh Thompson, Chairman, Hazardous and Toxic Substance Regulation Task Force, Office of Water Program Operations, Environmental Protection Agency, Washington, D.C. 20460.

A public hearing to consider the proposed effluent standards will be held commencing January 25, 1974, at 9 a.m., at Jefferson Hall, U.S. Department of Agriculture, Independence Avenue, between 12th and 14th Streets SW., Washington, D.C. Persons adversely affected by the proposed standards may file, not later than January 18, 1974 unless justifiable cause for delay can be shown, objections to the proposed standards. Such objections shall be filed in accordance with 40 CFR Part 104 which is being published contemporaneously with these proposed standards.

The Agency also expects to hold technical symposia on the proposed standards in several locations throughout the country. At these symposia EPA personnel will exchange views with interested members of the public on standards-setting methodology for toxic pollutants, and will discuss data needs for setting such standards. It should be emphasized that these symposia are not intended to duplicate the public hearing described above. Section 307(a) requires that any modifications in the proposed standards must be justified on the record of the public hearing. Thus, the hearing will serve as the exclusive forum for consideration of modifications in the proposed standards.

Dated: December 14, 1973.

JOHN QUARLES,
Acting Administrator.

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 concentrations.
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 concentrations.
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.
129.10b Determination of weights and concentrations.
129.10c 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.

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§ 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 of any discharge, established or proposed to be established for any toxic pollutant under section 307(a) of the Act.

(d) "No discharge" means no detectable discharge as determined by analytical methods as set forth in 40 CFR Part 136.

(e) "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.

(f) "Working day" means the hours during a calendar day in which a facility discharges effluents subject to this part.

(g) The term "navigable waters" includes:

(1) All navigable waters of the United States;

(2) Tributaries of navigable waters of the United States;

(3) Interstate waters;

(4) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes;

(5) Intrastate lakes, rivers, 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.

(h) "Low flow" means the probable low rate of flow occurring during a period of seven consecutive days, once in ten years.

(i) "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 60 days.

(j) "Lakes and impoundments" means all bodies of water in which the flow velocity is impeded by a natural or man-made barrier in such a way that water is stored for 60 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.

(k) "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).

(l) "Estuary" means any water body between the baseline from which the territorial sea is measured and the landward limit of tidal influence.

(m) "Tidal range" means the measured difference between high and low tide during a normal tidal cycle.

(n) "Daily composite sample" means a combination of at least five individual samples obtained at approximately equal time intervals during the working day.

(o) "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.

(p) "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).

(q) "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.

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

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

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

(u) "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.

(v) "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 wire and cable; and the production of coke.

(w) "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.

(x) "Industrial inorganic chemicals manufacturing" means the manufacture of basic industrial inorganic chemicals, excluding manufacture of alkalies 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.
Bauxite, 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 sulfate.
Lead oxide.
Lead silicate.
Lithium compounds.
Lithium metals.
Magnesium compound, inorganic.
Manganese dioxide.
Mercury.
Mercury compounds.
Nickel compounds, inorganic.
Perchloric acid.
Phosphorus.
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.

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Sulfur hexafluoride.
Sulfuric acid.
Thiocyanates, inorganic.
Tin compounds, inorganic.
Zinc chloride.

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

(1) Non-cyclic organic chemicals such as acetic, 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, ethylene glycol ether and diethylene 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 naphthalene sulfonic acid condensates;

(8) Chemical warfare gases; and

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

(z) "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 other physical research and development.

(aa) "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 veneer mills engaged in producing lumber and wood basic materials;

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

(bb) "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.

(cc) "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.

(dd) "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 of oil and gas up to the point of shipment from the producing property.

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

(ee) "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 boxes, and envelopes.

(ff) "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.

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

(hh) "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.

(ii) "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.

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

(kk) "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.

(ll) "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.
m^3/s—cubic meters per second.
ft^3—cubic feet.
m^3—cubic meters.
ug/l—micrograms per liter.

§ 129.01c Compliance.

(a) Compliance with 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). 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 in intake waters for a discharger shall not be included in measurement of the amount or concentration of such pollutant discharged.

(c) Computation of flow: For the purposes of this subpart, receiving water flow rates shall be determined as follows:

(1) *Streams.* The low flow of the stream shall be measured at the outfall or at the nearest upstream monitoring point.

(2) *Lakes and impoundments.* The low flow of lakes and impoundments shall be measured at the outlet. When more than one outlet exists, the low flow shall be the cumulative low flows for all outlets.

(3) *Estuaries.* The low flow of an estuary shall be the low flow of the tributary entering the estuary. When more than one tributary exists, the low flow shall be the cumulative low flows of all tributaries entering the estuary above the point of discharge.

(4) *Coastal waters.* The low flow of coastal waters shall be that volume of water in the immediate vicinity of the outfall which is influenced by the tidal range during the normal tidal cycle.

§ 129.01d Effective date.

The effluent standards set forth herein shall be effective one year after promulgation.

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.

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§ 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, excluding any associated element or compound.

§ 129.02c Effluent standard for Aldrin-Dieldrin.

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

(a) Into streams, lakes, or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes, or estuaries with a low flow greater than 0.283 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters.

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

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

(ii) One-tenth the concentration set forth in paragraph (b)(1)(i) of this section for discharges into fresh water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentration permitted to be discharged under paragraph (b)(1)(ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentratons specified in paragraph (b)(1)(ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b)(1)(i) of this section.

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

(i) Stream from any facility subject to this subpart shall not exceed 0.000259 times the receiving water body flow in m³/sec give kg/day or 0.0000163 times the receiving water body flow in cfs to give pounds/day, provided that no facility shall discharge in excess of 0.0735 kg/day or 0.162 pounds/day regardless of receiving water flow.

(ii) Lake from any facility subject to this subpart shall not exceed 0.000216 times the receiving water body flow in m³/sec to give kg/day or 0.0000135 times the receiving water body flow in cfs to give pounds/day, provided that no facility shall discharge in excess of 0.061 kg/day or 0.135 pounds/day regardless of receiving water flow.

(iii) Estuary from any facility subject to this subpart shall not exceed 0.00242 times the receiving water body flow in m³/sec to give kg/day or 0.000151 times the receiving water body flow in cfs to give pounds/day, provoded that no facility shall discharge in excess of 0.686 kg/day or 1.512 pounds/day regardless of receiving water flow.

(iv) Coastal water from any facility subject to this subpart shall not exceed 0.00286 times the receiving water body flow in m³/sec to give kg/day or 0.000178 times the receiving water body flow in cfs to give pounds/day, provided that no facility shall discharge in excess of 0.808 kg/day or 1.782 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, cyclic organic chemical 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 and its salts, excluding any associated element or compound.

§ 120.03c Effluent standard for Benzidine.

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

(a) Into streams, lakes, or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no opportunity provided for the discharge of the pollutants covered by this part.

(b) Into streams, lakes, or estuaries with a low flow greater than 0.293 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters.

(1) The daily average benzidine concentration shall not exceed

(i) 1.8 μg/l for discharges into fresh water bodies (1.8 μg/l for discharges into salt water bodies) which have a low flow greater than or equal to 10 times the waste stream flow with the provision that an immediate 1:10 diffusion is assured; or

(ii) One-tenth the concentration given in (b)(1)(i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) The total daily weight of benzidine discharged into a stream, lake, estuary, or coastal water from any facility subject to this subpart shall not exceed 0.0016 times the receiving water body flow in m³/sec to give kg/day or 0.0001 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.44 kg/day or 0.97 pounds/day regardless of receiving water flow.

(3) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under paragraph (b)(1)(ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b)(1)(ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration required by paragraph (b)(1)(i) of this section.

Subpart D—Effluent Standard for Cadmium

§ 129.04 Applicability.

The provisions of this subpart apply to any ferrous metal production, nonferrous 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 dissolved 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) Into streams, lakes, or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes, or estuaries with a low flow greater than 0.283 cubic

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meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters

(1) The daily average cadmium concentration shall not exceed

(i) 40 μg/l for discharges into fresh water bodies (320 μg/l for discharges into salt water bodies) which have a low flow greater than or equal to 10 times the waste stream flow with the provision that an immediate 1:10 diffusion is assured; or

(ii) One-tenth the concentration set forth in paragraph (b) (1) (i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under paragraph (b) (1) (ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b) (1) (ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b) (1) (i) of this section.

(3) The total daily weight of cadmium discharged into a/an:

(i) Stream from any facility subject to this subpart shall not exceed 0.0206 times the receiving water body flow in m³/sec to give kg/day or 0.00130 times the receiving water body flow in cfs to give pounds/day, provided that no facility shall discharge in excess of 5.88 kg/day or 12.96 pounds/day regardless of receiving water flow.

(ii) Lake from any facility subject to this subpart shall not exceed 0.0173 times the receiving water body flow in m³/sec to give kg/day or 0.00108 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 4.90 kg/day or 10.8 pounds/day regardless of receiving water flow.

(iii) Estuary from any facility subject to this subpart shall not exceed 0.139 times the receiving water body flow in m³/sec to give kg/day or 0.00864 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 39.2 kg/day or 86.4 pounds/day regardless of receiving water flow.

(iv) Coastal water from any facility subject to this subpart shall not exceed 0.164 times the receiving water body flow in m³/sec to give kg/day or 0.01026 times the receiving water body flow in cfs to give pounds/day: Provided, That no facility shall discharge in excess of 46.5 kg/day or 102.6 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, ferrous metal production, industrial organic chemicals, electroplating, non-ferrous metal smelting and refining, metal mining 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 simple cyanides after all interferences have been eliminated or their effects minimized by appropriate removal techniques.

§ 129.05b Determination 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) Into streams, lakes, or estuaries with a flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes, or estuaries with a low flow greater than 0.283 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters.

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

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

(ii) One-tenth the concentration set forth in paragraph (b) (1) (i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under paragraph (b) (1) (ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b) (1) (ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b) (1) (i) 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.

§ 129.06a Definitions.

As used in this subpart, the term: DDT means the compounds 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) Into streams, lakes, or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes, or estuaries with a low flow greater than 0.283 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters.

(1) The daily average DDT concentration shall not exceed:

(i) 0.2 μg/l for discharges into fresh water bodies (0.8 μg/l for discharges into salt water bodies) which have a low flow greater than or equal to 10 times the waste stream flow with the provision that an immediate 1:10 diffusion is assured; or

(ii) One-tenth the concentration set forth in paragraph (b) (1) (i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under paragraph (b) (1) (ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b) (1) (ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b) (1) (i) of this section.

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

(i) Stream from any facility subject to this subpart shall not exceed 0.000102 times the receiving water body flow in m³/sec, to give kg/day or 0.00000648 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0294 kg/day or 0.0648 pounds day regardless of receiving water flow.

(ii) Lake from any facility subject to this subpart shall not exceed 0.0000868 times the receiving water body flow in m³/sec, to give kg/day or 0.00000540 times the receiving body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0245 kg/day or 0.054 pounds/day regardless of receiving water flow.

(iii) Estuary from any facility subject to this subpart shall not exceed 0.000260 times the receiving water body flow in

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m³/sec. to give kg/day or 0.0000162 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0734 kg/day or 0.162 pounds/day regardless of receiving water flow.

(D) Coastal water from any facility subject to this subpart shall not exceed 0.000311 times the receiving water body flow in m³/sec. to give kg/day or 0.0000194 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.088 kg/day or 0.194 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 endrine is 0.1 µg/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 or 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) Into streams, lakes or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes or estuaries with a low flow greater than 0.283 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into costal waters.

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

(i) 0.2 µg/l for discharges into fresh water bodies (0.6 µg/l for discharges into salt water bodies) which have a low flow greater than or equal to 10 times the waste stream flow with the provision that an immediate 1:10 diffusion is assured; or

(ii) One-tenth the concentration set forth in paragraph (b) (1) (i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under paragraph (b) (1) (ii) of this section, *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b) (1) (ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b) (1) (i) of this section.

(3) The total daily weight of endrin discharged in a/an:

(i) Stream from any facility subject to this subpart shall not exceed 0.000102 times the receiving water body flow in m³/sec. to give kg/day or 0.00000648 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0294 kg/day or 0.0648 pounds/day regardless of receiving water flow.

(ii) Lake from any facility subject to this subpart shall not exceed 0.0000866 times the receiving water body flow in m³/sec. to give kg/day or 0.00000540 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0245 kg/day or .054 pounds/day regardless of receiving water flow.

(iii) Estuary from any facility subject to this subpart shall not exceed 0.000260 times the receiving water body flow in m³/sec. to give kg/day or 0.0000162 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0734 kg/day or 0.162 pounds/day regardless of receiving water flow.

(iv) Coastal water from any facility subject to this subpart shall not exceed 0.000311 times the receiving water body flow in m³/sec. to give kg/day or 0.0000194 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.088 kg/day or 0.194 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. 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.

§ 129.08c Effluent standard for mercury.

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

(a) Into streams, lakes or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes or estuaries with a low flow greater than 0.283 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters.

(1) The daily average mercury concentration shall not exceed

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

(ii) one-tenth the concentration set forth in paragraph (b) (1) (i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under paragraph (b) (1) (ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b) (1) (ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b) (1) (i) of this section.

(3) The total daily weight of mercury discharged into a/an:

(i) Stream from any facility subject to this subpart shall not exceed 0.00260 times the receiving water body flow in m³/sec. to give kg/day or 0.000162 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.735 kg/day or 1.62 pounds/day regardless of receiving water flow.

(ii) Lake from any facility subject to this subpart shall not exceed 0.00216 times the receiving water body flow in m³/sec. to give kg/day or 0.000135 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.612 kg/day or 1.35 pounds/day regardless of receiving water flow.

(iii) Estuary from any facility subject to this subpart shall not exceed 0.0431 times the receiving water body flow in m³/sec. to give kg/day or 0.0027 times the receiving water body flow in cfs to give pounds/day, provided that no facility shall discharge in excess of 12.2 kg/day or 27.0 pounds/day regardless of receiving water flow.

(iv) Coastal water from any facility subject to this subpart shall not exceed 0.0519 times the receiving water body flow in m³/sec. to give kg/day or 0.0032

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times the receiving water body flow in cfs to give pounds/day, provided that no facility shall discharge in excess of 14.7 kg/day or 32.4 pounds/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 and capacitor manufacturing facility; any manufacturing facility, formulating facility, or facilities which use polychlorinated biphenyls in processes or products, constituting a point source discharging into navigable waters.

§ 129.09a Definitions.

As used in this subpart, the term: Polychlorinated biphenyls (PCB's) means materials containing the biphenyl group which have been chlorinated to varying degrees. There are 210 possible different PCB compounds.

§ 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) Into streams, lakes or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes or estuaries with a low flow greater than 0.283 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters.

(1) The daily average PCB concentration shall not exceed:

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

(ii) One-tenth the concentration set forth in paragraph (b)(1)(i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under (b)(1)(ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b)(1)(ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b)(1)(i) of this section.

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

(i) Stream from any facility subject to this subpart shall not exceed 0.000104 times the receiving water body flow in m³/sec. to give kg/day or 0.00000648 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0294 kg/day or 0.0648 pounds/day regardless of receiving water flow.

(ii) Lake from any facility subject to this subpart shall not exceed 0.0000865 times the receiving water body flow in m³/sec. to give kg/day or 0.00000540 times the receiving body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.0245 kg/day or 0.0540 pounds/day regardless of receiving water flow.

(iii) Estuary from any facility subject to this subpart shall not exceed 0.000735 times the receiving water body flow in m³/sec. to give kg/day or 0.0000459 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.208 kg/day or 0.459 pounds/day regardless of receiving water flow.

(iv) Coastal water from any facility subject to this subpart shall not exceed 0.000883 times the receiving water body flow in m³/sec. to give kg/day or 0.0000551 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.250 kg/day or 0.551 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 $C_{10}H_{10}Cl_8$ containing 67–69% 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) Into streams, lakes or estuaries with a low flow of less than or equal to 0.283 cubic meters per second (10 cfs) or into lakes with an area of less than or equal to 202 hectares (500 acres), there shall be no discharge of the listed pollutants.

(b) Into streams, lakes or estuaries with a low flow greater than 0.283 cubic meters per second (10 cfs) or into lakes with an area of greater than 202 hectares (500 acres) or into coastal waters.

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

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

(ii) One-tenth the concentration set forth in paragraph (b)(1)(i) of this section for discharges into water bodies which have a low flow less than 10 times the waste stream flow.

(2) An NPDES permit may authorize an increase in the concentrations permitted to be discharged under paragraph (b)(1)(ii) of this section: *Provided*, That the discharger demonstrates that immediate diffusion of the discharge to concentrations specified in paragraph (b)(1)(ii) of this section will occur: *And provided further*, That no such permit shall authorize any discharge in a concentration exceeding the concentration set forth in paragraph (b)(1)(i) of this section.

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

(i) Stream from any facility subject to this subpart shall not exceed 0.000519 times the receiving water body flow in m³/sec. to give kg/day or 0.0000324 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.147 kg/day or 0.324 pounds/day regardless of receiving water flow.

(ii) Lake from any facility subject to this subpart shall not exceed 0.000431 times the receiving water body flow in m³/sec. to give kg/day or 0.0000270 times the receiving water body flow in cfs to give pounds/day, provided that no facility shall discharge in excess of 0.122 kg/day or 0.270 pounds/day regardless of receiving water flow.

(iii) Estuary from any facility subject to this subpart shall not exceed 0.000431 times the receiving water body flow in m³/sec. to give kg/day or 0.0000270 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.122 kg/day or 0.270 pounds/day regardless of receiving water flow.

(iv) Coastal water from any facility subject to this subpart shall not exceed 0.000519 times the receiving water body flow in m³/sec. to give kg/day or 0.0000324 times the receiving water body flow in cfs to give pounds/day: *Provided*, That no facility shall discharge in excess of 0.147 kg/day or 0.324 pounds/day regardless of receiving water flow.

[FR Doc.73-26918 Filed 12-26-73;8:45 am]

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the requirements of § 51.4 of this chapter.

(m) In any area covered by a parking management plan approved under paragraph (1) of this section, no action to expand the number of spaces at parking facilities may be taken that is not explicitly provided for in the plan without a permit issued in accordance with the requirements of paragraphs (d) through (k) of this section.

[FR Doc.74-199 Filed 1-3-74;8:45 am]

SUBCHAPTER D—WATER PROGRAMS

PART 104—PUBLIC HEARINGS ON EFFLUENT STANDARDS FOR TOXIC POLLUTANTS

Pursuant to the authority of section 307(a) of the Federal Water Pollution Control Act, as amended (the Act) (Pub. L. 92-500, 86 Stat. 816), notice is hereby given that the Environmental Protection Agency has adopted a new Part 104, Title 40, Code of Federal Regulations, establishing rules of practice applicable to public hearings in connection with the establishment of effluent standards for toxic pollutants.

Section 307(a)(3) of the Act requires that, whenever the Administrator publishes a proposed effluent standard for a toxic pollutant, "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 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 rules set forth procedures for the required formal rulemaking hearings. Under the statute, modifications in proposed standards must be justified by a preponderance of evidence on the record. Thus, the procedures set forth below are intended to assure the production of a full and complete record.

Because these requirements constitute "rules of agency procedure or practice", notice and public procedure hereon are not required by 5 U.S.C. section 553. The regulations set forth below are hereby adopted, effective January 4, 1974.

Dated: December 27, 1973.

JOHN R. QUARLES, Jr.
Deputy Administrator.

Chapter I of Title 40, Code of Federal Regulations, is amended by adding a new Part 104, as follows:

Sec.
104.1 Applicability.
104.2 Definitions.
104.3 Notice of Hearing.
104.4 Statement of Basis and Purpose.
104.5 Docket.
104.6 Objections to Proposed Effluent Standard.
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104.14 Tentative or Recommended Decision.
104.15 Decision of Administrator.
104.16 Ex Parte Discussions.
104.17 Filing and Time.

AUTHORITY: Sections 501 and 307(a) of the Federal Water Pollution Control Act, as amended (Pub. L. 92-500, 86 Stat. 816).

§ 104.1 Applicability.

This Part shall be applicable to hearings held in connection with the establishment of toxic pollutant effluent standards under section 307(a) of the Act.

§ 104.2 Definitions.

As used in this part, the term:

(a) "Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. section 1251 *et seq.*, Pub. L. 92-500, 86 Stat. 816.

(b) "Administrator" means the Administrator of the Environmental Protection Agency, or any employee of the Agency to whom the Administrator may by order delegate his 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) "Hearing clerk" means the Hearing Clerk, U.S. Environmental Protection Agency, Washington, D.C. 20460.

(d) "Party" means the staff of the Environmental Protection Agency, and any person who files an objection pursuant to § 104.6 hereof, or the authorized representative of any such person.

(e) "Person" means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.

(f) "Effluent standard" means any effluent standard, which may include a prohibition of any discharge, established or proposed to be established for any toxic pollutant under section 307(a) of the Act.

(g) "Presiding officer" means the person designated by the Administrator to preside at a hearing under this part.

§ 104.3 Notice of hearing.

Whenever the Administrator publishes any proposed effluent standard, he shall simultaneously publish a notice of a public hearing to be held within thirty days following the date of publication of such proposed standard. The notice shall set forth a date prior to which any party may file objections to the proposed effluent standard in accordance with § 104.6 hereof.

§ 104.4 Statement of basis and purpose.

Whenever the Administrator publishes a proposed effluent standard, he shall make available to any interested person a statement of the basis and purpose of such standard. Such statement shall be set forth in its entirety or summarized in the preamble to the notice of proposed rulemaking for the effluent standard, and shall include:

(a) An explanation of how the proposed standard was derived, including any assumptions or calculations necessary for its derivation;

(b) Scientific and technical data and studies supporting the proposed standard; and

(c) Such other information as is necessary to fully set forth the basis and purpose of the standard.

§ 104.5 Docket.

Whenever the Administrator publishes a notice of hearing under this Part, the hearing clerk shall promptly establish a docket for the hearing, which shall contain the complete record of the hearing. The docket shall include all objections filed by any party, a verbatim transcript of the hearing, the statement of basis and purpose required by § 104.4 hereof, any public comments received pursuant to the notice setting forth the proposed effluent standards, and such other documents or exhibits as may be received in evidence by the presiding officer. Any documents in the docket shall be available to any person at actual cost of duplication.

§ 104.6 Objections to Proposed Effluent Standard.

Objections will be received for filing only if they comply with all the following provisions:

(a) Objections shall be received by the Hearing Clerk only if postmarked on or before the date set forth in the notice of hearing under § 104.3 hereof: *Provided*, That if the presiding officer finds that reasonable cause existed for the failure of an objector to file an objection prior to such date, he may authorize the objection to be filed subsequently thereto;

(b) Each objection to a proposed effluent standard shall be separately numbered;

(c) Objections must state with particularity the provisions of the proposed standard to which objection is taken, and must identify the specific modifications sought;

(d) Objections must be supported by reasonable grounds which, if true, are adequate to justify the specific modifications sought. If the objection alleges that the Administrator should not have relied on certain information, data, or expert opinion in setting an effluent standard, the objection shall specify precisely what information, data, or opinion should not have been relied upon, and the reasons therefor. If an objection alleges that a standard should be modified because of economic impact or considerations relating to feasibility or cost of treatment, such objection shall specify the relevance of such factors to determinations required to be made under section 307(a) of the Act.

The presiding officer shall promptly notify any person whose objection is not accepted for filing for any of the reasons set forth in this section, stating the reasons for such refusal. The objector may within seven days after receipt of such notification make a written reply.

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§ 104.7 Designation of presiding officer.

The Administrator may preside personally at any hearing under this Part, or he may designate a presiding officer for the hearing. No person who has any personal pecuniary interest in the outcome of a proceeding under this Part shall serve as presiding officer in such proceeding.

§ 104.8 Powers of presiding officer.

The presiding officer shall have the duty to conduct a fair hearing within the time constraints imposed by section 307 (a) of the Act. He shall take all necessary action to avoid delay and to maintain order. He shall have all powers necessary to these ends, including but not limited to the power to:

(a) Rule upon motions and requests;

(b) Change the time and place of the hearing, and adjourn the hearing from time to time or from place to place;

(c) Examine and cross-examine witnesses and receive evidence;

(d) Admit or exclude evidence;

(e) Hear oral argument on the facts or the law;

(f) Require any part or all of the evidence to be submitted in writing.

§ 104.9 Prehearing conferences.

The presiding officer on his own motion, or on the motion of any party or his representative, may direct all parties or their representatives to appear at a specified time and place for a conference for:

(a) The simplification of the issues;

(b) The possibility of obtaining stipulations, admission of facts, and documents;

(c) The possibility of limitation of the number of witnesses;

(d) The identification, and if practicable, the scheduling of witnesses to be called;

(e) If appropriate, the advance submission at the prehearing conference by any party of all documentary evidence to be marked for identification. When portions only of a document are to be relied upon, the offering party shall prepare the pertinent excerpts thereof, adequately identified, and shall supply copies of such excerpts together with the original document to the presiding officer for examination and study by all other parties and for use by opposing counsel.

(f) Such other matters as may aid in the expeditious disposition of the proceeding.

§ 104.10 Admission of evidence.

(a) Where a prehearing conference has been held, and the presiding officer has directed identification of witnesses and production of documentary evidence at such conference, the presiding officer may exclude any such evidence, or refuse to allow any witnesses to testify, where such witnesses were not identified or such documents submitted at the prehearing conference. Such evidence or testimony may be permitted, however, upon a showing satisfactory to the presiding officer that good cause existed for failure to produce them at the prehearing conference. The presiding officer may, following a prehearing conference, issue an order setting forth the agreements reached by the parties or representatives, the schedule of witnesses, and a statement of issues for the hearing. Such order shall control the subsequent course of the proceeding unless modified for good cause by subsequent order.

(b) The authenticity of all published or official documents included in the statement of facts and purpose or submitted at the prehearing conference shall be deemed admitted unless written objection thereto is filed with the presiding officer upon notice to the other parties within a time period which shall be specified by the presiding officer.

(c) The presiding officer shall, insofar as practicable, exclude evidence which is immaterial, irrelevant, or unduly repetitious, or which is not of the sort upon which responsible persons are accustomed to rely.

(d) If relevant and material evidence is contained in a report or document containing immaterial or irrelevant matter, such immaterial or irrelevant matter shall be excluded and shall be segregated insofar as practicable, subject to the direction of the presiding officer.

(e) Whenever evidence is excluded from the record, the party offering such evidence may make an offer of proof, which shall be included in the transcript. The offer of proof shall consist of a brief statement describing the evidence to be offered. If the evidence consists of a brief statement or affidavit, or an exhibit, it shall be inserted into the transcript *in toto*. In such event, it shall be considered a part of the transcript if the Administrator decides that the presiding officer's ruling in excluding the evidence was erroneous. The presiding officer shall not allow the insertion of such evidence *in toto* if the taking of such evidence will consume a considerable length of time at the hearing. But if the Administrator rules that such evidence should have been admitted, the hearing shall be reopened for that purpose.

(f) Affidavits may be admitted as evidence upon a showing of their relevancy, materiality, and competency. All parties may be permitted to examine all affidavits that are filed and to file counter affidavits within a period of time set by the presiding officer.

(g) Where affidavits or other documents are admitted without cross-examination of the affiant or maker, or where cross-examination is limited for any purpose by the presiding officer, the Administrator shall consider the extent to which an opportunity for cross-examination was provided in determining the weight to be accorded to evidence appearing in the record.

§ 104.11 Hearing procedures.

(a) *Burden of proof.* The burden of proof, and of going forward to present an affirmative case, shall be upon any party seeking to show that a modification of the proposed standard is justified. The presiding officer shall establish the order in which such parties shall be heard.

(b) *Limitation on oral testimony.* Where necessary in order to prevent undue prolongation of the hearing, or to comply with time limitations set forth in the Act, the presiding officer may limit the number of witnesses who may testify, and the scope and extent of cross-examination. Where necessary, corroborative or cumulative evidence may also be so limited.

(c) *Transcript.* A verbatim transcript of the hearing procedure shall be maintained, and shall constitute a part of the record.

(d) *Objections to admission of evidence.* If a party objects to the admission or rejection of any evidence or to any other ruling of the presiding officer during the hearing, he shall state briefly the grounds of such objection. If the objection is overruled by the presiding officer, an automatic exception will follow. The transcript shall not include argument or debate on an objection except as ordered by the presiding officer. The ruling of the presiding officer on any objection shall be a part of the record. No interlocutory appeal may be taken from any ruling of the presiding officer.

(e) *Waiver of objections to effluent standard.* Any party may at any time withdraw his objections to a proposed effluent standard. Any party who, after timely notice thereof, fails to appear at a hearing under this Part shall be deemed to have waived his objections.

§ 104.12 Written arguments.

The presiding officer shall announce at the hearing a reasonable period of time within which any party may file with the hearing clerk proposed findings and conclusions, and written arguments or briefs, based upon the record, citing, where applicable, the page or pages of the transcript or otherwise identifying the specific evidence in the record which is relied upon. If the party filing a brief seeks consideration by the Administrator of objections made by such party to any ruling of the presiding officer, he shall include in the brief a concise statement concerning each such objection, referring, where practicable, to the pertinent pages of the transcript.

§ 104.13 Certification of record.

The presiding officer shall notify the hearing clerk of the close of a hearing as soon as possible thereafter and of the time for filing written arguments, briefs, and proposed findings of fact and concomitant modifications in the proposed effluent standard. As soon as possible after the hearing, the presiding officer shall transmit to the hearing clerk the transcript of the testimony and any exhibits not already included in the docket. The presiding officer shall attach to the original transcript of testimony his certificate stating that, to the best of his knowledge and belief, the transcript is a true transcript of the testimony given at the hearing except in such particulars as he shall specify, and that the exhibits transmitted are all the exhibits so introduced at the hearing with such exceptions as he shall specify. At the end of the time period announced by the pre-

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Monsanto

MONSANTO INDUSTRIAL CHEMICALS CO.
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
Phone: (314) 694-1000

July 13, 1973

Dr. Martha Sager, Chairman
Effluent Standards and Water Quality
Information Advisory Committee
Environmental Protection Agency
Room 821, Crystal Mall, Building 2
Washington, D.C. 20460

Re: Effluent Standards and Water Quality
Information Advisory Committee
Agenda and Notice of Public Hearings
Federal Register, Vol. 38, No. 116, Page 11868
Monday, June 18, 1973

Dear Dr. Sager:

Monsanto Company, as an interested party and a manufacturer of polychlorinated biphenyl (PCB), would like to take this opportunity to share with the Committee, and present for the record, our experiences regarding the manufacture, sale and handling of PCB and its relationship to the environment.

We hope this information, along with the attached exhibits, will be helpful to the Committee and the Administrator when proposing effluent standards for toxic pollutants.

BACKGROUND

Monsanto Company has been a major manufacturer of chemical products since 1901. These products are used in numerous American industries, and in fact, through our research department, we have played a role in developing new products to meet the needs of industry and the consumer.

On some occasions a chemical compound with specific properties is developed to meet a need in a certain application. In other cases a chemical compound with unique properties is developed first -- possibly through innovative research or even by happenstance -- and then an end-use is found.

siding officer under § 104.12, the record shall promptly be transmitted to the Administrator for decision, including all documents filed in the docket, all motions and requests filed with the hearing clerk and rulings thereon; the certified transcript; and any proposed findings and conclusion of written arguments or briefs which have been filed.

§ 101.14 Tentative or recommended decision.

(a) As soon as practicable following the termination of the period allowed for the filing of written arguments or briefs and proposed findings and conclusions, the Administrator shall file a tentative decision with the hearing clerk, or he shall designate a responsible employee of the Environmental Protection Agency to prepare a recommended decision.

(b) The tentative or recommended decision shall include a brief explanation of the material issues of fact, law, or discretion presented on the record, and proposed findings and conclusions with respect to such issues and the reasons or basis therefor. The tentative or recommended decision shall also include a ruling on each proposed finding or conclusion submitted by an objector, but need not include a ruling on any objection to a ruling of the presiding officer, except for any such ruling which is reversed by the Administrator.

(c) Upon the filing of the tentative or recommended decision, the Administrator shall give notice thereof, and opportunity to file exceptions thereto by publication in the FEDERAL REGISTER. Within a period of time specified in such notice any interested person may file with the hearing clerk exceptions to the tentative or recommended decision, and a brief in support of such exceptions, setting forth references to the basis in the record for the exceptions, and any proposed changes in the tentative or recommended decision.

(d) Submission to Administrator: Upon the expiration of the period allowed for filing exceptions, the hearing clerk shall transmit to the Administrator any exceptions to the tentative or recommended decision which have been filed, with any briefs filed in support thereof.

(e) The procedures set forth in paragraphs (a) through (d) of this section may be omitted where the Administrator finds that due and timely execution of his functions, including compliance with time limitations established by law, imperatively and unavoidably so requires.

§ 101.13 Decision of Administrator.

After due consideration of the record, including exceptions and briefs filed under § 104.14, if any, the Administrator shall determine whether a modification of the proposed effluent standard is justified based upon a preponderance of evidence adduced at the hearing. If he determines that a modification is justified, he shall immediately promulgate a revised effluent standard.

§ 101.16 Ex parte discussions.

At no stage of a hearing under this Part shall the Administrator or the presiding officer consult with any person or party on a fact at issue: *Provided*, That the Administrator or the presiding officer may discuss facts at issue with any such person or party if all parties have been given reasonable notice and an opportunity to be present.

§ 104.17 Filing and time.

(a) All documents or papers required or authorized by the foregoing provisions of this Part shall be filed in quadruplicate. Any document or paper so required or authorized to be filed with the hearing clerk shall, during the course of the hearing, be filed with the presiding officer. A copy of each document or paper filed by any party with the presiding officer shall be provided to all other parties.

(b) Any document or paper required or authorized to be filed by this Part shall be deemed to be filed when postmarked, or in the case of papers delivered other than by mail, when received by the hearing clerk.

(c) Sundays and Federal holidays shall be included in computing the time allowed for the filing of any document or paper: *Provided*, That when such time expires on a Sunday or legal holiday, such period shall be extended to include the next following business day.

[FR Doc.74-198 Filed 1-3-74;8:45 am]

Title 41—Public Contracts and Property Management

CHAPTER 5A—FEDERAL SUPPLY SERVICE

PART 5A-12—LABOR

PART 5A-16—PROCUREMENT FORMS

General Services Administration; Labor Practices

This amendment of the General Services Administration Procurement Regulations (1) adds procedures applicable to the award and reporting of contracts subject to the Walsh-Healey Public Contracts Act and (2) adds procedures for carrying out the General Services Administration Equal Employment Opportunity Program. The amendment provides that the GSA Office of Civil Rights is responsible for the GSA Equal Employment Opportunity Program and indicates the duties and responsibilities of various officials and organizational units associated with the program. In addition, the amendment implements the requirements of the Secretary of Labor (41 CFR 60-3) pertaining to employee testing and other selection procedures.

Chapter 5A is amended to add new Part 5A-12, as follows:

Subpart 5A-12.6—Walsh-Healey Public Contracts Act

Sec. 5A-12.604 Responsibilities of contracting officers.

Subpart 5A-12.8—Equal Opportunity in Employment

5A-12.800 Scope of subpart.
5A-12.803 Basic requirements.
5A-12.803-2 Equal Opportunity clause.
5A-12.803-3 Notice to bidders regarding preaward equal opportunity compliance reviews.
5A-12.803-50 Equal opportunity representation.
5A-12.804 Exemptions.
5A-12.804-1 General.
5A-12.804-2 Specific contracts.
5A-12.804-3 Facilities not connected with contracts.
5A-12.805 Administration.
5A-12.805-1 Duties of agencies.
5A-12.805-4 Reports and other required information.
5A-12.805-5 Compliance reviews.
5A-12.805-6 Complaints.
5A-12.805-9 Sanctions and penalties.
5A-12.805-50 Ability to comply with the Equal Opportunity clause.
5A-12.805-51 Equal opportunity considerations.
5A-12.805-52 [Reserved].
5A-12.805-53 Compliance agency.
5A-12.805-54 Furnishing information to contractors.
5A-12.807 Hearings.
5A-12.807-1 General.
5A-12.807-2 Informal hearings.
5A-12.807-3 Formal hearings.
5A-12.810 Affirmative action compliance programs.
5A-12.813 Rulings and interpretations.
5A-12.850 Validation of employment tests.
5A-12-850-1 General.
5A-12.850-2 Evidence of validity.
5A-12.850-3 Minimum standards for validation.
5A-12.850-4 Employment agencies and State employment services.
5A-12.850-5 Use of validity studies.
5A-12.850-6 Assumptions of validity.
5A-12.850-7 Continued use of tests.
5A-12.850-8 Other selection techniques.
5A-12.850-9 Compliance reviews.

Subpart 5A-12.6—Walsh-Healey Public Contracts Act

§ 5A-12.604 Responsibilities of contracting officers.

(a) *Notification to contractors.* Contracting officers shall furnish contractors with copies of Department of Labor W H Publication 1313, Notice to Employees Working on Government Contracts (illustrated at § 5A-16.954-1313) when awarding a contract subject to the Walsh-Healey Public Contracts Act. In addition, Form PC-16, Minimum Wage Determinations under the Walsh-Healey Public Contracts Act (copies available from Department of Labor) has been prepared by the Department of Labor to enable a contractor to ascertain the minimum wage determinations applicable to a particular contract. The Department of Labor will issue amendments to Form PC-16 as new determinations become effective. Copies of both W H Publication 1313 and PC-16 should be supplied for each of the contractor's establishments performing on contracts subject to the Walsh-Healey Public Contracts Act.

(b) *Reporting contract awards to Department of Labor.* The original and 1 copy of Standard Form 99, Notice of Award of Contract (illustrated at § 5A-16.901-99), shall be forwarded to the Department of Labor, Employment Standards Administration, Wage and Hour Division, Washington, DC 20210. A copy shall be retained in the procurement file. Detailed instructions for preparing

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The chemical structure of PCB has been known for nearly 100 years. It was not until the late 1920s that a use for PCB was found -- as a dielectric fluid in transformers and capacitors. The properties of PCB -- inertness, fire resistance and a nonconductor of electricity -- seemed to be perfectly suited to these electrical applications where high-voltage arcing could occur, possibly resulting in serious fires or damage to the equipment.

Monsanto began commercial production of PCB in 1929. As the unique properties of the material became known new uses were found. For example, their fire-resistant nature made them excellent choices for use in heat-transfer fluids. Their inertness gave long-lasting qualities to lubricants. Their use in surface coatings improved waterproofing characteristics.

Handling of the product at the manufacturing level has not presented problems so long as the proper industrial hygiene practices were followed and PCB has always been considered less hazardous than many other chemicals in everyday use.

Therefore, it appeared that PCBs were a very suitable product which met the needs of industry.

Late in the 1960s, sophisticated analytical procedures were developed which could detect very minute quantities of PCB in nature. Following this analytical breakthrough, researchers discovered that PCB could possibly be affecting certain forms of aquatic, marine, terrestrial and avian wildlife.

The persistent nature and stability of PCB, while so desirable from the standpoint of many industrial applications, appeared to be undesirable in terms of our environment.

INDUSTRY ACTIONS

When questions about the effect of PCB on the environment first surfaced, Monsanto Company reviewed its product line and the applications for these products. As more data were developed and the environmental controversy grew, Monsanto took steps intended to reduce the entry of PCB into the environment. The company stopped the sale of PCB for use in various applications, except where no acceptable alternatives were available.

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Today, PCB manufactured by Monsanto Company is sold to the electrical industry where it is used in closed systems as a dielectric fluid in transformers and capacitors -- applications for which we understand there continue to be no acceptable substitutes.

Our manufacturing and sales reduction program was a unilateral action taken by Monsanto and was based on our evaluation of developing environmental data.

Recognizing the need for proper controls in the handling and use of PCBs, representatives of the transformer and capacitor industries, utilities, and governmental agencies under the initial auspices of the National Electrical Manufacturers Association formed American National Standards Institute Committee C-107. A copy of the Committee's recently issued proposed guidelines for the handling and disposal of dielectric fluids is attached. These guidelines reflect the industry's understanding of the need for proper control and should contribute significantly toward this objective.

TOXICITY IN PERSPECTIVE

In Section 502 (13) of the current Federal Water Pollution Control Act, the term "toxic pollutant" is defined as "those pollutants or combinations of pollutants including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such organisms or their offspring."

While the breadth of this definition can be so construed as to permit the inclusion of many substances on a list of "toxic pollutant(s)," we concur with the recent suggestion of the EPA's Acting Administrator (Federal Register Vol. 38, No. 129, page 18044) that Congress intended the Administrator under the Act "... to be selective in determining which of the potentially large number of candidate substances

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actually should be listed at various times." Although not spelled out in the definition, we feel it important to consider the degree of toxicity of the substance; differences in biological species' sensitivity; and whether or not the substance poses a threat to man, animals, birds, the aquatic environment or some other aspect of the ecosystem.

For example, there is a material difference between the threat to human health posed by equal amounts of the "cyanide ion" and "PCBs," both of which substances appear on your proposed list of pollutants. We feel certain the members of your committee will agree that these two substances should not be considered on the same basis merely because they are both suggested for inclusion in the same list.

We trust that comparative differences in the potential hazard to health and our environment of the various substances proposed for your list will be an important factor in your deliberations and determinations.

On the basis of available evidence, it would appear that PCBs pose less of an acute toxic health hazard than many substances not proposed for your list, and at the levels found in the total environment are not a threat to public health. We believe these views agree with the conclusions reached by the Interdepartmental Task Force on PCBs in its report dated May, 1972 (COM-72-10419).

We sincerely believe, because of Monsanto's sales policies discussed elsewhere, and actions of others throughout the world, that the levels of PCB in the aquatic environment are even lower now than at the time the Task Force report was prepared.

BIODEGRADATION

A valid assessment of the environmental impact of polychlorinated biphenyls must include consideration of the persistence of these materials. Certain reports have been made that PCBs are non-degradable. However, although much work remains to be done, an analysis of available information and information from studies by Monsanto indicate beyond any reasonable doubt that the many PCB

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isomers degrade in the environment at different rates. This information indicates that under the proper conditions of use and control, some of the commercial PCBs, which are mixtures of several isomers, can be utilized and their safety benefits can be realized without serious adverse consequences to the environment.

In May, 1972 we shared with members of the Federal Interdepartmental Task Force on PCBs the results of studies of residual PCBs in animal tissues and biodegradation by activated sludges. A copy of this presentation is attached for review by your Committee. Articles describing in more detail the results of the degradation studies in activated sludges and soils are being prepared for publication. Copies of these reports will be mailed to your Committee when they are completed.

EFFLUENT STANDARDS

The worldwide interest in PCBs and their environmental impact has resulted in an abundance of published articles. To assist the Committee we have attached a bibliography of some of the pertinent literature, copies of selected articles and a copy of the Interdepartmental Task Force report. This report, in our opinion, is an excellent reference document and we recommend it to the Committee as a valuable source of information as you consider possible effluent standards.

Although much has been published, much more scientific information is required. This critical need for more knowledge was recognized by the Task Force and is highlighted in its report under "Findings, Conclusions and Recommendations".

It is our considered opinion that in the absence of critical basic scientific data any attempt to establish a PCB standard for water effluents at point sources would be premature at this time.

Pending the availability of the data which would contribute to the establishment of a realistic effluent standard, it is appropriate to consider that the restricted use and proper control of PCBs have and will continue to result in a diminished impact on the environment. Furthermore, the recent ruling by the Food and Drug Administration

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(Federal Register, Volume 38, Number 129, July 6, 1973) provides for temporary PCB tolerances in food, animal feeds and food packaging materials, thereby limiting exposure to humans and domestic animals.

We appreciate the opportunity the Committee has provided for interested parties to contribute information. If you have any questions concerning our comments or any of the attachments we will be pleased to supply further explanations or information upon request.

Respectfully submitted,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosures

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August 6, 1973

Dr. C. H. Thompson
Office of Air and Water Programs
Environmental Protection Agency
Washington, D.C. 20460

Re: Environmental Protection Agency
(40 CFR Part 129)
Water Pollution Prevention and Control
Proposed List of Toxic Pollutants
Federal Register, Volume 38, No. 129
Pages 18044 and 18045
Friday, July 6, 1973

Dear Dr. Thompson:

Monsanto Company, as a manufacturer of polychlorinated biphenyls (PCBs), appreciates the opportunity to comment on the proposed list of toxic pollutants.

Recently we submitted comments to Dr. Martha Sager, Chairman, Effluent Standards and Water Quality Information Advisory Committee, to assist the Committee in its evaluation of effluent standards for toxic pollutants.

We believe these comments to be timely and relevant to the proposal being considered by your Office and have enclosed copies for your use.

If you have any questions concerning our comments or any of the attachments, we will be please to supply further explanations or information upon request.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosures

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GENERAL ELECTRIC

PRODUCT
QUALITY
STAFF

GENERAL ELECTRIC COMPANY, 1 RIVER ROAD, SCHENECTADY, NEW YORK 12345
Phone (518) 374-2211

Subject: Effluent Limitations for Items on Toxic Substances List: Economic Impact of a Ban on PCB

November 21, 1973

Dr. Martha Sager
Chairman, Effluent Standards
and Water Quality Information
Advisory Committee
Environmental Protection Agency
Room 821, Crystal Mall, Bldg. #2
Washington, D. C. 20460

Dear Dr. Sager:

With reference to your forthcoming meeting (38FR30577) and pursuant to our understanding that the Committee has expressed an interest in knowing the economic impact of a possible ban of polychlorinated biphenyls (or a restriction tantamount to a ban), we have the following comments to offer:

The value of the annual production of PCB transformers in the U.S. is approximately $45 million and that of capacitors $140 million. Neither of these figures forms an appropriate base for assessing the socio-economic effect of regulations having the force of a ban on further production. Should such a ban occur in the near future (i.e., within five years) the impact of PCB transformer unavailability would be felt primarily in terms of disruption of building construction, electric distribution, and railroad equipment projects; and interruption of the supply of PCB capacitors would impact most heavily on the electrical supply situation, exacerbating the "energy crisis."

Most PCB transformers are installed in industrial, commercial, and residential substation applications. A considerable number are installed on electric railway passenger commuter cars serving major metropolitan areas. In all applications, these tranformers distribute electric power reliably without risk of fire and explosion, and in compliance with specific laws, codes, and insurance restrictions mandating non-flammable liquid content. There is no readily available alternative for many applications where construction is under way or plans are complete. As much as $1 billion of construction projects could be seriously delayed, involving schools, factories, office buildings, apartment houses, and commuter trains.

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The PCB capacitors produced in the U.S. annually have a major effect in reducing the electric current which would otherwise have to be generated to serve industrial and public needs. The saving may be approximated by summing up the incremental cost of oversize generators and that portion of transmission and distribution system equipment which is thermally limited. Equipment in these classes, corresponding to the 44 million kilovars of new capacitors installed annually, has a value of approximately $1 billion. A forced conversion to a non-PCB capacitor would be hampered by shortages of basic capacitor materials and factory production capability, thus placing in jeopardy about half of this annual saving. Additionally, there would be serious dislocations in the lighting and air-conditioning industries due to shortages and mismatches of capacitors required in those systems.

The enclosed paper, "The Role of Polychlorinated Biphenyls in Electrical Equipment", February 4, 1972, was prepared originally for the Office of Science and Technology and is included here for further information on the economic value of these devices. In addition, we have updated the information about capacitors and addressed ourselves specifically to the consequences of unavailability of PCB capacitors in the enclosed new study entitled, "The Impact of a 'Ban' on the Use of PCB in Capacitors," November 19, 1973.

Important as are economic considerations, we feel that the case for continued use of PCB's in capacitors and transformers rests less on these factors than upon the lack of substantiated need for any tighter constraints on the handling of these materials than those already in use or assumed as goals by the electrical industry. These aspects are discussed in the enclosed letter from Dr. Simons of General Electric to Dr. Thompson of E.P.A., commenting upon toxic pollutant effluent standards (reference, 38FR21342).

We hope this discussion will be of use to your committee.

Very truly yours,

James S. Nelson

James S. Nelson, Consultant-
Product Environmental Compatibility

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cc: Dr. C. Hugh Thompson
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IDS 002363

WATER_PCB-SD0000001916

THE IMPACT OF A "BAN" ON THE USE OF PCB IN CAPACITORS

SUMMARY

The PCB-impregnated capacitors produced in the U.S. annually have a major effect in reducing the electric current which must be generated to serve industrial and public needs for power. The annual saving may be viewed as equivalent to 44 large electric generators, each of the 1000 megawatt size, which do not need to be installed – an aggregation comparable to the nation's annual growth requirement.

The following consequences will result from a PCB effluent standard so strict as to have the effect of a ban:

- If the industry is forced to convert to a non-PCB impregnant, low dielectric-constant liquids, such as mineral oil, offer the best initial fallback position.

- Mineral oil would roughly double the pounds of capacitor grade dielectric paper and aluminum foil needed to produce present capacitor requirements. Current world-wide shortages of capacitor paper and foil would not support this.

- Materials availability would support about 50% of the current capacitor requirements using mineral oil.

- If adequate materials supplies were somehow attained, current capacitor manufacturing facilities could produce at best only 50% of capacitor unit requirements.

- Forced conversion to a non-PCB would result in capacitor shortages and major production cutbacks in the lighting, air conditioner, and power supply industries, and in their customer operations.

- Doubling the size of capacitors would present serious replacement problems where PCB capacitors had been used.

- Ballast and air conditioner manufacturers would have to redesign certain products to accept the larger capacitors.

- Power system stability would be adversely affected by a shortage of capacitors, and black-outs could be expected.

- New non-PCB's, such as G.E.'s Econol, could subtantially reduce the magnitude of the materials problem. However, Econol still represents an unknown risk in reliability and safety in the major consumer application areas. A mass conversion is not justified at this time.

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I. INTRODUCTION

This is a forecast of the consequences of a PCB effluent standard which cannot be met by capacitor manufacturers, and consequently becomes an effective ban. It is submitted by the General Electric Company to assist in the determination of appropriate effluent standards relative to capacitor grade PCB.

II. BACKGROUND

In the U.S., an impregnated capacitor can be very simply described as:

- Aluminum foil (around 0.22 mil thick) which serves as the electrodes.
- Sheets of dielectric consisting of capacitor grade paper or combinations of this paper with plastic film. The dielectric is positioned between the aluminum electrodes as it is wound into rolls.
- An appropriate liquid impregnant.
- A sealed container for the capacitor roll and impregnant.

The choice of dielectric materials, the number of sheets, and their thicknesses are all the result of many years of research and testing for reliability and consumer use safety. About 90-95% of liquid impregnated capacitors contain PCB, and are critical components to the fluorescent and mercury vapor lighting, the electric motor and air conditioning industries, and power transmission by electric utilities. The dielectric paper and plastic films (primarily polypropylene), aluminum foil, and PCB have all been specially developed and controlled for capacitor use and are produced as "specialty" materials.

Capacitor grade PCB is Aroclor 1016, manufactured only by Monsanto. It is primarily trichlorobiphenyl. It differs from all previously used formulations in that practically all of the higher boiling homologs--which have given rise to reports of PCB in wild-life residues--have been removed. Introduced in 1971, it is now the only PCB used by the U.S. capacitor industry. Compared to other formulations,

- it has a higher degree of biodegradability;
- it has a lower degree of persistence in the environment.

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III. CONSEQUENCES OF A "BAN" TO THE CAPACITOR INDUSTRY

This evaluation addresses itself to the situation wherein the capacitor industry is effectively banned from using PCB's.

A. Alternative Impregnants

Alternative impregnants are unproved in the U.S. capacitor industry. Mineral oil was the major impregnant before PCB's, and it appears to represent the best immediate fallback position. Even though mineral oil technology would put the industry back 30-40 years in progress, it still represents the best combination of known technology, materials availability, and reliability. For these reasons, mineral oil impregnant has been selected at this time as the basis of comparison with PCB's.

There have been a number of very active programs to develop non-PCB impregnants, especially after the environmental problem was recognized. These programs are continuing in the industry, and it is expected that an improvement will be found which would be more acceptable than mineral oil. As an example, General Electric is using a phthalate ester as the base for its non-PCB Econol® impregnant. Econol® capacitors are being sold commercially where special situations require a non-PCB. This is the case where U.S. electrical equipment, such as computers, is to be shipped to Japan where PCB's are banned.

Econol® has a higher dielectric constant (see next Section B for discussion of this property) than mineral oil, and consequently will require less additional materials and manufacturing capacity. However, limited availability of the phthalate ester, lack of appropriate manufacturing facilities, need for developing new efficient manufacturing processes, and particularly the unknown factors of reliability and safety in the broad consumer use areas such as lighting and air conditioners are some of the problems that prevent a near-term substitution.

Unless considerable time for the development and evaluation of alternative liquids is permitted, the most suitable immediate stratagem appears to be the use of mineral oil.

The virtues of PCB impregnant and the disadvantages of mineral oil have been discussed in detail in a number of recent documents. Among these documents are the report of the Interdepartmental Task Force on PCB's (COM-72-10419), a paper titled, "The Role of Polychlorinated Biphenyls in Electrical Equipment" presented by General Electric on February 4, 1972, and NEMA's Official Standards Proposal CP-P1-1973/TR-P6-1973, dated January 25, 1973.

All of these documents have pointed out that PCB-impregnated capacitors are significantly smaller, more reliable and safer than mineral oil impregnated capacitors and that use of mineral oil would return

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capacitor technology to its pre-1932 level. The substitution of mineral oil for PCB impregnants would necessitate redesign of end equipment to utilize the larger capacitors, large increases in capacitor manufacturing facilities (both plant and equipment) and would result in increased use of basic materials which are presently in short supply.

The following is an attempt to quantify some of the consequences related to the use of mineral oil as an alternative impregnant.

B. Capacitor Manufacturing Capacity

Mineral oil impregnated capacitor sizes relative to PCB capacitors are shown in Table 1.

Table 1 - Relative Size Comparisons

Types*	AROCLOR 1016	Mineral Oil
Small Industrial	1.0	2-2.5
Power	1.0	2.5-3.2

*Small Industrial - Used in lighting, air conditioning, motors and electronics.

Power - Large capacitors used by electric utilities and by industry for induction furnaces and power factor correction.

The dielectric constant of a capacitor's dielectric system is the ratio of its ability to store electrostatic energy relative to air. The dielectric constant of PCB impregnant is 5.85 while that of mineral oil is 2.25. Use of the lower dielectric constant mineral oil in a paper dielectric system, assuming no change in the thickness of the paper dielectric, would result in a capacitor which is 60% larger than the PCB impregnated design. Additionally, however, use of mineral oil requires that the thickness of the paper dielectric be increased to reduce the operating stress on the system if equal life and reliability are to be attained. In the case of lower voltage industrial type capacitors, such as those used in fluorescent ballast and air conditioning applications, the dielectric thickness must be increased 10 to 25%. In power capacitors operating at higher voltages, the dielectric thickness must be increased 25 to 40%. The larger increase in the high voltage units is related to the fact that corona initiation and extinction voltages of mineral oil impregnated dielectric systems are lower than those of PCB impregnated systems.

The approximate doubling of physical size results in about half the throughput of capacitors in existing manufacturing equipment. The capacitor industry currently has little if any excess capacity to handle this, even if adequate capacitor materials supplies are assumed to be available.

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CONSEQUENCE - THE CAPACITY AND OUTPUT OF THE CAPACITOR INDUSTRY WILL BE CUT APPROXIMATELY IN HALF.

C. Capacitor Materials Availability

The following Table 2 estimates the capacitor industry requirements for paper, foil, and impregnant based on the currently used AROCLOR 1016 and for mineral oil.

Table 2 - 1974 Capacitor Materials Requirements (lbs. in millions)

	AROCLOR 1016	Mineral Oil	% Change
Paper	26	52-65	100-150%
Al Foil	18	32-36	80-100%
Impregnant	26	35-42	35-60%

There is a worldwide shortage of capacitor grade paper and aluminum foil. The capacitor paper supply is expected to continue at its present level of availability. Mineral oil impregnation will require at least twice the amount of materials to produce the same capacitance as with PCB's. Using the most optimistic of the above numbers, the total capacitor industry's requirements of Kraft paper dielectric, all of it using imported pulp for its production, would increase by 2 to 2.5 times and its requirements for aluminum electrode foil would increase by 1.80 to 2 times.

Total industry requirements in 1974 for paper dielectric in PCB impregnated capacitors is estimated at 26 million pounds. Based on recent experience, this requirement is the limit that suppliers of this type of paper can produce with existing equipment. Adding facilities to more than double the present domestic output of paper is a task that could not be completed in less than 4 to 5 years and the total investment required by the paper manufacturers is estimated to exceed $200 million. It is questionable that the paper industry would make this investment, facing the probability that future impregnant and design developments would negate its need.

Aluminum foil is also in short supply. Some investment in foil-rolling equipment is already under way at General Electric to alleviate the shortage, but an adequate continuing supply of reroll aluminum stock from which the thin gauges of aluminum electrode material are made cannot presently be assured.

The supply of dielectric-grade mineral oil required to replace PCB impregnants is also unassured. Doubling the size of capacitors would

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approximately double the volume of impregnant required. The sole manufacture of dielectric-grade mineral oil has recently announced that its manufacture is being discontinued. The feasibility of supplying the capacitor industry on a timely basis with 35 million pounds annually, starting from a production rate of zero, is doubtful to say the least.

CONSEQUENCE - THE CAPACITOR INDUSTRY WOULD BE ABLE TO SUPPLY ONLY ABOUT 50% OF THE CURRENT CAPACITOR DEMAND BECAUSE OF MATERIAL SHORTAGES.

D. Costs

U.S. impregnated capacitor sales for 1974 are shown in Table 3.

Table 3 - Estimated 1974 Total Impregnated Capacitor Sales

	$ Millions
Small Industrial	100
Power	55

About 90-95% of these are PCB impregnated capacitors. It is estimated that the cost of capacitors would increase by at least 100% in going to mineral oil. It is likely that there would be an added inflationary force with demand far exceeding supply.

CONSEQUENCE - COST OF CAPACITORS WOULD AT LEAST DOUBLE. AT CURRENT PCB CAPACITOR SALES LEVELS, THIS WOULD ADD ABOUT $145 MILLION IN CAPACITOR COSTS TO EQUIPMENT MANUFACTURERS. TO THIS WOULD BE ADDED AT LEAST ANOTHER $200 MILLION IN COSTS AT THE END-CONSUMER LEVEL.

E. Reliability and Warranty

The life expectancy of capacitors exceeds 10 years for lighting applications and more than 20 years in electric utility power transmission applications. Although capacitors are considered long-lived products, there is an ever present danger of short life and early failure. This can be caused by a number of factors such as poor process control, materials quality, mis-application, and new product introduction with inadequate knowledge and experience of reliability.

The General Electric Company warrants its capacitors for one year, and has extended this warranty where capacitor failures have been excessive and due to shortcomings in capacitor quality. The major reliability and warranty problems lie in the small industrial type capacitors

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such as used for lighting, motors, and power supplies. The capacitor industry produces in the order of 100 million capacitors per year. The majority of these units sell in the price range of 50¢ to $4. The service cost for replacing a failed capacitor is $20 to $25. The in-warranty failure rate of General Electric capacitors during the first year is well under 0.5%. We believe that this reliability is typical of the capacitor industry in general. This performance has been attained after many years of developing the PCB capacitor, and establishing expected norms for failure rates and service life.

The capacitor industry historically is very careful in introducing product and process changes because small changes in failure rate, which are extremely difficult to determine without years of service experience and statistics, could result in excessive complaint and replacement costs. For example, Table 4 shows the replacement cost if the failure rate during the warranty period increased by different levels.

Table 4 - Replacement Costs for Early Failures

% of Annually Installed Capacitors Failing, over Existing Rate

Increase in Percentage Points	Millions Replaced	Cost at $25/Service Call
1.0	1.0	$25 million
2.0	2.0	$50 "
3.0	3.0	$75 "

In order to avoid the consequences of such warranty costs, the capacitor industry would design any new non-PCB products on the conservative side. However, there would still be a substantial risk associated with a mass changeover to a new impregnant, especially in the end-consumer product area, with essentially no experience on reliability and safety.

CONSEQUENCE - IF THE FAILURE RATE OF THE 100 MILLION CAPACITORS PRODUCED IN ONE YEAR WERE TO INCREASE BY 1 TO 3 PERCENTAGE POINTS, THE REPLACEMENT COSTS AT $25 PER SERVICE CALL WOULD RUN FROM $25 to $75 MILLION. THIS IS THE MAGNITUDE OF THE CAPACITOR INDUSTRY'S EXPOSURE IN GOING TO A NEW, UNTRIED IMPREGNANT ON A MASS BASIS.

IV. CONSEQUENCES OF A "BAN" TO CAPACITOR USERS

This section estimates the effect of a PCB ban on customers and users of capacitors.

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CRITICAL COMPONENT AVAILABILITY

Capacitors are a critical and necessary component in end-user equipment, particularly in small industrial applications. Without the capacitor, the end product would not operate as designed. The capacitor shortage resulting from a "ban" on PCB capacitors would force a reduction by at least half from the normal production rate in the plants of capacitor users.

CONSEQUENCE - INCREASED LAYOFF AND UNEMPLOYMENT AS MANUFACTURERS ADJUST TO THE SHORTAGE.

ELECTRIC POWER SYSTEM SAVINGS

The magnitude of the energy levels under discussion can be assessed from the following:

- The U.S. capacitor industry produces the equivalent of 55 million kilovar per year.
- A kilovar is equivalent to at least 1 kilowatt of generating capacity (some estimates place this ratio of kilowatt/kilovar at up to 1.4).

About 20% of the capacitors are for replacement purposes, and the remaining 80% are for new service. Thus, 44 million kilovars are installed on new systems. Without these capacitors, the steam turbines and fuel requirements would be relatively unaffected, but generators would be larger to handle more current, and certain components of transmission and distribution systems (e.g., step-down transformers) would have to be larger to prevent burn-out. The additional generating capacity for 44 million kilovolt-amperes, priced incrementally, would amount to about $300 million; the additional transmission and distribution equipment would amount to about $700 million.

CONSEQUENCE - REDUCED AVAILABILITY OF CAPACITORS WOULD ADD FURTHER SUBSTANTIAL BURDEN TO THE ENERGY SUPPLY SITUATION.

POWER SYSTEM STABILITY

The preceding discussion indicates that electrical energy requirements could theoretically be met by using fewer capacitors and building oversize generation, transmission and distribution components (at a severe economic penalty). Such a system would be operating at low power factor -- or, in other words, the system would be carrying a large component of useless reactive volt-amperes in addition to the in-phase component that represents

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energy delivery. Systems studies have shown (see Economics of Kilovar Supply by Campbell, Ros, and Tice, General Electric Company, June 20, 1972) that low power factor severely limits the capability of a power pool to import power from its neighbors during a loss-of-generation emergency.

CONSEQUENCE - CAPACITOR SHORTAGES WOULD MAKE LARGE POWER SYSTEMS SUBJECT TO CASCADING OUTAGES, OR "BLACK-OUTS."

SIZE AND REPLACEMENT

As pointed out earlier, the size and cost of mineral oil impregnated capacitors would be at least twice that of PCB capacitors. The lighting industry has designed their ballasts for the small size PCB capacitors. Approximately 20% of ballast capacitors are used in the replacement market. Many room air conditioners have no space for a larger capacitor if a replacement is required. The capacitor industry has continually moved to reduce the size of capacitors. Equipment manufacturers have taken advantage of these size reductions, and have no room for size increases. In certain cases, size limitations in the replacement market would force the scrapping of good light fixtures and air conditioners.

CONSEQUENCE - UNAVAILABILITY OF SMALL SIZE CAPACITORS WOULD FORCE THE EARLY OBSOLESCENCE OF GOOD, FUNCTIONAL EQUIPMENT.

General Electric Company
November 19, 1973

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GENERAL ELECTRIC

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REAL ESTATE
AND CONSTRUCTI
OPERATION

November 21, 1973

Dr. C. Hugh Thompson, Chairman
Hazardous and Toxic Substance
Regulation Task Force
Office of Water Program Operations
Environmental Protection Agency
Washington, D.C. 20460

SUBJECT: COMMENTS ON TOXIC POLLUTANT EFFLUENT STANDARDS (38 FR 21342, Sept. 7, 1973)

Dear Dr. Thompson:

In the above Federal Register announcement, the Environmental Protection Agency invited comments that might assist it in setting effluent standards for the pollutants on EPA's first list of toxic pollutants. On behalf of the General Electric Company, I am pleased to submit for your consideration the following comments that we believe are relevant to the establishment of effluent standards for polychlorinated biphenyls (PCBs). The General Electric Company is a major manufacturer of sealed capacitors and transformers that incorporate PCBs as insulating liquids.

COMMENTS

In promulgating its list of toxic pollutants, EPA stated that "Polychlorinated biphenyls are on the list because of their high order of toxicity to man and aquatic organisms, and because of their bio-accumulative potential. The data are adequate, and the point source discharges require prompt control." (underlinings added)

In an earlier section of this same promulgation (I, 3), which explains the criteria of toxicity, appears the statement that "substances which have an oral LD50 of 50 mg/kg of body weight or less ... are defined as highly toxic to mammals ...". This definition would seem to exclude PCBs, because the LD50's of all commercial preparations are many times greater, that of a typical material (Aroclor 1242) being 8650 mg/kg [1].

[1] PCBs and the Environment, Interdepartmental Task Force on PCBs, May 1972, p. 131.

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The low order of toxicity to man is supported by several decades of experience in the U.S. electrical industry.

In addition, the foregoing statements about PCBs quoted from the promulgation receive little support from EPA's subsequent publication in October of its "Proposed Criteria for Water Quality - Vol. I."(2) These criteria "are defined as the acceptable limits of constituents in receiving waters based upon an evaluation of the latest scientific information by the Environmental Protection Agency" (p. 12) and "are based upon current knowledge of the effects on health and welfare of the presence of various pollutants in receiving waters" (p. 18). Criteria for PCBs are discussed under four categories of water use (pages 121, 180, 224, and 320) along with the rationale for the recommended limits. None of these discussions suggests biological effects that could be described as a "high order of toxicity to man and aquatic organisms"; most of the rationales represent far from "adequate" data; and none of them leads to the conclusion that "point source discharges require prompt control."

The only numerical value suggested is a maximum acceptable concentration of PCBs in fresh water of 0.002 μg/l (0.002 ppb) (p. 121). The rationale given for this level is based upon an exceedingly tenuous chain of reasoning beginning with a PCB residue level that has been suggested (not demonstrated) as the threshold for salmon egg mortality and continuing through several other vaguely defined multiplicative factors. Further, this number has no operational significance because no analytical techniques are available for the reliable determination of so low a concentration of PCBs in water.

Section 304 (a) (1) of The Federal Water Pollution Control Act Amendments of 1972 requires that criteria for water quality should accurately reflect the latest scientific knowledge "on the kind and extent of all identifiable effects on health and welfare ... which may be expected from the presence of pollutants in any body of water ...". We submit that none of the water quality criteria proposed for PCBs, which presumably reflect the latest scientific knowledge, provides an adequate basis for establishing effluent standards for PCBs. Other bases than water quality should be used and are discussed later on in this letter. In our opinion, however, the recommendation that "the body burdens of PCB's in birds and mammals should not be increased over present levels in order to maintain acceptable levels" does represent a reasonable goal for any PCB control program (Ref. 2, p. 180).

The Proposed Criteria for Water Quality acknowledge (Ref. 2, pp 17-18) that other considerations are important in "establishing particular standards and control measures" for pollutants that "may be listed as toxic pollutants under subsection 307 (a)."

(2) Proposed Criteria for Water Quality, Vol. I, U.S. Environmental Protection Agency, October 1973.

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"Some of the more important considerations are:

(1) The nature of the environmental effect of the presence of pollutants in water (e.g., long or short term, temporary or permanent, localized or widespread, etc.).

(2) The economic and social impact of the standards and control measures and the impact of the environmental damage to be alleviated.

(3) The practicality and enforceability of the standards and control measures, including the availability of techniques and instrumentation for determining whether particular standards are being met."

Regarding the third consideration, we have already indicated that there is no practical method of enforcing a standard based upon the recommended maximum concentration of 0.002 ppb of PCBs for fresh water.

The following additional points, which we believe should be considered in establishing effluent standards for PCBs, are germane to the other two considerations.

(1) In 1971 the Monsanto Company (the sole U.S. producer of PCBs) began a program that has led to a total ban on sales of PCBs for all uses except the manufacture of sealed electrical equipment (capacitors and transformers). As a result there has been a large decrease in the number of point source discharges of PCBs. Since there are probably not more than 25 major users of PCBs throughout the country, current production-type discharges of PCBs are no longer as ubiquitous as when PCBs were a component of paints, inks, plastics, adhesives, textile coatings, hydraulic and heat transfer fluids, etc. Indeed, "production and sales figures for PCBs in 1971 were roughly half of those for 1970, when these volumes were at their peak ...(and) projections for 1972 indicate an even lower volume " (Ref. 1, pp. 5-10).

Thus, even apart from the introduction of improved control measures by present PCB-users, there has been a major decrease in the amount of PCBs to which the environment can possibly be exposed. Although current PCB discharges can and should be more carefully controlled, the situation is one whose magnitude is decreasing. There is, therefore, no need for emergency-type controls, which might be reflected in technically infeasible standards and compliance schedules.

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(2) PCBs are not a unique chemical species. More than 100 isomers are possible, and major commercial products may contain as many as 18 distinct compounds. As pointed out by the Interdepartmental Task Force on PCBs:

> "Full evaluation of actual or potential effects in the environment is hampered by the complex nature of the mixtures that compose PCBs, and by the inclusion of contaminants in these mixtures. As experimental studies have been conducted with the unaltered products, as sold, the results may not properly reflect the effects of the components as they exist in the environment." (Ref. 1, p. 19).

Furthermore, it was reported to the Interdepartmental Task Force

> "... that all PCB products cannot be lumped together in terms of either their environmental impact or persistence." (3)

Other points made in this report to the Task Force are:

(1) As the degree of chlorination (of PCBs) decreases, the bacterial degradation rate increases. (Ref. 3, p. 4).

(2) The residue storage levels (in albino rats) decrease exponentially as the weight percent chlorine decreases. (Ref. 3, p. 6)

(3) PCB residues found in wild life are dominantly penta-, hexa-, hepta-, and octa- chloro biphenyls. (Ref. 3, Chart 4).

In recent years the Monsanto Company has developed a special product, Aroclor 1016, which is the only grade of Aroclor now used in capacitor manufacture. Although its gross chlorine content is almost the same as that of Aroclor 1242 (i.e. about 42% of Cl), Aroclor 1016 has been specially distilled to remove most of the higher boiling homologs, which are found in wild life residues. Indeed, more than 99% of Aroclor 1016 comprises homologs with 4 or less chlorine atoms per biphenyl (Ref. 3, Chart 1); and these homologs have not been found in wild life residues.

In light of the foregoing we recommend that the specific commercial preparation, Aroclor 1016, not be considered as a toxic pollutant. We are encouraged to see that in promulgating its list of toxic pollutants, EPA has recognized that not all compounds of cadmium and cyanide are toxic and has stated that distinctions will be made when the final

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(3) Tucker, E.S., "Assessment of the Biological Persistence of Polychlorinated Biphenyls," from Presentation to the Interdepartmental Task Force on PCBs by Monsanto Company, May 15, 1972, p. 2.

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effluent standards are published. We recommend that similar distinctions be made in writing effluent standards for PCBs.

(3) The "economic and social impact" (consideration number 2) of a uniform effluent standard would be much more severe upon an existing plant than upon a new plant. Most of the existing plants that manufacture sealed electrical equipment containing PCBs were in operation for many years before there was any recognition of the possible environmental hazards of PCBs, and during these years no special precautions were taken concerning the handling and disposal of these liquids. Thus, accumulations of PCBs over the years in and around the drainage systems of these plants could result in continued discharge of PCBs even if the plants were to eliminate PCBs from their current operations. Elimination of such reservoirs of PCBs might well require a major and prohibitively expensive renovation of plant and site. However, with the institution of internal control measures such as described in proposed American National Standard Guidelines [4], older plants are preventing further build-up of such reservoirs.

WHAT EFFLUENT STANDARDS ARE FEASIBLE FOR THE ELECTRICAL MANUFACTURING INDUSTRY

We have already noted that the Monsanto Company now sells PCBs only to manufacturers of sealed electrical equipment, such as capacitors and transformers. The soundness of this decision is supported by the findings of the Interdepartmental Task Force on PCBs (Ref. 1, p. 4) and the regulations promulgated by the Food and Drug Administration (38 FR 18096, July 6, 1973). These documents recognize the unique combination of fire safety and design efficiency that the use of PCBs imparts to capacitors and transformers and the minimal risk of environmental contamination associated with such use.

We believe that the special conditions pertaining to the past and present use of PCBs in the electrical industry warrant recognition in the setting of effluent discharge standards. These should not necessarily be identical to those deemed appropriate for the chemical industry.

The manufacture of transformers and capacitors involves a multiplicity of operations including vacuum impregnation, heat treatment, filling, sealing, washing operations and the like. Provision must be made for the handling of large apparatus containing up to 1500 gallons/unit (in the case of transformers) and for the filling and sealing of millions of small units per year (in the case of capacitors).

Control of PCB discharges in such electrical manufacturing plants requires a combination of process design and good housekeeping. For example, waste lines and operating procedures may be designed to eliminate contact between PCBs and water not directly used in the PCB operations themselves (e.g. cooling water). No effective end-of-line treatment has been demonstrated on a plant scale.

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(4) Official Standards Proposal. Proposed American National Standard Guidelines for Handling and Disposal of Capacitor- and Transformer-Grade Askarels Containing Polychlorinated Biphenyls, C107.1- ( ), National Electrical Manufacturers Association Pub. No. CP-P1-1973 and Pub. No. TR-PG-1973, January 25, 1973.

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Segregation of operations and waste lines is feasible in the design and construction of a new plant but would be prohibitively expensive for an old plant. If such controls are incorporated into a new transformer or capacitor plant on a new site, it should be possible to limit the discharge of PCBs to less than 5 pounds per day depending upon the volume and complexity of the production processes. The attainable discharge from an existing plant that had already been in production before the mid-60's may be as much as 15 pounds higher as the background level, depending on the size of the plant, its age, and the nature of its earlier operations, all of which would have affected the location and extent of its reservoirs of PCBs. Such a plant could install the control measures mentioned above and still be unable to reach the discharge levels for a new plant at a new site.

We believe that the foregoing numbers can provide the basis for realistic effluent standards because they reflect the actual technology of the capacitor and transformer industry. As we have mentioned earlier, the recommended water quality standards provide no practical basis for effluent standards.

SUMMARY

In the foregoing comments we have raised the following points:

1) Available data do not support categorizing PCBs as a "highly toxic" material, nor setting standards on the basis of this arbitrarily assigned hazard rating.

2) The maximum recommended concentration of 0.002 ppb of PCBs in fresh water is an operationally meaningless number that is unsupported by convincing ecological data. Any effluent standards based upon such a water quality standard could not be attained in existing plants and could lead to shut-down of capacitor and transformer operations.

3) Actions already taken by Monsanto and PCB users in the electrical industry have substantially reduced the exposure of the environment to PCBs and should result in a decreasing impact of PCBs in the environment.

4) Existing data suggest that Aroclor 1016 should not be considered a toxic pollutant.

5) Older plant sites will continue to have significant background levels of PCBs in their discharges because of accumulated reservoirs from years of operation before anyone recognized the possible environmental hazards of PCBs. These background levels should be considered apart from those levels contributed by current operating procedures.

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We appreciate the opportunity to submit these comments and hope that they will be of assistance to EPA in setting effluent standards for PCBs.

Very truly yours,

Dr. E. L. Simons, Manager
Environmental Protection Operation

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Polychlorinated Biphenyl (PCB)

- A PRESENTATION TO THE EFFLUENT STANDARDS AND WATER QUALITY INFORMATION ADVISORY COMMITTEE
- BY MONSANTO INDUSTRIAL CHEMICALS COMPANY
- NOVEMBER 29, 1973

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I certainly appreciate the opportunity to participate in this meeting of the Effluent Standards and Water Quality Information Advisory Committee. My name is Bill Papageorge. I am Manager, Product Acceptability, for the Functional Product Groups of Monsanto Industrial Chemicals Company.

In this presentation, I would like to consider several questions about polychlorinated biphenyl (PCB). Why was it developed and produced? What has industry done to keep it out of the environment? What has Monsanto done to contain the product through improved manufacturing procedures? What are the problems involved in sampling and analyzing PCB's in manufacturing effluents? And finally, is PCB biodegradable?

I would also like to present some comments on the so-called Toxic Pollutant List.

And finally, I would like to summarize the points I'm trying to make.

Polychlorinated Biphenyl (PCB)

- WHY WAS PCB DEVELOPED AND PRODUCED?

The chemical structure of PCB has been known for nearly 100 years. It was not until the late 1920's that a use for PCB was found - as a dielectric fluid in transformers and capacitors. Its properties (stability, fire-resistance, high dielectric strength and conductivity) seemed perfectly suited to these electrical applications, where high-voltage arcing, serious fires, and damage to property and people could result.

Monsanto began commercial production of PCB in 1929. Other uses soon developed: in heat-transfer fluids (because of its fire resistance), in lubricants (because of its stability), and for water-proofing.

As long as proper industrial hygiene practices were followed, the manufacture of this product represented no safety or handling problems for employes.

- WHAT HAS INDUSTRY DONE TO KEEP PCB OUT OF THE ENVIRONMENT?

In the late 1960's, sophisticated analytical procedures were developed which could detect very minute quantities of PCB in nature. Following this breakthrough, researchers discovered that PCB could possibly be affecting certain forms of wildlife.

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As more data were developed, Monsanto voluntarily undertook a two-phased program to keep the product out of the environment.

•*FIRST: WE LIMITED SALES*

First: we limited sales of PCB for use in many, many applications where there was any danger of it getting into the environment. Today, PCB manufactured by Monsanto Company is sold only to the electrical industry, where it is used in closed systems as a dielectric fluid in transformers and capacitors - applications where there are no known substitutes of acceptable quality and none that are fire resistant.

In addition, representatives of the transformer and capacitor industries, utilities, and governmental agencies (under the initial auspices of the National Electrical Manufacturers Association) formed the American National Standards Institute Committee C-107. This committee issued guidelines (which have already been supplied to the committee) for handling and disposing of dielectric fluids. They reflect the industry's understanding of the need for proper control.

•*SECONDLY: WE DEVELOPED AN AGGRESSIVE CONTROL PROGRAM AT OUR MANUFACTURING LOCATION.*

Secondly: since 1969, we have invested more than 22 man years of work and millions of dollars in this program. Since we are quite proud of our results, let me take a few minutes to summarize it:

--In our manufacturing area, we have taken a number of significant steps to contain PCB's. In essence, we have made the department a "concrete bathtub". Drainage is directed to trenches and piping, and then to one of two 3,000-gallon settling basins. This insures PCB containment in case of accidental spill or equipment failure.

We have also installed an incinerator to safely dispose of PCB's. This is accomplished through incineration at or above 2000° +F.

When small quantities of PCB's are collected into the settling basins in the manufacturing area they are later pumped into drums, and eventually incinerated. In the incinerator area itself, drainage is directed to trenches and piping which flow into a 10,000-gallon basin. Recovered PCB's are periodically pumped to storage, or incinerated.

In the manufacturing area, we have also rerouted rupture disc lines and atmospheric vents through catch tanks, or redirected them to settling basins. This insures that if a rupture does occur, PCB's will not get into the environment, but will be contained in a controlled area.

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We also provide nitrogen blanketing on storage tanks to eliminate any "breathing" of the tanks and resultant PCB escape.

We have installed mist eliminators in vapor lines - once again to eliminate the possibility of PCB's leaving the manufacturing area through these lines.

Finally, we have replaced underground sewers with above-ground sewers, and repaired or combined others, so that we can monitor the effluent from the department. In addition, this will prevent any unknown buildup of PCB's in our sewer systems or any contamination of PCB's into other sewers.

Much of the success of our efforts also depends on maintaining a high housekeeping level in the department itself. Among the housekeeping responsibilities our operators have assumed are these:

--All pumps are checked for leakage on every shift. Drip pans that collect leaks are emptied into scrap PCB drums.

--All leaks are reported and documented so that corrections can be made and settling basins observed.

--"FloorDry" is used to absorb any liquid PCB's that have spilled or leaked. If it becomes necessary to flush PCB's to the settling basin, a minimum amount of water is used.

--Sampling drums and scrap-PCB drums are quickly palletized, labeled, and transferred to the incineration area.

Through these kinds of programs, we feel we have literally built a "concrete bathtub" to catch and safely dispose of PCB's at our manufacturing location.

--We have also developed sophisticated systems to monitor our effluent. Monitoring effluent streams for PCB's is not an easy effort. Measurement can be changed dramatically by taking the sample at different places along the sewer main, by changing the level at which the sample is taken, by changing the speed at which the sample is taken, or by varying the velocity of the effluent. But we have purchased the best available laboratory equipment, which enables us to determine PCB content in the parts-per-billion range. Here again, however, many factors affect our findings. Dr. Scott Tucker, our analytical expert, advises that the minimum detection level of PCB's on a routine basis contained in distilled water is one part per billion (± 25%). If "dirty" water - i.e., that containing other materials which

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interfere with the determination of PCB - is analyzed, the minimum detection level is 100 ppb ± 25%. Monitoring is a very tricky business. But we feel with our experience and acquired "know-how", we're doing the best possible job. And we do this job 24 hours a day, 365 days a year.

We have also established loading and shipping safeguards to minimize accidental PCB loss during transportation. Specific written instructions are on every container we ship.

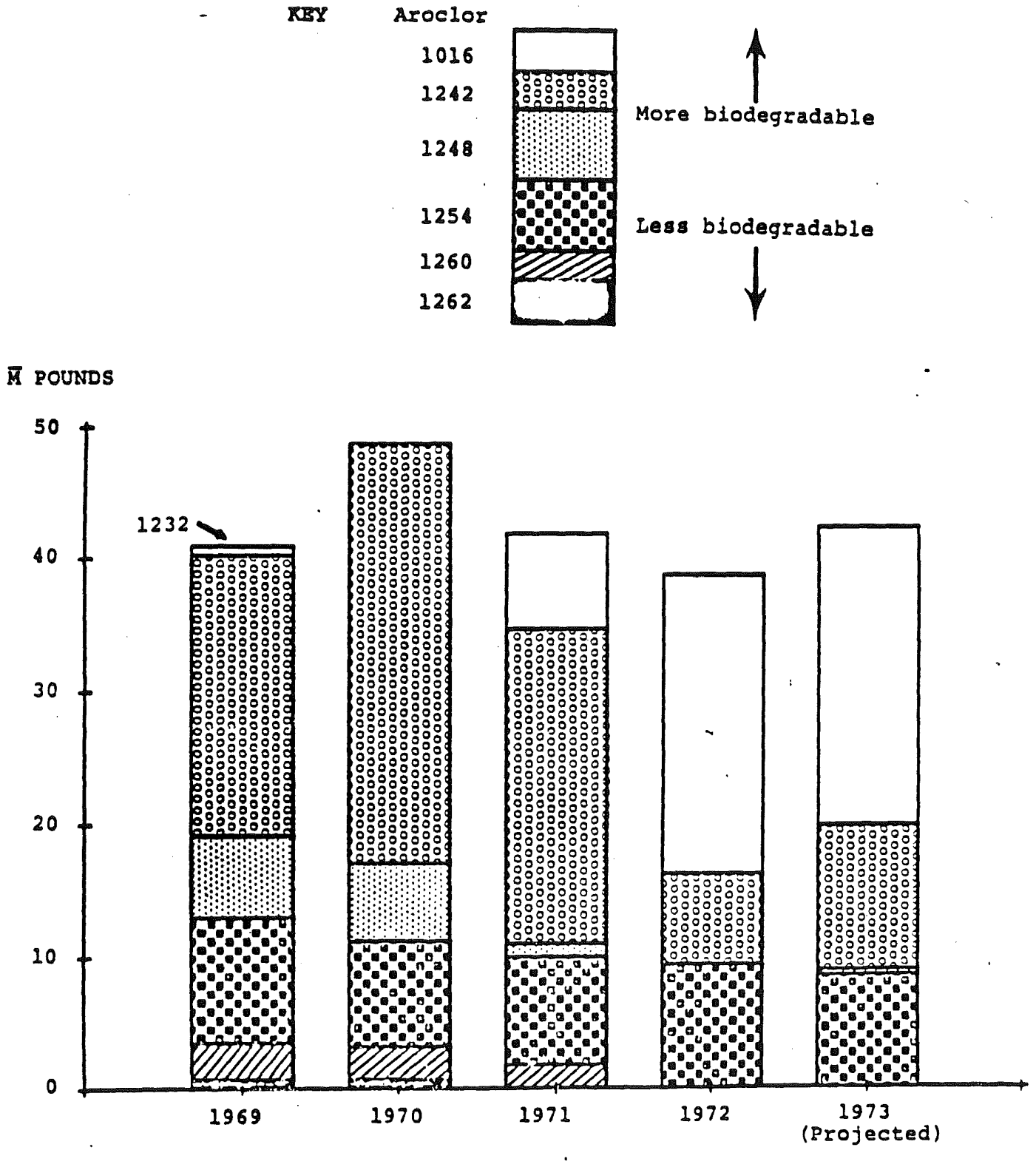
--And finally, we have provided facilities for safely disposing of used PCB's returned from customers. As I mentioned above, we installed a specially designed PCB incinerator, at a cost of $790,000. We have received an operating permit from the Illinois EPA for this incinerator, which meets all EPA requirements. This incinerator completely destroys PCB's received either from our manufacturing area or from customers.

Finally, we have moved toward the manufacture of a more biodegradable polychlorinated biphenyl. In 1971, we installed a new distillation column in our manufacturing department at a cost of $970,000. This allowed us to separate the higher chlorinated, less biodegradable compounds from the lower chlorinated, more biodegradable ones. Our PCB's are known by the trade name Aroclor. We manufacture different grades of Aroclor (1016, 1242, 1254, for example). The lower the grade number, the less chlorinated and more biodegradable is the product.

The attached table reflects how our production mix has changed to more biodegradable products while the production of higher chlorinated less biodegradable products has declined.

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AROCLOR PRODUCTION AT THE Wm. G. KRUMMRICH PLANT



IDS 002385

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So I think we can safely assert that industry and Monsanto have taken strong measures to contain PCB's and keep them out of the environment.

•IS PCB BIODEGRADABLE?

I mentioned before that we are presently manufacturing more biodegradable PCB's. We feel all information points out - beyond any reasonable doubt - that many PCB isomers do degrade, and they do degrade at different rates. Under proper conditions of use and control, PCB's can be utilized without serious adverse consequences to the environment.

To support this view, we have previously sent the reports of Monsanto studies which were submitted to the Federal Interdepartmental Task Force on PCB's. Articles describing the results of biodegradation studies in activated sludges are also being prepared, and we will send copies when they are completed.

The Toxic Pollutant List

Neither Mr. Hosmer nor myself are toxicologists. We are chemical engineers.

But we would like to make some comments on the toxic pollutant list. In Section 502 (13) of the current Federal Water Pollution Control Act, the term "toxic pollutant" is defined as "those pollutants or combinations of pollutants including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such organisms or their offspring."

We have also read the Federal Register, Volume 38, No. 173, dated September 7, 1973. Part 129 (beginning on page 24343) is concerned with the Toxic Pollutant Effluent Standards.

We are concerned with the "catch-all" nature of these definitions and criteria. Depending on how they are defined and applied, the toxic pollutant list could conceivably cover all chemicals and many, many other materials which are relatively innocuous in their impact on the environment.

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We concur with the recent suggestion of the EPA's Acting Administrator (Federal Register Volume 38, No. 129, page 18044) that Congress intended the Administrator under the Act "...to be selective in determining which of the potentially large number of candidate substances actually should be listed at various times". Although not spelled out in the definition, we feel it important to consider the degree of toxicity of the substance; whether or not the substance poses a threat to man, animals, birds, the aquatic environment or some other aspect of the ecosystem.

Whether or not PCB's remain on the "enemy list", it is our recommendation that an effluent limit no more stringent than one pound of PCB per 100,000 pounds of production be established for our manufacturing operation. To keep this in perspective, this would correspond to a concentration in the Mississippi River of 1.4 parts per trillion, based on that river's average flow. We believe this concentration would have no adverse effect on the aquatic environment.

In Summary

First: Monsanto began producing PCB to fill a market need. The product has excellent qualities to fill these needs.

When the "alarm bell" sounded in the late '60's, Monsanto and the concerned industries took positive steps to keep PCB out of the environment. At our manufacturing location, we developed a many-sided program to contain PCB, and keep any of the product from the environment. Because of this, levels of PCB in the aquatic environment are reported to be lower now than before.

We feel that some PCB's are biodegradable, and we are developing supporting evidence.

Secondly: We are concerned that the criteria for the Toxic Pollutant List are too general and susceptible to "fishing expeditions". (Excuse the pun.) Whether PCB should be on that list at all is questionable.

Finally: We recommend that a limit no more stringent than one pound of PCB's per 100,000 pounds of production be established for our manufacturing location. This corresponds to 1.4 parts per trillion in the Mississippi River.

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