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Part VI

Environmental Protection Agency

Polychlorinated Biphenyls; Criteria Modification; Hearings

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 761

[FRL 1079-2]

Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: This final rule implements provisions of the toxic Substances Control Act (TSCA) prohibiting the manufacture, processing, distribution in commerce, and use of polychlorinated biphenyls (PCBs). Specifically, this rule:

(1) Prohibits all manufacturing of PCBs after July 2, 1979 unless specifically exempted by the Environmental Protection Agency (EPA);

(2) Prohibits the processing, distribution in commerce, and use of PCBs except in a totally enclosed manner after July 2, 1979;

(3) Authorizes certain processing, distribution in commerce, and use of PCBs in a non-totally enclosed manner (which would otherwise be subject to the prohibition described above);

(4) Prohibits all processing and distribution in commerce of PCBs after July 1, 1979, unless specifically exempted by EPA.

EFFECTIVE DATE: July 2, 1979. The disposal and marking rule (43 FR 7150, February 17, 1978, as amended by 43 FR 33818 August 2, 1978) shall remain in effect until the rule promulgated today becomes effective.

FOR FURTHER INFORMATION CONTACT: For information concerning this rule and for copies of this rule contact: John Ritch, Jr., Director, Office of Industry Assistance, Office of Toxic Substances (TS-799), Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. Call the toll-free number (800)-424-9065, or in Washington, D.C. call 554-1404.

The support documentation for this rule can also be obtained through the above-mentioned address. The support documentation consists of two parts and are entitled *Support Document/ Voluntary Environmental Impact Statement* and *PCB Manufacturing, Processing, Distribution in Commerce Ban Regulation: Economic Impact Analysis.* (This *Economic Impact Analysis* is hereinafter referred to as the Versar Report). These two documents have been reproduced and bound into one publication.

SUPPLEMENTARY INFORMATION:

Format of Rule

In order to clarify the relationship between the PCB Disposal and Marking Rule and the PCB Ban Rule, all of Part 761 is printed in this notice in a fully integrated form. This notice incorporates the Disposal and Marking Rule (43 FR 7150, February 17, 1978) for PCBs and the technical amendments (43 FR 33818, August 2, 1978) to that Rule into one regulation. Therefore, this notice supercedes the previous notices on July 2, 1978.

Background

Section 6(e) of TSCA requires EPA to control the manufacture, processing, distribution in commerce, use, disposal, and marking of polychlorinated biphenyls (PCBs). On February 17, 1978, EPA published the PCB Disposal and Marking Rule in the Federal Register (43 FR 7150). Clarifying amendments to this rule were published on August 2, 1978 (43 FR 33818).

Section 6(e)(2) provides that no person may manufacture, process, distribute in commerce, or use any PCB in a manner other than in a "totally enclosed manner" after January 1, 1978, except to the extent EPA authorizes activities in a non-totally enclosed manner. On December 30, 1977, EPA published a notice (42 FR 65384) stating that implementation of the January 1, 1978 ban would be postponed until 30 days after promulgation of this rule.

Section 6(e)(3) provides that no person may manufacture any PCB after January 1, 1978, or process or distribute in commerce any PCB after July 1, 1979, except to the extent that EPA specifically exempts such activities. Implementation of the January 1, 1979 ban was postponed until 30 days after the promulgation of the rule published today (See 44 FR 106, January 2, 1979).

Section 6(e)(3)(B) provides that persons may petition the Administrator for exemptions from the prohibition of the manufacture of PCBs, which goes into effect July 2, 1979 or from the prohibition of processing and distribution in commerce, which goes into effect July 1, 1979. Interim rules establishing procedures for submitting petitions for exemptions from the manufacturing prohibition were published November 1, 1978 (43 FR 50906). More than 70 petitions for exemptions have been received. On January 2, 1979, EPA announced (44 FR 106) that it would not enforce the PCB manufacturing and importation ban of section 6(e)(3)(A) against persons who had submitted petitions until EPA has acted on their exemption petition. This nonenforcement policy applies solely to activities that are properly subject to a pending PCB manufacturing or importation exemption petition.

Elsewhere in today's Federal Register, EPA has published a Notice of Proposed Rulemaking that identifies each petition received for exemptions from the manufacturing prohibition and, in most cases, the action that EPA proposes to take on individual petitions. Rules establishing procedures for submitting petitions for exemptions from the processing and distribution in commerce prohibitions will be published in the near future.

Authority to grant or deny petitions for exemptions from the PCB processing and distribution in commerce bans under section 6(e)(3)(B) of TSCA, as well as the authority to revise the procedural rules for PCB exemptions and to grant further PCB authorizations and to amend or modify this regulation is delegated to the Assistant Administrator for Toxic Substances. This authority was previously delegated to the Assistant Administrator for Toxic Substances for the PCB manufacturing exemptions (see 43 FR 59225).

This final rule implementing sections 6(e) (2) and (3) of TSCA was proposed June 7, 1978 (43 FR 24822). Ten days of public hearings were held in Washington, D.C., from August 21 to September 1. Over 80 oral presentations were made and two hearing participants conducted cross-examinations on September 20, 1978. On September 22, 1978 (43 FR 43049), EPA published a notice of the opportunity for cross-examination and extended the reply comment period to October 10, 1978. EPA received over 200 comments on the proposed rule.

EPA has produced, as part of the rulemaking process for PCBs, two support documents. The first support document which was entitled *Support Document/Voluntary Draft Environmental Impact Statement*, was made available at the time the proposed rule was published and discussed the health and environmental effects of PCBs; the substitutes for PCBs, and the regulatory alternatives EPA considered in developing the proposed PCB Ban Rule. The second support document entitled *Support Document/Voluntary Environmental Impact Statement* was prepared along with the final PCB Rule and Preamble. This particular document contains updated versions of the health and environmental effects and PCB substitutes sections, and addresses the

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major comments that were made on the proposed rule during the comment period. In many cases these comments led to changes to the proposed PCB Ban Rule. There are also two versions of the economic impact analysis that have been prepared by Versar, Inc. The first Versar Report was made available at the time of the proposed PCB Ban Rule. The second, or final Versar Report, has been incorporated into the final Support Document. Copies of the final Support Document can be obtained from the Industry Assistance Office identified above.

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I. Summary of the Rule's Organization

Subpart A (§§ 761.1 and 761.2) of this rule contains general provisions applicable to all other Subparts. Section 761.1 states the applicability of the provisions of the rule. Section 761.2 contains definitions of terms used in the rule. Subparts B (§ 761.10) and C (§ 761.20) contain disposal and marking requirements. Subpart D (§§ 761.30 and 761.31) concerns the manufacturing, processing, distribution in commerce, and use of PCBs. Section 761.30 contains prohibitions on activities while § 761.31 sets out authorizations under TSCA section 6(e)(2)(B). Subpart E contains Annexes to the rule concerning incineration of PCBs, chemical waste landfills, storage for disposal, decontamination, marking, and records and monitoring.

The preamble to this rule primarily describes changes from the proposal. Except to the extent that it is inconsistent with this final rule preamble, the preamble to the proposed rule (43 FR 24802, June 7, 1978) is incorporated by reference into this document and should be consulted for additional information (see 43 FR 24802–24812, June 7, 1978). The contents of this preamble are summarized in Table 1. The amount of PCBs used in different PCB activities and the impact this rule will have on these PCBs is summarized in Table 2.

Table 2—Quantities of PCBs Used in PCB Activities*

Activity	Pounds used	Pounds regulated	Pounds prohibited
PCB Transformers	290,000,000	290,000,000	0
PCB-Contaminated Trans.	450,000	450,000	0
Rebuilt Trans.	6,000,000	6,000,000	6,000,000
Servicing	34,000	34,000	34,000 †
Railroad Trans.	500–2000	500–2000	500–2000 †
Heat Transfer	45,000–100,000	45,000–100,000	45,000–100,000 †
Carbonless Copy Paper	(*)	(*)	0
Pigments	2,700,000	2,700,000	2,700,000 †
Electromagnets	30,000–40,000	30,000–40,000	0
Gas Pipeline Compressors	2000	2000	0 †
Small Quantity R&D	Very small	All	(*)
Microscopy	Very small	All	(*)
PCB Capacitors/PCB Scrap	1,000,000	1,000,000	0
Totals	330,000,000–331,000,000	330,000,000–331,000,000	330,000,000–331,000,000
Heat Systems, Railroads, Coatings from Waste Oil	50,000–1,000,000	50,000–1,000,000	50,000–1,000,000
	330,000,000–332,000,000	330,000,000–332,000,000	330,000,000–332,000,000

*Quantity has not been estimated.
†Quantity is more than zero.
‡Quantity not estimated but other quantities used to estimate total.
*Quantity not available.
†Not estimated but other quantities used to estimate total.
*Amount of PCB contamination may affect incineration estimates. Use is authorized individually.
*The difference between the value and the sum of the values is due to a 20% PCB in other equipment, which was not estimated.

*Does not include Versar report.
†Does not include Versar estimate for exemptions from the manufacturing ban.

II. Changes in Major Definitions

A. "PCBs" and "PCB Items"

This final rule changes the definition of "PCB" from that contained in the proposal in two significant respects. In the proposed rule, § 761.2(q) defined "PCB" and "PCBs" to include PCB Chemical Substances, PCB Mixtures, PCB Articles, PCB Equipment, PCB Containers, and PCB Sealants, Coatings, and Dust Control Agents. Section 761.2(s) of the final rule defines "PCB" and "PCBs" to mean any chemical substance or combination of substances that is limited to the biphenyl molecule that has been chlorinated to varying degrees. This definition is essentially what the proposal defined as "PCB Chemical Substance". This term and the term "PCB Mixture" have been deleted

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from the rule. Because some provisions in the rule apply to concentrations of PCBs below 50 ppm (e.g., the ban on the use of PCBs as sealants, coatings, and dust control agents), the applicability section (§ 761.1(b)) explains that wherever the term "PCB" or "PCBs" is used in this rule, it means PCBs at a concentration of 50 ppm or greater unless otherwise specified.

The second principal change is the addition of a new term, "PCB Item", defined as "any PCB as it is a part of, or contained in, any 'PCB Article', 'PCB Article Container', 'PCB Containers' or 'PCB Equipment', at a concentration of 50 ppm or greater" (see § 761.2(x)). This change significantly affects the scope of the manufacturing ban. (See preamble section VI.B.1. below.)

B. Regulation of PCBs at the 50 ppm Concentration Level

To implement this rule in a practical manner, it is essential that EPA adopt a regulatory cut-off point based upon the concentration of PCBs. PCBs are widely dispersed in the environment and are found worldwide at low concentration. This wide dispersion has occurred because hundreds of millions of pounds of PCBs have been used in the past with little or no attempt to control their use or disposal. Because PCBs are now so pervasive, the effect of not having a cut-off concentration would be to extend the prohibitions and other requirements of section 6(a) of TSCA to almost all human activity. Many foods, such as fish and milk, as well as the human body often contain detectable concentrations of PCBs.

The final rule applies to any substance, mixture, or item with 50 ppm or greater PCB. This 50 ppm cut-off was proposed as a change from the Disposal and Marking Rule (43 FR 7150, February 17, 1978), which specified a 500 ppm cut-off. (See definition of "PCB Mixture" in that rule (§ 761.2(w), 43 FR 7157).)

Where to set the cut-off point for the PCB rule has been an issue throughout the development of both the Disposal and Marking Rule and the Ban Rule. The preamble to the proposed Disposal and Marking Rule (see 43 FR 28864, May 24, 1977) first discussed the issue under the heading "PCB Mixtures, Waste Materials, and Sludges". The preamble to the final Disposal and Marking Rule discussed the issue further under the heading "Changes in § 761.2 Definitions" (see 43 FR 7161, February 17, 1978). This discussion stated that EPA was seriously considering lowering the PCB concentration in the definition of "PCB Mixture" from 500 ppm to possibly 50 ppm. The preamble to the proposed Ban Rule emphasized that EPA must select a cut-off point that it can reasonably administer in order to attain the objectives of §6(e) of TSCA (see 43 FR 24804, June 7, 1978).

Before selecting 50 ppm PCB as the cut-off point, EPA considered several other options, including retaining the 500 ppm PCB cut-off originally specified in the Disposal and Marking Rule, and lowering the cut-off concentration to 10 ppm or even 1 ppm. The 500 ppm PCB option was favored by affected industries because it would reduce the costs of complying with the rule, but no evidence was presented that indicated that industry is technologically or economically unable to comply with the more stringent standard. In fact, in this final rule, EPA is easing the economic burden of complying with the more stringent standard by allowing alternative disposal methods for certain wastes containing between 50 ppm and 500 ppm PCB.

Lowering the PCB cut-off point from 500 ppm to 50 ppm will result in substantially increased health and environmental protection. Using data developed by Versar, Inc. of Springfield, Virginia, EPA estimates that approximately one million additional pounds of existing PCBs will be controlled by lowering the cut-off to 50 ppm. In addition, from 100,000 to 800,000 pounds per year (estimated from manufacturing exemption petitions) of new PCBs will be controlled. Because Congress intended that EPA address the problem of contamination of the environment by PCBs to the greatest extent possible, EPA believes that regulating this substantial additional amount of PCBs is justified.

Lowering the cut-off concentration to 10 ppm PCB would provide an additional degree of environmental protection but would have a grossly disproportionate effect on the economic impact and would have a serious technological impact on the organic chemicals industry. Although firm data are not available, investigations have indicated that a number of chlorinated organic chemicals are produced with PCB concentrations of 10 ppm to 30 ppm and that it may be very difficult technically to alter the production processes to produce lower levels of PCBs or eliminate them. In addition, a 10 ppm concentration cut-off would also substantially increase the scope of the disposal requirements, especially for soils, debris, and solvents contaminated with low concentrations of PCBs. Those wastes would be added to the total quantity of waste at these PCB disposal sites. Since PCB disposal site capacity is limited, these additional wastes would add to the volume of wastes stored at PCB storage facilities. Illegal disposal of PCB wastes and inadvertant releases of PCBs into the environment are more likely to occur when disposal capacity is not readily available.

EPA recognizes that increased environmental benefits could result if additional PCBs were destroyed or controlled by regulating PCBs at very low concentrations. These potential benefits would be negated, however, if high-concentration PCB wastes are not properly disposed of because the limited disposal capacity for PCB wastes and EPA's surveillance and enforcement efforts are diverted to low concentration wastes. In addition, other authorities administered by EPA, such as the Clean Water Act (CWA) and the Marine Protection, Research, and Sanctuaries Act, can be used to regulate low concentrations of PCBs. EPA has the ability to control environmental releases of certain low concentration PCBs through the National Pollutant Discharge Elimination System (section 402 of CWA), through dredging permits (§ 404 of CWA) and through toxic effluent standards and prohibitions (section 307(a) of CWA).

The arguments against a cut-off of 10 ppm are pertinent to a cut-off of 1 ppm to an even greater extent. Foods, such as milk and fish, and even the human body itself often contain PCBs at this low concentration. For these reasons, EPA also decided not to adopt a cut-off of 1 ppm.

After reviewing the public comments, informal hearing testimony, and other information in the rulemaking record and then evaluating the available options, EPA concludes that retaining the PCB cut-off limit at 50 ppm provides adequate protection for human health and the environment while defining a program that EPA can effectively implement.

The major exception in the rule to the 50 ppm limit is the prohibition of the use of waste oil as a sealant, coating, or dust control agent if the waste oil contains any detectable concentration of PCB. This prohibition is necessary to prevent the use of PCB-contaminated materials in ways that result in direct and widespread environmental contamination. Road oiling, other dust control, pipe coating, and spraying of vegetation permit substantial direct entry of PCBs into the air and waterways and may introduce PCBs into the food chain.

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C. Classification of Transformers Under This Rule

This rule establishes four categories of transformers: 1) PCB Transformers; 2) PCB-Contaminated Transformers; 3) Non-PCB Transformers; and 4) Railroad Transformers. Railroad Transformers are discussed in the preamble section IX.B. The other three categories are discussed immediately below.

1. PCB Transformers

PCB Transformers are transformers that contain PCBs at a concentration of 500 ppm or greater. This category includes transformers that were designed to use concentrated PCBs (40 percent or greater PCBs) as a dielectric fluid, as well as transformers that were not designed to use concentrated PCBs but contain 500 ppm or greater PCB. The higher concentration of PCB could result from an unusual contamination incident at the manufacturing facility, from careless servicing operations, or from deliberate attempts to use concentrated PCBs as a dielectric fluid. The selection of 500 ppm as the lower limit defining a PCB Transformer is directly related to the selection of limits for defining PCB-Contaminated Transformers. This is discussed in section C.2 immediately below.

A transformer must be assumed to be a PCB Transformer if any one of the following conditions exist: (1) the nameplate indicates that the transformer contains PCB dielectric fluid; (2) the owner or operator has any reason to believe that the transformer contains PCB dielectric fluid; or (3) the transformer's dielectric fluid has been tested and found to contain 500 ppm or greater PCB. If a transformer does not have a nameplate or if there is no information available to indicate the type of dielectric fluid in it, the transformer must be assumed to be a PCB Transformer unless it is tested and found to contain less than 500 ppm PCB. This category of transformers is defined in the rule in § 761.2(y).

2. PCB-Contaminated Transformers

PCB-Contaminated Transformers are transformers that contain between 50 ppm and 500 ppm PCB. This category includes transformers that were designed to use PCB-free mineral oil dielectric fluids but now contain between 50 ppm and 500 ppm of PCBs because of contamination that occurred in manufacturing or servicing operations. Available data indicate that as many as 98 percent of the 35,000,000 mineral oil transformers contain between 50 and 500 ppm PCBs but that PCB concentrations above 500 ppm in such transformers are rare. Based on these data, EPA is specifying 50 to 500 ppm as the range of PCB concentration defining PCB-Contaminated Transformers. The data also support the requirement that all mineral oil transformers must be assumed to be PCB-Contaminated Transformers unless tested and found not to contain between 50 and 500 ppm PCB.

The upper limit of 500 ppm is a practical cut-off because it includes virtually all mineral oil transformers that are substantially contaminated with PCBs and it coincides with the February 17, 1978 PCB Disposal and Marking Rule limit for defining a "PCB Transformer". Because most of the requirements of this rule apply only to PCB concentrations of 50 ppm or greater (see preamble section II.B above), 50 ppm is the logical choice for a lower limit for PCB-Contaminated Transformers.

As discussed in section C.4 below, PCB Transformers may be converted to PCB-Contaminated Transformers by draining and replacing the dielectric fluid as long as the replacement fluid is between 50 and 500 ppm PCBs after three months of in-service use. The term PCB-Contaminated Transformer is defined in § 761.2(z).

3. Non-PCB Transformers

Non-PCB Transformers are transformers that contain less than 50 ppm PCB. No transformer may ever be considered to be a Non-PCB Transformer unless its dielectric fluid has been tested or otherwise verified to contain less than 50 ppm PCB. A person who tests his transformers to classify them as Non-PCB Transformers should also take precautions to insure that these transformers are not later contaminated in servicing operations. Addition of PCB-contaminated fluid, for example, may result in PCB levels over 50 ppm.

Non-PCB Transformers are not specifically covered by this rule. However, it is possible that the dielectric fluid in these transformers may contain a detectable, but less than 50 ppm PCB concentration. In this case, the rule's prohibition of the use of waste oil containing any detectable PCBs as a sealant, coating, or dust control agent would be applicable when the dielectric fluid is removed from the transformer. The term Non-PCB Transformer is not defined in the rule.

4. Discussion of Transformer Categories

The owner or operator of a transformer must ascertain which of these three categories, PCB Transformer, PCB-Contaminated Transformer, or Non-PCB Transformer, is applicable. In determining this, a person must make certain assumptions, as discussed below.

a. Determining Appropriate Categories

Transformers originally designed to use concentrated PCBs usually have a nameplate indicating that they contain PCB dielectric fluid. Such transformers must be assumed to be PCB Transformers unless tested and found to contain less than 500 ppm PCB. The same assumption must also be made if there is any other reason to believe that a transformer was designed to use concentrated PCB fluid or was ever filled with such fluid. If a transformer does not have a nameplate or if there is no information available to indicate the type of dielectric fluid in it, the transformer must be assumed to be a PCB Transformer.

If the owner or user has serviced the transformer to reduce the PCB concentration below 500 ppm, he cannot simply assume that the PCB reduction process was successful. Because PCBs can continue to leach out of transformer windings after refilling with dielectric fluid containing less than 50 ppm PCB, the owner must test to determine the PCB concentration in the dielectric fluid if he wants to reclassify such a transformer. The test must be performed only after the transformer has been in use for three months or longer after the most recent servicing intended to reduce the PCB concentration. If this test shows the transformer dielectric fluid to contain between 50 ppm and 500 ppm PCB, then the transformer can be reclassified as a PCB-Contaminated Transformer. If the PCB reduction was successful enough to reduce the PCB concentration below 50 ppm, then the transformer would be a Non-PCB Transformer. Owners or operators of reclassified transformers must retain records of their tests in order to be able to demonstrate compliance with the reclassification requirements.

Because of the widespread PCB contamination of transformers that were designed to use PCB-free mineral oil dielectric fluid, all such mineral oil dielectric fluid transformers must be assumed to be PCB-Contaminated Transformers, unless reasons exist to believe that a transformer was filled with greater than 500 ppm PCB fluid (in which case the assumption is that the transformer is a PCB Transformer). The owner or operator has the option of testing the dielectric fluid to determine if the PCB concentration is below 50 ppm. This testing must be performed on the

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dielectric fluid that is in the transformer. If the PCB concentration in the dielectric fluid is below 50 ppm, then the transformer may be considered a Non-PCB Transformer.

If any 500 ppm or greater PCB fluids are added to a collection tank, the entire tank contents must be considered to be greater than 500 ppm PCBs and be disposed of in an incinerator that meets the requirements found in Annex I of the rule. (In other parts of this preamble this will be referred to as an Annex I incinerator.) The tank contents *cannot* be used as dielectric fluids; the tank contents *must* be disposed of. In addition, PCB-free or low concentration PCB fluids cannot be added to the tank in order to dilute the tank contents to a level below 50 ppm PCBs and avoid more stringent disposal requirements. High concentration PCBs must be disposed of in accordance with the applicable requirements even if the concentration of PCBs could be or is actually lowered by dilution. This requirement is intended to prevent the deliberate dilution of concentrated PCBs to evade the more stringent disposal requirements that apply to such liquids. In addition, to permit dilution in this way would result in greater dissemination of PCBs and, consequently, greater human and environmental exposure to PCBs. The use of collection tanks for mineral oil dielectric fluid is discussed further in preamble section III.E.

b. Significance of Transformer Categories

The three categories of transformers are subject to different disposal, rebuilding, and storage requirements under these rules. Fluids from Non-PCB Transformers (with less than 50 ppm PCBs) have one disposal restriction: they cannot be used as a sealant, coating, or dust control agent if they contain any detectable PCB. Fluids from PCB-Contaminated Transformers (with 50 ppm or 500 ppm PCBs) must be disposed of in high efficiency boilers, in approved chemical waste landfills, or in Annex I incinerators. (See section III.A below). Fluids from PCB Transformers (concentrations of 500 ppm or greater) must be disposed of only by high temperature incineration.

Other significant activities for which the categories have different requirements are servicing (including rebuilding) and disposal (of the transformer coil and casing). PCB-Contaminated Transformers are subject to no restrictions on servicing (including rebuilding) or coil and casing disposal, except that after July 1, 1979, servicing of PCB-Contaminated Transformers must be performed either by the owner or operator or by someone who has an exemption from the processing and distribution in commerce bans. The major advantage of recategorizing a PCB-Contaminated Transformer to Non-PCB Transformer is that no exemption would be needed for servicing and that simpler dielectric fluid disposal requirements would apply.

The servicing and disposal of PCB Transformers are subject to more stringent restrictions. Any servicing of PCB Transformers that requires the removal of the coil from the casing is prohibited and PCB Transformer coils and casings must be disposed of either in an Annex II chemical waste landfill or in an Annex I high temperature incinerator. Any fluid removed from a PCB Transformer being serviced must either be reused as dielectric fluid or disposed of in an Annex I incinerator. Any fluid removed from a PCB Transformer that is being disposed of must be disposed of in an Annex I incinerator. Servicing that does not require the removal of the coil can be performed, but persons who process or distribute PCBs in commerce for purposes of servicing must be granted an exemption by EPA. Consequently, recategorizing a PCB Transformer to a PCB-Contaminated Transformer by lowering the PCB concentration would permit rebuilding of the transformer, simplify future disposal, and permit salvage of the casing and coil. Rebuilding may be especially important to owners of transformers that are used in special applications or have unique design characteristics and that cannot be readily replaced in the event of a failure.

D. Totally Enclosed Manner and Significant Exposure

The definitions of these terms are basically unchanged from those contained in the proposed rule. See the preamble to the proposed rule (43 FR 26805-6, June 7, 1978) for a discussion of these terms.

E. Sale for Purposes Other Than Resale

Two modifications have been made to this definition. First, sale for purposes of research and development is not considered to be for purposes other than resale. The proposed rule excluded all activities involving small quantities of PCBs for research and development (as defined in § 761.2(ee)). The final rule includes such activities within its scope and authorizes the processing and distribution in commerce of small quantities for research and development until July 1, 1979 (after which exemptions would be required to continue these activities) and authorizes use of such quantities until July 1, 1984 (see preamble section IX.J).

The second change concerns leasing of PCB Equipment. The proposed rule would have required that PCB Equipment be leased for a minimum of one year. The final rule provides that the lease period may be for any period of time provided that the lease begins before July 1, 1979. The import and export of leased equipment will require an exemption after July 1, 1979 (see preamble section VI.B.1.b).

F. Other Definition Changes

The definitions of "Chemical Waste Landfill" (§ 761.2(f)) and "incinerator" (§ 761.2(l)) have been modified in a minor way to reflect more closely the proposed definitions developed for these facilities under the Hazardous Waste Regulations developed pursuant to the Resource Conservation and Recovery Act (RCRA). The changes do not affect the criteria for these facilities in Annexes I and II of the PCB Disposal and Marking Rule.

Definitions for "Byproducts" (§ 761.2(c)) and "Impurity" (§ 761.2(k)) have been added. These definitions are the same as those promulgated in EPA's inventory regulation under section 8 of TSCA (42 FR 64572). (See preamble section VI.C.1.)

III. Changes in Subpart B: Disposal of PCBs and PCB Items

A. Mineral Oil Dielectric Fluid With 50 to 500 ppm PCB

The proposed rule would have changed the PCB Disposal and Marking Rule by requiring all PCBs containing 50 ppm or more PCB to be disposed of in an incinerator meeting the requirements of Annex I. This requirement would have increased the quantity of liquid to be incinerated over the next 30 to 40 years from 300 million pounds to at least 3 billion pounds, with proportional increases in costs (see the Versar Report). This increase would also have severely strained available incineration capacity. EPA was concerned about the impact of this requirement and requested comments on the use of high temperature boilers for incinerating PCB contaminated mineral oil.

1. High Efficiency Boilers

A substantial number of comments stated that power generation facilities could provide an environmentally safe alternative for burning PCB-contaminated mineral oil. EPA reviewed

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the comments and investigated the feasibility of permitting the use of boilers as a disposal option. After exploring this matter with combustion experts, EPA concluded that there are boilers capable of adequately incinerating PCB-contaminated mineral oil. These boilers (which can be referred to as "high efficiency boilers") include power generation boilers and industrial boilers that operate at a high combustion efficiency (99.9%), as defined by the carbon monoxide concentrations and excess oxygen percentages in the combustion emissions.

These boilers are capable of achieving a PCB destruction efficiency of 99.9% or greater. This destruction efficiency is somewhat lower than the estimated 99.9999% or greater destruction efficiency that an Annex I incinerator can achieve. However, this disposal alternative is restricted to PCB-contaminated mineral oil of low PCB concentration (50–500 ppm) and offers a substantial reduction in disposal costs (*over $13 million per year*). Given the 99.9% destruction efficiency for PCBs in high efficiency boilers, only 10 more pounds of PCB would enter the environment annually as compared to the amount released from high temperature incinerators under Annex I. (This estimate is derived from Versar data).

After considering these factors, EPA concluded that disposing of PCB-contaminated mineral oil containing 50 to 500 ppm PCB in high efficiency boilers does not present an unreasonable risk to human health or the environment. However, for the reasons explained in section III.B, only PCB-contaminated mineral oil will be permitted to be burned in boilers without specific approval by the appropriate EPA Regional Administrator. A discussion of the burning of other low concentration PCB wastes also is found in section III.B.

2. Conditions for Boilers

Based on the conclusions stated above, the final rule permits the burning of PCB-contaminated mineral oil with a concentration below 500 ppm in high efficiency boilers if the following conditions are met: (1) the boiler is rated *at a minimum of 50 million BTU/hour*; (2) the mineral oil is no more than ten percent of the total fuel feed rate; (3) the mineral oil is not added to the combustion chamber during boiler start-up or shut-down operations; (4) before commencing the burning of PCB-contaminated mineral oil, the owner or operator has conducted tests and determined that the combustion emissions contain at least three percent (3%) excess oxygen and the carbon monoxide concentration does not exceed 50 ppm for oil or gas-fired boilers or 100 ppm for coal-fired boilers; (5) the company has notified the appropriate EPA Regional Administrator at least 30 days before the company uses its high efficiency boiler for this purpose and has supplied the notice with the combustion emissions data as specified in (4) above; (6) the combustion process is monitored either continuously or, for boilers burning less than 30,000 gallons of mineral oil annually, at least once each hour that PCB-contaminated mineral oil is burned, to determine the percentage of excess oxygen and the carbon monoxide level in the combustion emissions; (7) the primary fuel and mineral oil feed rates are monitored at least every 15 minutes whenever burning PCB-contaminated mineral oil; (8) the carbon monoxide and excess oxygen levels are checked at least once an hour and, if they fall below the specified levels, the flow of mineral oil to the boiler is immediately stopped; and (9) records are maintained that include the monitoring data in (6) and (7) above and the quantities of PCB-contaminated mineral oil burned each month. When burning mineral oil dielectric fluid, the boiler must operate at a level of output no less than the output at which the reported carbon monoxide and excess oxygen measurements were taken. The Regional Administrator has to be notified only before the first burning of PCB-contaminated mineral oil in the boiler. The conditions are intended to prevent the introduction of PCBs into boilers when combustion conditions are not optimum for the destruction of PCBs. The level of 30,000 gallons per year was chosen as the cut-off for continuous monitoring because, (1) EPA believes that boilers burning 30,000 gallons or more per year of PCB-contaminated mineral oil would be burning on a regular basis and therefore should continuously monitor CO and excess O_2; and (2) a boiler burning this quantity of mineral oil annually will incur more than sufficient savings over high temperature incineration or chemical waste landfill disposal costs to offset the added costs of continuous monitoring. However, a person whose boiler does not meet these requirements but who can demonstrate that the boiler will destroy PCBs as efficiently as a high efficiency boiler may seek specific approval from the appropriate EPA Regional Administrator under § 761.10(a)(2)(iv).

EPA plans to monitor the use of these boilers closely and will carefully analyze the effectiveness of this disposal option.

3. Other Disposal Alternatives

Alternatively, any PCB-contaminated mineral oil dielectric fluid (with a PCB concentration less than 500 ppm) may be disposed of either in an incinerator complying with Annex I or, under special conditions (see section III.C below), in a chemical waste landfill complying with Annex II. These landfills will provide a disposal option less costly than Annex I incineration for owners or users of PCB-contaminated mineral oil who do not have access to high efficiency boilers. EPA believes that only small quantities of dielectric fluid will be disposed of in landfills because high efficiency boilers or incinerators will be available for most of the waste fluids.

The impact on human health and the environment from disposing of these wastes in chemical waste landfills is discussed in the preamble section III.B below.

B. Other Liquid Wastes With 50 to 500 ppm PCB

To provide thermal destruction alternatives for other low concentration liquid wastes containing less than 500 ppm PCB, EPA has included in the rule a procedure that is comparable to the disposal alternatives for PCB-contaminated mineral oil. This procedure permits the disposal of these non-mineral oil fluids on a case-by-case basis in high efficiency boilers.

Such approval can be granted if: (1) the boiler is rated at a minimum of 50 million BTU/hour; (2) the PCB-contaminated waste comprises no more than ten percent (10%) of the total volume of fuel; (3) the waste will not be added to the combustion chamber during boiler start-up or shut-down operations; (4) the combustion emissions will contain at least three percent (3%) excess oxygen and the carbon monoxide concentration will be less than 50 ppm for oil or gas-fired boilers or 100 ppm for coal-fired boilers; (5) the combustion process will be monitored continuously or at least once each hour that the PCB-contaminated wastes are being burned to determine the percentage of excess oxygen and the carbon monoxide level in the combustion emissions; (6) the primary fuel and waste feed rates are monitored at least every 15 minutes whenever burning the waste; (7) the carbon monoxide and excess oxygen levels are monitored at least once an hour and if they fall below the levels

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specified, the flow of wastes to the boiler is stopped immediately; and (8) records are maintained that include the monitoring data in (5) and (6) above and the quantities of PCB-contaminated waste burned each month. When burning PCB wastes, the boiler must operate at a level of output no less than the output at which the reported carbon monoxide and excess oxygen measurements were taken. These requirements are similar to those for high efficiency boilers used to burn PCB-contaminated mineral oil.

Persons seeking approval to use this disposal alternative must submit an application to the appropriate EPA Regional Administrator. The application must contain information describing the quantity of waste expected to be disposed of each month, descriptive information about the waste including the concentrations of PCBs and other chlorinated hydrocarbons, the results of a number of standard fuel analyses to determine the nature of the waste, BTU heat value and flash point of the wastes, and an explanation of the procedures to be followed to insure that burning the waste in the boiler will not adversely affect the operation of the boiler such that the combustion efficiency will decrease. The information contained in the applications will help the Regional Administrator to assess whether these high efficiency boilers will adequately destroy these low concentration PCB wastes.

The cost of this alternative is greater than the mineral oil disposal alternative because approval application costs and analytical costs are greater. However, these costs will be less than the cost for Annex I incineration or Annex II chemical waste landfills. As a result, the quantity of low concentration PCB wastes going to Annex I and Annex II facilities should be reduced. In addition, a person whose boiler does not meet these requirements but who can demonstrate that the boiler will destroy PCBs as efficiently as a high efficiency boiler may seek specific approval from the appropriate EPA Regional Administrator under § 761.10(a)(3)(iv).

These wastes are treated differently than PCB-contaminated mineral oil dielectric fluid because they tend to be more varied in composition than contaminated mineral oil. In many cases, these fluids are fire or heat resistant and could reduce PCB destruction efficiency. For example, unlike mineral oil, PCB-contaminated hydraulic fluid will require the addition of *more* primary fuel for it to burn in the manner necessary to destroy the PCBs.

C. Disposal of 50 to 500 ppm PCB Liquids in Chemical Waste Landfills

The rule also provides another new disposal alternative not permitted in the proposed rule. All liquid wastes with less than 500 ppm PCB may be disposed of in chemical waste landfills that comply with the requirements of Annex II. Allowing this additional disposal option for low concentration liquid wastes will reduce disposal costs and increase the availability of Annex I incinerators to destroy high concentration wastes.

This disposal alternative is limited to those low PCB concentration (50–500 ppm) wastes that are not considered ignitable wastes. A waste is considered ignitable if its flash point is less than 60° C (140° F). This limitation is consistent with the proposed Resource Conservation and Recovery Act (RCRA) rules for disposal of hazardous wastes (43 FR 58946, December 18, 1978).

Properly designed and operated chemical waste landfills are capable of containing liquid wastes when the liquids are stabilized in the disposal process or contained in cells of sorbent material, as required by this rule. EPA's Office of Solid Waste recommends mixing liquids with soils or solid wastes in order to stabilize liquid wastes. Alternatively, containers of the liquids may be surrounded by enough inert, sorbent material to absorb all of the liquid in the container should the container leak. These techniques will effectively control the migration of PCBs from the landfill site. Use of such landfills will result in only limited exposures to PCBs. Almost all of the exposure will occur during the liquid stabilization process. This use of chemical waste landfills is consistent with hazardous waste disposal policies being proposed by EPA under RCRA (see 43 FR 58946).

Incineration of low concentration PCB wastes is much more costly. To destroy a small percentage of PCBs, a significant volume of contaminated material must be destroyed. The cost of incineration per pound of PCB may be very high. Disposal of low concentration liquid PCBs in an Annex II chemical waste landfill will greatly reduce these disposal costs, free incineration facilities for burning of high concentration wastes, and produce little increase in environmental or human exposure to PCBs.

Owners or operators of chemical waste landfills already approved by EPA for disposal of non-liquid PCBs and PCB items will have to request additional approval to dispose of liquids with low-concentrations of PCBs. Guidance on proper procedures for requesting such approval will be provided for these owners or operators. Owners and operators of chemical waste landfills not yet approved for disposal of PCBs will also have to request specific permission to dispose of such liquids.

D. Disposal of Non-Liquid PCBs in Chemical Waste Landfills

EPA has decided to permit the disposal of non-liquid PCBs at any concentration in chemical waste landfills that meet the requirements of Annex II. The Disposal and Marking Rule permitted only persons with contaminated soils and other solids recovered from spills or removed from old disposal sites to use this disposal option. It would be inconsistent not to permit this same disposal option for other non-liquid PCB wastes such as contaminated rags and absorbent materials. These additional solids are estimated to be only a small fraction of the total non-liquid PCB wastes generated. Providing this alternative disposal method will permit more of the currently available incineration capacity to be used for high concentration liquid wastes and will result in little additional human or environmental exposure to PCBs. For these reasons, EPA has made this change in § 761.10(a)(4) of the rule.

In addition to disposal in Annex I incinerators or Annex II chemical waste landfills, dredge materials and municipal sewage sludges that contain between 50 ppm and 500 ppm PCB may also be disposed of by any alternative method approved by the appropriate EPA Regional Administrator (see § 761.10(a)(5)(iii)). This provision is unchanged from the Disposal and Marking Rule, except that it now covers these materials down to 50 ppm.

EPA has received a petition from the State of North Carolina regarding the disposal of contaminated soil and debris from spills (44 FR 13675, March 12, 1979). EPA is required to respond to the petition by June 4, 1979.

The storage requirements of § 761.42 Subpart E apply to all of the low concentration wastes discussed above including substances containing between 50 and 500 ppm PCB and will help provide adequate protection against spills.

E. Batch Testing of Mineral Oil Dielectric Fluid

Testing of mineral oil dielectric fluid and waste oil from sources that are otherwise assumed to contain PCBs at a concentration between 50 ppm and 500

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ppm can be performed on samples taken from collection tanks ("batch testing"). This is permitted so that oils from multiple sources can be collected and tested without requiring a separate test of each transformer each time a disposer wants to evaluate his disposal options.

The prohibition against dilution, however, has not changed. The new testing option does *not* permit the deliberate dilution of the collected oil (assumed to contain PCBs above 50 ppm) with PCB-free or low-PCB fluids to reduce the concentration of PCBs in the resultant mixture below 50 ppm. Further, the option does not permit the deliberate addition of PCB wastes with concentrations greater than 500 ppm to the tank in order to avoid the more stringent disposal requirements for high-concentration wastes. If such high-concentration wastes are added to the tank, then the entire tank contents must be disposed of in compliance with requirements for wastes containing 500 ppm PCBs or greater, even if a sample of the aggregate tank contents reveals a concentration below 500 ppm. In this circumstance, the tank contents *cannot* be used as dielectric fluid; the tank contents *must* be disposed of in a high temperature incinerator.

These restrictions are essential to ensure that appropriate measures are taken to destroy or dispose of PCB-contaminated wastes. In developing the final rule, EPA developed a balanced approach to disposal by considering the most appropriate means of disposing of wastes with different PCB concentrations in light of the risks to human health and the environment. Diluting or mixing PCB wastes as described above to avoid proper disposal upsets this balance and is a violation of this rule. The proposed rule would have required testing of each transformer's fluid. The cost of batch testing is substantially less than individual source testing. In addition, permitting testing from collection tanks will result in very little additional exposure of humans or the environment to PCBs.

F. Other Changes in the Disposal Requirements

The disposal requirements for PCB chemical substances and PCB mixtures have been replaced by disposal requirements for PCBs (§ 761.10(a)). This was necessary because of the revised definition of PCBs and the elimination of the definitions of "PCB Chemical Substances" and "PCB Mixtures".

The disposal requirements for PCB Articles other than PCB Transformers and PCB Capacitors have been changed to permit these articles to be disposed of in a chemical waste landfill as well as in high temperature incinerators (§ 761.10(b)(4)). Examples of these articles include pipes, hoses, parts of heat transfer systems, electromagnets, and electric motors. Altogether, these articles account for less than one percent (1%) of the PCBs currently in use in the United States. When these articles are disposed of in chemical waste landfills, they must be drained of free flowing liquid. As a consequence, these articles will contain only small amounts of PCBs. Disposal of these articles in chemical waste landfills will add only small quantities of PCBs to the landfills and will result in little or no additional human and environmental exposure of PCBs.

The final rule has a special disposal provision for hydraulic machines. These machines are difficult to transport as they frequently weigh many tons and can be as large as a small building. In general, only a relatively small portion of the machine is contaminated with PCBs. For these reasons, instead of requiring disposal in a chemical waste landfill, the final rule permits disposal of hydraulic systems as municipal solid waste and salvaging of these machines after draining. The machines must first be drained of all free-flowing liquid. If the fluid contains more than 1000 ppm PCBs, the machines must be flushed with a solvent and thoroughly drained before disposal. After considering the cost of disposing of these machines in chemical waste landfills and the small quantities of PCBs that would remain in a properly drained machine; EPA concluded that disposal as municipal solid waste did not represent an unreasonable risk to health or the environment. For these same reasons, no special storage requirements have been included for properly drained machines.

The final rule also permits PCB Containers that were used only to contain materials or fluids with PCB concentrations between 50 and 500 ppm to be disposed of as municipal solid waste. If these containers are well drained, as required by the rule, only very small quantities of PCBs would remain and these containers could be safely disposed of as municipal solid waste with little added exposure to humans or the environment. For example, if a drum containing 500 ppm liquid waste is drained of 99% of the liquid, less than one gram of PCB would remain in the drum. Disposers of these containers will have to be able to demonstrate that the containers only contained PCBs in concentrations of 50 to 500 ppm.

IV. Changes in Subpart C: Marking of PCBs and PCB Items

The PCB Disposal and Marking Rule, as promulgated in February 1978, applied only to PCB and PCB Items that contained 500 ppm or greater PCBs. These requirements now extend to all PCB Items (including PCB Containers, PCB Article Containers, PCB Articles, PCB Equipment, and PCB transport vehicles) that contain 50 ppm or greater PCBs. This modification makes the marking and disposal requirements consistent with the final prohibition rule, which generally extends to all PCB Items with 50 ppm or greater PCBs, as discussed above.

The extension of the disposal and marking requirements is essential to ensure that PCB Items regulated under this rule are properly identified, handled, and disposed of to minimize the potential risks of exposure to PCBs. To provide sufficient time to identify and mark PCB Items containing between 50 and 500 ppm PCB, § 761.20(e) provides that these PCB Items must be marked by October 1, 1979.

PCB-Contaminated Transformers are an exception to the policy described above and are not required to be marked. The cost of marking a very large number of PCB-Contaminated Transformers while they are in service would be extremely high. There are about 35 million PCB-Contaminated Transformers and, if it cost $10 to label each one, the total labeling cost would be about $350 million. Also, because EPA assumes that all transformers other than PCB Transformers (which are required to be marked) are PCB-Contaminated Transformers, labels are not necessary. An unmarked mineral oil transformer will automatically be assumed to be a PCB-Contaminated Transformer unless it meets one of the criteria listed in preamble section II.C.1 above. Although transformers at any time can be properly tested and found to be either a Non-PCB Transformer or a PCB Transformer, such testing would generally be performed only when disposal is contemplated. Consequently, labeling to differentiate such transformers from PCB-Contaminated Transformers would have little practical value.

Some PCB-Contaminated Transformers may have already been marked with the PCB Transformer mark (especially in Michigan where State law requires marking for transformers with 100 ppm PCB or greater). There is some concern that the label on the transformer will determine the disposal alternatives. This is to clarify that when

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a transformer is ready to be disposed of, the owner or operator may choose among the alternative disposal methods applicable to the transformer in question and permitted by this rule. (See preamble section II.C, "Classification of Transformers Under This Rule".)

Marking of large capacitors is relatively straightforward because virtually all large capacitors were PCB-filled until the past few years. Therefore, any capacitor that cannot be shown to be PCB-free by examining label or nameplate information, must be assumed to be a PCB Capacitor and must be marked with the PCB mark.

A new paragraph § 761.20(h), has been added that requires that marks (or labels) be placed on the exterior of PCB items and transport vehicles so that the marks can be seen by interested persons. This addition corrects an oversight in the original Disposal and Marking Rule.

Section 762.20(i) has been added to clarify that any marking requirements for PCBs at concentrations less than 500 ppm manufactured after [30 days after publication in the Federal Register], including PCBs that are byproducts or impurities, will be contained in the exemption EPA grants to permit such manufacture. However, any PCB Article or PCB Equipment into which the PCBs are processed must be marked in accordance with the requirements found elsewhere in Subpart C. Those persons who have submitted petitions to manufacture chemicals with PCB contamination pursuant to the rulemaking procedures for the manufacturing exemptions (43 FR 50905, November 1, 1978) are not required to label any chemical that contains less than 500 ppm PCB until EPA acts on their petition. For example, persons who have petitioned because they manufacture PCBs as a contaminant at less than 500 ppm or a pigment or other commercial chemical product do not have to label that product as containing PCBs until after EPA acts on their petition. Conversely, any containers of any product that contains 500 ppm or greater PCBs must be labeled. This latter requirement was included in the PCB Disposal and Marking Rule (43 FR 7150, February 27, 1978).

V. Changes in Subpart E: Annexes

A. Annex I: Incineration

Section 761.40(a)(2) establishes a new value of 99.9% for the combustion efficiency required of incinerators. This is a correction of the earlier value of 99% efficiency that was specified in the Disposal and Marking Rule. Specifically, incinerators operating at the temperatures, dwell times, and excess oxygen concentrations specified in Annex I normally operate at a combustion efficiency of 99.9% or greater. A combustion efficiency of 99.9% thus more accurately represents the true combustion efficiency of Annex I incinerators. All incinerators that have been approved or that are under consideration for approval by EPA are capable of operating at 99.9% combustion efficiency; accordingly, this modification should not disqualify these incinerators or result in additional operating expenses for these facilities. (This change does not mean that those incinerators already approved will be required to reapply for approval to operate.) Combustion efficiency is an effective parameter for evaluating the degree of destruction that occurs in an incinerator, and it is essential that the required value for this parameter accurately reflect expected combustion conditions.

A change has been made to the CO_2 monitoring requirement of § 761.40(a)(7). The Disposal and Marking Rule required continuous monitoring of the CO_2 concentration in the stack gas of the incinerator. The rule has been changed to require periodic CO_2 monitoring as specified by the Regional Administrator. This change was made for two reasons: (1) the high cost of the equipment needed to continuously monitor CO_2; and (2) the insensitivity of the combustion efficiency calculation to variations in the CO_2 concentration.

The automatic shutoff of waste flow that was required by the Disposal and Marking Rule when certain operating deficiencies occurred has been modified. Owners or operators of an incinerator may submit to the Regional Administrator, when they apply for the approval to incinerate PCBs, a contingency plan outlining the corrective steps they will take when operating problems occur. This change provides for greater flexibility for incinerator operators and will result in no increased human or environmental exposure since the contingency plans will be examined on a case-by-case basis by the Regional Administrator for proper safeguards before approval.

A new paragraph, § 761.40(d)(8), has been added to clarify the responsibility of the owner or operator of an approved facility when the ownership of the facility is transferred.

B. Annex II: Chemical Waste Landfills

Section 761.41(b) specifies requirements for operational plans for chemical waste landfills. These requirements have been modified to require delineation of the procedures to be used for the disposal of liquids containing between 50 ppm and 500 ppm PCB. After EPA approves an operational plan, the affected landfill operator must follow those procedures in disposing of PCB wastes.

Section 761.41(b)(3) specifies that the bottom of a chemical waste landfill must be at least fifty feet above the historical high water table. Because the distance between the bottom of the chemical waste landfill and the water table in many areas east of the Mississippi River is far less than fifty feet, EPA Regional Administrators have had to waive this criterion in several situations. While the criterion in the final rule is unchanged from the Disposal and Marking Rule, EPA is proposing a modification of this provision in a separate notice of proposed rulemaking.

The provisions in Annex II of the Disposal and Marking Rule establishing monitoring requirements for surface water (§ 761.41(b)(6)(i)) have been modified to allow the Regional Administrator to designate the surface watercourses that are to be sampled. This minor change eliminates any uncertainty about which watercourses are to be sampled.

Section 761.41(b)(7) includes provisions for leachate collection in chemical waste landfills. The Disposal and Marking Rule specified that the collection system be located under the landfill liner system. The final rule corrects this provision and specifies that the collection system be above the landfill liner system. Collection systems are placed above the liner to capture liquids to protect and reduce hydraulic pressure on the liner system. All chemical waste landfills currently in use have collection systems above the liner.

A new paragraph, § 761.41(e)(7), has been added to clarify the responsibility of the owner or operator of an approved facility when the ownership of the facility is transferred.

C. Annex III: Storage

1. Container Specifications

The requirements of § 761.42(c)(6) have been modified to clarify the five types of Department of Transportation (DOT)-approved containers that can be used to store PCBs and PCB items. The Disposal and Marking Rule (§ 761.42(c)(6)) stated that containers used to store liquid PCBs must comply with the DOT specifications set out in 49 CFR 173.346, which describe a broad range of containers varying in size from less than one gallon containers to

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railroad tank cars. Since only five of these container specifications (3, 3B, 6D, 17C, and 17E) are appropriate for such PCB storage, the rule has been modified to refer only to these five DOT container specifications. This change should not be disruptive as industry already generally uses the containers included in these five DOT specifications for PCB storage and handling.

In addition, on August 2, 1978, EPA published a clarification of § 761.42(c)(6) concerning PCB containers that provided for the use of special-sized containers for oversized PCB Articles or PCB Equipment (43 FR 33618). This clarification is incorporated in the final rule.

2. Bulk Storage

A new subparagraph, § 761.42(c)(7), has been added to permit the use of large containers, such as storage tanks, for the storage of PCB liquids. This change is designed to allow safer transfer and storage of bulk PCBs. While the greatest risks of spills and exposure to PCBs may occur during transfer operations, transfers in bulk from storage tank (or tank truck) to storage tank are usually better controlled than transfers to or from drums. Accordingly, the modification should reduce the number of spills and the extent of exposure to PCBs during transfer operations.

To permit bulk storage of liquid PCBs, EPA has had to add to the rule suitable standards for the containers or storage tanks that would be used. The Occupational Safety and Health Administration (OSHA) has prepared comprehensive tank specifications (29 CFR Part 1910.106). These specifications are based on standards developed by organizations such as the American Society of Mechanical Engineers (ASME) and the American Petroleum Institute (API) and are widely recognized as reasonable standards that provide for safe storage of hazardous substances. These specifications, however, are oriented to flammable and combustible liquids, which usually have a specific gravity of less than one. As provided in the OSHA rules, when a liquid's specific gravity is greater than 1.0 (which is the case with PCBs), precaution must be taken to insure that an adequate factor of safety exists when designing new tanks or when evaluating the structural strength of existing tanks. Liquids with such specific gravities are heavier than water and will put greater stress on the tanks. Accordingly, § 761.42(c)(7)(i) requires that this factor be taken into account to insure adequate structural safety of storage tanks used for PCBs.

Owners or operators of bulk storage facilities will have to keep a record of the amounts added to and removed from the bulk containers. The records will be important in tracing waste shipments and enforcing the disposal and storage requirements. This requirement is similar to the requirement promulgated in the Disposal and Marking Rule for individual containers.

Another factor in EPA's decision to allow bulk storage was the high cost of not permitting it. Considering just mineral oil dielectric fluid, there are about 1.73 billion gallons presently in use (see Versar Report). Assuming this oil would be disposed of over a 40 year period and that the cost of storing each 55 gallon drum is $145 (see Versar Report, Disposal and Marking Rule), the annual storage cost would have been about $132 million. This value would have been larger in practice since new mineral oil brought into use after this year would also have been stored in the same way because of contamination from residual PCBs in the equipment.

3. Spill Prevention Procedures

Spill prevention procedures are necessary to provide adequate environmental protection during the use of PCB storage tanks permitted by § 761.42(c)(7). Some of the substances contained in these tanks may qualify as oils under section 311 of the Clean Water Act and, therefore, may be subject to the spill prevention provisions of 40 CFR Part 112. In order to provide equivalent control of PCB liquids that do not qualify as oils, the Spill Prevention Control and Countermeasures (SPCC) provisions of the 40 CFR Part 112 have been incorporated with certain modifications into this rule. A wide cross section of U.S. industry is now using these procedures to protect against oil spills. Extending these requirements to non-oil PCBs should provide substantial environmental protection and should be easily complied with by industry.

These provisions of 40 CFR Part 112 incorporated in this PCB rule have been modified to adapt them to the PCB activities regulated by § 761.42(c)(7) of this rule. Specifically, the Part 112 oil spill prevention requirements do not apply to tanks smaller than 660 gallons and underground tanks smaller than 42,000 gallons. Because of the risks associated with spills of PCBs, these tank size exemptions do not apply to containers or tanks containing PCBs at concentrations of 50 ppm or greater. The PCB rule also adds the requirement that the area between a storage tank and secondary containment dikes must be impervious to PCBs to prevent groundwater contamination.

One provision of 40 CFR Part 112, the SPCC plan amendment procedures, is not currently applicable to PCBs. These procedures are triggered by a notification requirement for oil spills. Because these notification requirements do not now apply to PCB spills, the SPCC plan amendment procedures are not applicable.

EPA has proposed a spill prevention rule for hazardous substances (including PCBs) under section 311 of the Clean Water Act (43 FR 39278, September 1, 1978). When this spill prevention rule is promulgated, the spill prevention provisions of this PCB rule will be revised to eliminate duplications or inconsistencies.

4. Flood Protection

The Disposal and Marking Rule required that storage areas be above the 100 year flood level. The Agency is considering modifying the PCB rule to include the flood protection guidelines developed by the National Flood Insurance Administration (NFIA) which is part of the Department of Housing and Urban Development. The Agency decided not to change the PCB rule at this time because the Hazardous Waste Regulations proposed under the Resource Conservation and Recovery Act have included a flood protection approach based on the NFIA program. If that approach is adopted when the Hazardous Waste Regulations are promulgated, the Agency will consider adopting a similar flood protection approach for PCB storage areas.

5. Temporary Storage

a. Revisions

The temporary storage of non-leaking PCB Articles and PCB Containers containing leaking articles was permitted for 30 days under the provisions of the Disposal and Marking Rule. This would enable electric utilities and others to consolidate their PCB items in a central facility and improve management and recordkeeping for PCB wastes. The proposal did not, however, permit PCB Containers of non-liquid wastes, such as contaminated soil, to be placed in temporary storage. Because these containers of non-liquid waste do not pose any greater hazard than the containers of leaking articles, § 761.42(c)(1) of this rule modifies the storage requirements to permit PCB Containers of non-liquid waste to be

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held in temporary storage for up to 30 days.

Under the final rule, large quantities of low concentration PCB liquids from PCB-Contaminated Transformers must be properly disposed of. The logistics of immediately transporting liquids drained from these transformers to a single, permanent storage facility are frequently difficult. Even though these liquids pose less of a threat to health and the environment when spilled than do more highly concentrated PCB liquids, adequate spill prevention remains essential. The final rule permits the 30 day temporary storage of low concentration (50 to 500 ppm PCBs) liquids at facilities that have a SPCC plan. That SPCC Plan must adequately address storage of PCBs in relatively small containers, such as 55-gallon drums, which is not normally included in such plans. This approach will insure adequate environmental and human health protection and will place little or no additional burdens on facility owners or operators.

The final rule does not allow temporary storage for high concentration PCB liquids (above 500 ppm). Because of the potential harm from an uncontrolled spill, temporary storage of these concentrated liquids is not permitted.

b. Action on Petitions To Amend Rule on Temporary Storage Requirements

Subsequent to the close of the reply comment period, EPA received petitions under section 21 of TSCA from Commonwealth Edison, Consolidated Edison Company, and the Edison Electric Institute to amend § 761.42(c)(1) (43 FR 7150, 7162, February 17, 1978 and 43 FR 33888, 33920, August 3, 1978) to allow temporary storage of PCB substances, mixtures, and PCB-contaminated materials, such as rags and soil. Representatives of EPA met with petitioners on January 24, 1979 and received written materials on that date in support of the petitions. EPA wrote to petitioners on February 9, 1979 and advised them that the Agency considered the petitions to have been filed on January 26, 1979, the date when written and oral information in support of the petitions was received.

The actions on temporary storage of PCBs and PCB Items described in section V.C.5.a. above grant the petitions in part and deny them in part. The petitions are granted as to temporary storage of PCB Containers of non-liquid wastes, such as contaminated soil and rags. Such temporary storage is now permitted under the conditions of § 761. 42(c)(1)(iii). Similarly, the petitions are granted as to temporary storage of low concentration (50 to 500 ppm PCBs) liquids. Such temporary storage is permitted under the conditions of § 761.42(c)(1)(iii). However, the petitions are denied as to temporary storage of high concentration PCB liquids (above 500 ppm). As noted in section V.C.5.a. of this preamble, the risk of potential harm from an uncontrolled spill, or a leak, is too great to permit temporary storage of such high concentration PCB liquids.

D. Annex IV: Decontamination

The decontamination requirements in Annex IV were changed in this rule to require flushing with a solvent containing less than 50 ppm PCB rather than 500 ppm PCB as previously promulgated. This change is based on lowering the cut-off concentration of PCBs from 500 ppm to 50 ppm. This change will further reduce the amount of residual PCBs in decontaminated containers.

E. Annex V: Records and Monitoring

A new paragraph, § 761.45(d), has been added specifically to require chemical waste landfill operators to retain records concerning the operation of the landfill. These records include the identity of the wastes they receive and where the wastes are placed in the landfill. This paragraph does not require the development of any new records but corrects an omission from the Disposal and Marking Rule.

The final rule modifies § 761.45(b) and adds § 761.45(e) to provide for retention of records by owners or operators of high efficiency boilers. The requirements are similar to recordkeeping requirements for other PCB waste disposal alternatives, such as incinerators or chemical waste landfills, and are necessary for enforcement.

VI. Subpart D: Manufacturing, Processing, Distribution in Commerce, and Use Bans

A. Prohibitions

Section 761.30(a) implements TSCA section 6(e)(2)(A), which prohibits the manufacture (including importation), processing, distribution in commerce, and use of PCBs and PCB Items in a manner other than a totally enclosed manner unless authorized under § 761.31 of this rule. This prohibition also applies to the manufacture, processing, and distribution in commerce of PCBs and PCB Items intended solely for export (see preamble section XI below).

Section 761.30(b) implements TSCA § 6(e)(3)(A)(i), which prohibits the manufacture (including importation into the United States) of PCBs after January 1, 1979 unless an exemption is granted for such manufacture. This prohibition applies to the manufacture (and importation) of PCBs regardless of whether they are manufactured in a totally enclosed manner or they are manufactured solely for export. This prohibition does not apply to PCBs that are imported solely for disposal (see section E.2 below).

Section 761.30(c) implements TSCA section 6(e)(3)(A)(ii), which prohibits both the processing and the distribution in commerce of PCBs and PCB Items after July 1, 1979 unless exemptions are granted for such activities. This prohibition applies to the processing and distribution in commerce of PCBs and PCB Items regardless of whether the Items are processed or distributed in a totally enclosed manner or solely for export. There are three exceptions to these prohibitions.

First, as provided in section 6(e)(3)(C) of TSCA, PCBs or PCB Items that have been sold for purposes other than resale before July 1, 1979, may continue to be distributed after July 1, 1979 in a totally enclosed manner. Therefore, a person who purchases before July 1, 1979, PCB Equipment (such as computers, television sets, or microwave ovens containing PCB Capacitors) for his own use, rather than for resale, may sell that equipment after June 30, 1979.

Second, after July 1, 1979, anyone may process or distribute in commerce PCBs or PCB Items for purposes of disposal in accordance with the requirements of § 761.10. Because TSCA treats disposal separately from processing and distribution in commerce, the processing and distribution in commerce requirements generally are not intended to interfere with the disposal requirements. Section 761.30(c)(2) explicitly states that processing and distribution for purposes of disposal in accordance with § 761.10 may continue after July 1, 1979.

Third, PCBs or PCB Items may be exported for disposal purposes despite the general ban on export of PCBs and PCB Items in § 761.30(c). Section 761.30(c)(3) requires persons to notify EPA at least 30 days before they first intend to export PCB wastes. This provision is discussed further in section B.2. below.

1. Waste Oil Ban

Section 761.30(d) prohibits the use of waste oil containing any detectable concentration of PCBs as a sealant, coating, or dust control agent. Prohibited uses include road oiling, general dust

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control, as a pesticide or herbicide carrier, and as a rust preventative on pipes. Waste oil is defined as used products primarily derived from petroleum, which include, but are not limited to, fuel oils, motor oils, gear oils, cutting oils, transmission fluids, hydraulic fluids, and dielectric fluids. In the proposed rule, "PCB Sealant, Coating, and Dust Control Agent" was defined (§ 761.2(oc), 43 FR 24813) and was included in the term "PCB" for the purpose of regulating these activities. Because the term "PCB Sealant, Coating, and Dust Control Agent" was deleted from the definition of "PCB" (see preamble section II.A.), it became necessary to specifically regulate these activities in § 761.30.

Persons who process, distribute in commerce, or use waste oil must assume it contains PCBs unless the waste oil has been tested and found to contain no PCBs. Batch testing of waste oils is permitted. Waste oils that contain detectable concentrations of PCBs less than 50 ppm may be used as a fuel, as a feedstock in the production of re-refined oils and lubricants, or for any other purpose except as a sealant, coating, or dust control agent.

The use of waste oil containing any detectable concentration of PCBs as a sealant, coating, or dust control agent is banned because these uses result in rapid, direct entry of PCB into the environment. For example, the run-off from road surfaces frequently goes directly to rivers or streams. Once in the environment, PCB enters the food chain, causing a number of adverse effects. The dumping of waste oil (e.g., in a field) is considered use as a dust control agent and is prohibited by this rule. Waste oil is also used to coat water pipes and as a carrier for pesticides and herbicides. These uses also result in substantial direct entry of PCBs into the environment and are prohibited. Although the PCB concentration in waste oil may be low, the large volume of waste oil that is used in these activities results in a large quantity of PCBs entering the environment. Approximately 6,800 pounds of PCB enter the environment annually just from road oiling activities (see the Versar Report).

B. Changes in § 761.30: Prohibitions

The following changes have been made to § 761.30:

1. Change in the Scope of the Manufacturing Ban

The proposed rule would have considered the manufacture (and importation) of PCB Articles and PCB Equipment as the manufacture and import of PCBs. This approach would have had the effect of prohibiting the production (and importation) of PCB Articles and PCB Equipment after January 1, 1979, under the provisions of section 6(e)(3)(A)(i) of TSCA. A large number of commentors argued that to consider the production of PCB Articles and PCB Equipment to be "manufacture" was inconsistent with TSCA and other rules promulgated under TSCA. In addition, it was argued that if these activities are considered to be "manufacturing" PCBs, the term "processing" would have no meaning, as almost all commerical activities using PCBs prior to final sale or end use would be manufacturing activities.

a. "Manufacturing" Versus "Processing" of PCB Items

After considering the comments, EPA reexamined the "manufacturing" versus "processing" issue and concluded that PCB Article and PCB Equipment production is "processing" of PCBs, not "manufacture" of PCBs. This conclusion is based on an analysis of the activities of manufacturing, processing, distribution in commerce, and use with respect to chemical substances. EPA determined that "manufacturing" a chemical substance involves only the actual creation of the chemical substance (or of a substance contaminated with PCBs). The other activities are distinguished from "manufacturing" because they involve the use of the already existing substance. "Processing" PCBs includes activities such as placing previously manufactured PCBs into capacitors or transformers. While these activities may be referred to as "manufacturing" of PCB Articles, they do not involve the "manufacture" of the PCBs, only the "processing" of PCBs. The "distribution in commerce" and "use" of PCBs generally coincides with the distribution and use of the PCB Articles and PCB Equipment. Thus, the ban of PCB "manufacture" applies solely to the manufacture of PCBs, as defined in § 761.2(s). Bans of all other activities, namely processing, distribution in commerce, and use, apply both to PCBs as a substance and PCB Items. This interpretation of the terms "manufacture" and "process" also accords with the manner in which Congress intended the requirements of section 6(e)(3) of TSCA to be "phased-in" over time.

The change in EPA's use of the terms "manufacturing" and "processing" is reflected in the definition of PCBs. The proposed definition of "PCB" and "PCBs" included both PCB Article and PCB Equipment (see § 761.2(q) at 43 FR 24813). The final rule changes the definition of "PCB" and "PCBs" in § 761.2(s) by applying these terms only to chemical substances (see preamble section II.A. for more detailed discussion). PCB Equipment and PCB Articles are no longer included in the definition of "PCB" and "PCBs" but are included in a separate term, "PCB Items", which is defined in § 761.2(x).

b. Manufacture and Import of PCB Items

The revised interpretation of "manufacture" and "processing" has two main effects. The first is to postpone the effective date of the prohibition under section 6(e)(3) of the manufacture of PCB Articles and PCB Equipment to July 1, 1979 (unless EPA grants an exemption under section 6(e)(3)(B) of TSCA for continuation of such activities beyond that date). The continued production of PCB Articles and PCB Equipment until July 1, 1979, must, however, be performed in a totally enclosed manner in order to avoid the prohibition on non-totally enclosed processing of PCBs of section 6(e)(2). As a practical matter, this means that production of PCB Articles will be prohibited after July 2, 1979, under section 6(e)(2) as a non-totally enclosed processing of PCBs. In general, PCB Equipment is produced in a totally enclosed manner and so this activity would not be prohibited until July 1, 1979. The practical effect of the change, then, will be to allow continued production of PCB Equipment (such as television sets and microwave ovens) until July 1, 1979 (see preamble section VIII below).

A second effect relates to the importation of PCB Articles and PCB Equipment; here the issues are more complex. The TSCA definition of "manufacture" includes importation (see section 3(7) of TSCA). This means that the importation of any PCB or PCB Item is equated with manufacture. A literal interpretation of this definition in implementing TSCA section 6(e)(3)(A)(i) would mean that no person would be able to import any PCB or PCB Item after [30 days after publication in the Federal Register]. This would create an inequity between domestic manufacturers and importers of PCB Items. Specifically, domestic manufacturers of PCB Items could continue to manufacture and distribute those PCB Items in commerce until July 1, 1979, when the ban under section 6(e)(3)(A)(ii) is effective, while importers would be prohibited from conducting the

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some activity after [30 days after publication in the Federal Register].

The most straightforward way to eliminate this inequity is to delay the effective date of the prohibition on the importation of PCB Items until July 1, 1979. This approach would eliminate the inequity for importers of PCB Equipment but create a different inequity for the importers of PCB Articles. Domestic production of PCB Articles, such as PCB Capacitors and PCB Transformers, is banned as of [30 days after publication in the Federal Register] (even though such production is PCB processing) because this type of production cannot be performed in a totally enclosed manner. (Non-totally enclosed processing and other activities are prohibited after July 2, 1979, by section 6(e)(2) of TSCA.) If the import prohibition for PCB Articles is delayed, PCB Articles could be imported into the U.S. even though they could not be manufactured in the U.S. The continued importation of PCB Articles would increase both the disposal problem associated with PCB Capacitors and the problems associated with use and disposal of PCB fluids in transformers.

Because of the inequities and disposal problems associated with continued importation, EPA is banning importation of PCB Articles after July 2, 1979. Persons wishing to import PCB Articles may petition EPA for an exemption from this ban. This rule does permit continued importation until July 1, 1979, of PCB Equipment, such as television sets and microwave ovens, since these items can be manufactured domestically during this period as they involve "processing" PCB in a totally enclosed manner. The effect of this rule is essentially to treat domestic and foreign manufacturers of PCB Articles and PCB Equipment equally. Such equal treatment was intended and desired by Congress.

From a strict statutory perspective, any importation of PCBs in any form, including in PCB Items, is "manufacturing" of PCBs and prohibited after [30 days after publication in the Federal Register], by TSCA section 6(e)(2) and (3). Although domestic production of PCB Items is best described as PCB "processing", importation of such items is best described as importation of PCBs in the Item. The alternative would be to wholly exclude such importation from the coverage of section 6(e), a manifest absurdity. But just as Congress obviously did not intend such exclusion, so too it did not intend discriminatory treatment. EPA, therefore, construes section 6(e) as authorizing it to impose parallel restrictions on PCB Item production and importation and this is what has been done.

While domestic manufacturers and importers both may continue to build or import PCB Equipment (but not PCB Articles) until July 1, 1979, EPA will strictly enforce the prohibition under TSCA section 6(e)(3)(A)(ii) of processing and distribution in commerce of PCBs and PCB Items, including PCB Equipment, after July 1, 1979. Accordingly, no one will benefit by creating stockpiles of these items in the next several months. The only exceptions to these July 1, 1979 prohibitions will be those activities for which EPA grants an exemption.

Any PCBs or PCB Items imported pursuant to this rule must comply with the import requirements and all other requirements of this rule.

2. Import and Export of PCBs and PCB Items for Disposal

The proposed rule would have prohibited any import or export of PCBs or PCB Items for any purpose. EPA has reviewed this proposed policy and has decided that because of the many potential advantages of an open border policy with respect to disposal of PCBs, that EPA will adopt such a policy for at least one year.

In theory, an open border policy would be advantageous to both the United States and foreign countries, especially Canada. Generators of PCB wastes would be able to select the PCB disposal site that offers the most reasonable transportation and disposal costs. The success of such a policy depends, however, upon the availability of facilities in other countries to safely dispose of PCB wastes. EPA is concerned that foreign disposal alternatives may not adequately destroy the PCBs and create a threat to human health and the environment in the United States.

To date, the United States has approved seven PCB disposal sites and is actively involved in evaluating other potential sites. Other nations have not made as much progress. If the United States were to adopt an open border policy without any qualifications, there may be no incentive for other nations to develop PCB disposal sites. The United States would probably receive a disproportionate share of the international PCB wastes. This disparity could overload existing U.S. capacity and impede public acceptance of PCB disposal sites.

The one year time limit on the open border policy will provide other nations an opportunity to establish PCB disposal sites. At the end of the one year period, EPA will examine the progress made by other nations in establishing and operating safe PCB disposal sites and determine if extension of the open border policy is appropriate.

The final rule, therefore, allows the import and export of PCB wastes for disposal for one year. All imported PCB wastes must be disposed of in accordance with Subpart B of this rule. In preparing this final rule, EPA has reviewed whether regulation of imported and exported PCB wastes for disposal should be accomplished under section 6(a)(1) of TSCA or under section 6(e)(3). While section 6(e)(3)(A)(i) could be read to allow regulation of the import of PCB wastes for disposal, section 6(e) treats PCB disposal as a separate matter under section 6(e)(1). Both the import and export of PCB wastes for disposal may be regulated under section 6(e)(1), which allows comprehensive regulation of the disposal of PCBs. Accordingly, EPA has elected to regulate import and export of PCB wastes for disposal under section 6(e)(1). Since the requirements governing disposal of PCB wastes must be complied with for all imported PCB wastes, no unreasonable risks should result. Moreover, proper disposal in this country provides protection against possible hazards from improper disposal elsewhere.

Other imports and exports of PCBs and PCB Items are regulated as elsewhere described in this preamble under sections 6(e)(2), 6(e)(3), and/or section 12. All imports and exports of PCBs and PCB Items remain subject to the applicable disposal and marking requirements under section 6(e)(1).

Under RCRA, EPA expects to establish a manifest system for hazardous wastes that will monitor the disposal of PCBs and other hazardous wastes imported into the U.S. This system should be in effect in 1980. No notification system for imports of PCB wastes for disposal will be established in this rule because of potential confusion with the forthcoming RCRA program. All importers of PCB wastes will be required to maintain records, as provided in Annex VI of this rule.

With respect to exports, § 762.30(c)(3) of this rule requires that persons exporting PCBs and PCB Items for disposal notify EPA at least 30 days before the first export of wastes. The initial notice should identify the owner of the waste, the expected annual volume of wastes to be exported, a description of the intended methods of disposal, the precautions to be taken to control release into the environment, and the identity of the receiver of the

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wastes. Quarterly reports of actual waste shipments are also required. For each successive year, the volume of wastes to be exported, if any, must be estimated. These reports are required pursuant to the authority in section 6(e) and 12(a) of TSCA. Additional reports under section 12(b) of TSCA would not be required for the export of these wastes. Unlike other exports of PCBs, export for disposal under this rule will not present an unreasonable risk to the United States because of the controls on such export contained in the rule and the fact that such export will only be for the purpose of disposal or destruction of PCBs.

EPA will carefully monitor the results of allowing the import and export of PCB waste. One future alternative may be to allow disposal only in countries whose facilities meet certain criteria arrived at through bilateral agreements. Closing the United States border to shipments of PCB wastes at this time, however, could have serious adverse effects on the environment by making safe disposal of PCBs more difficult. In particular, barring import of PCBs for disposal could make export for disposal impossible and thereby eliminate what in many cases would be the most desirable disposal alternative. Many generators of hazardous waste materials located near the U.S.-Canadian border find that the nearest disposal site is in the other country. An open border policy will allow import and export of such wastes to continue and maximize the opportunities for appropriate disposal.

For a general discussion of exports of PCBs, see preamble section XI, below. *Import or export of PCBs or PCB Items* for purposes of disposal remain subject to the other provisions of this rule.

C. Other Issues

1. PCB Impurities and Byproducts

The prohibitions in § 710.30 include a prohibition of the "manufacture" of "PCB" or "PCBs" as defined in § 761.2(s). This prohibition applies to the deliberate production of PCBs whether in large quantities for use in transformers and capacitors or in small quantities for research. Furthermore, the prohibition applies to the manufacture of any substance or mixture that contains PCB at 50 ppm or greater, including PCB that is an intermediate or "impurity" or "byproduct", as defined by § 761.3(k) and (c), respectively. While the production of PCBs under such circumstances may not be intentional and may have no independent commercial value, section 6(e) of TSCA applies to *any* production of PCBs and, therefore, covers such activities. Similarly, processing, distribution in commerce, and use of PCBs which are impurities or byproducts are subject to sections 6(e)(2) and (3) of TSCA.

The proposed rule prohibited activities involving PCB intermediates, impurities and byproducts under sections 6(e)(2) and (3) of TSCA. In response to questions on this point at the informal hearing, EPA made clear that such activities are subject to the rule. This discussion is intended to clarify further that the manufacturing, processing, distribution in commerce, and use bans of sections 6(e)(2) and (3) of TSCA apply whenever PCBs are present as intermediates, impurities, or byproducts at a concentration of 50 ppm or greater.

Some manufacturers commented that they interpreted the proposed rule to allow the creation of PCBs in concentrations greater than 50 ppm as an intermediate, impurity, precursor, or byproduct in a reaction process as long as the PCB concentration in any final byproduct or end product is below 50 ppm. The intent of the proposed rule was to prohibit such manufacture. All manufacturing or processing operations must be adequately controlled so that PCBs are not present at concentrations greater than 50 ppm at any point in the manufacturing process except when concentrating waste streams, as discussed below.

As discussed earlier in section II.B. of this preamble, several processes for the manufacture of chlorinated organic substances unintentionally create PCBs. EPA is aware of several cases in which the PCBs appear as impurities at concentrations greater than 50 ppm in the final product. To reduce the level of PCBs that are impurities in these chemical products, selection of ingredients and process techniques usually have to be altered. In some cases, more careful quality control of the production operations can help avoid unwanted impurities and byproducts.

Two groups of chemical products are most affected by controls on impurities and byproducts: pigments and other chlorinated chemicals. The impact on pigments is better understood because the industry became aware of the problem earlier than other potentially affected industries and provided extensive information and comments on the impact of the proposed rule. The PCB contamination of pigments is discussed further in preamble section IX.G. The impact on the production of other organic chemicals is not as well known. Only a few companies commented on the proposed rule, and available data are limited.

The manufacture of PCBs as intermediates, impurities and byproducts almost always involves some human and environmental exposure. Unless the PCBs are created in a totally enclosed, continuous reaction process, production workers will be exposed and there may be PCBs in air emissions and other effluents. The processing, distribution in commerce, and use of the chemicals containing PCBs will also cause exposure to PCBs among process workers and others who handle and use the chemicals. Controls that exist on worker exposure and/or handling and disposal practices are usually related to the primary chemical, not the PCBs contained in the chemical, which means that exposure to the PCBs often is uncontrolled.

As explained below, persons may petition for an exemption from this manufacturing ban pursuant to the Agency's interim procedures (43 FR 50908, November 1, 1978). In addition, the processing, distribution in commerce, and use of PCBs in a non-totally enclosed manner is prohibited after July 2, 1979, unless authorized and *all* processing and distribution of such PCBs as byproducts and impurities are prohibited after July 1, 1979, unless a specific exemption from the ban is granted by EPA.

Section 761.30(c)(2) provides that PCBs may be processed and distributed in commerce for purposes of disposal in accordance with the requirements of § 761.10. This provision is intended to apply to the concentration of waste streams and allow the concentration of PCBs to exceed 50 ppm in waste stream as long as the waste stream is disposed of in accordance with this rule. The following illustrates this. A product is manufactured that contains 20 ppm PCB. It is then processed to reduce the PCB concentration to 5 ppm. As a result of the processing, a waste stream is created that contains 100 ppm PCB. As long as this waste stream is disposed of in accordance with this rule, the manufacturer does not have to apply for an exemption. If the initial product contains more than 50 ppm PCB, however, the manufacturer must apply for an exemption from the manufacturing prohibition. Section 761.30(c)(2) only applies to byproducts or other wastes that are intended for disposal.

To clarify the relationship of the prohibitions of sections 6(e) (2) and (3) to intermediates, byproducts, and impurities, the terms "manufacture for commercial purposes" and "process for

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commercial purposes", defined in § 761.2 (bb) and (dd) of the proposed rule, have been deleted. These definitions were intended to exclude from the rule a very limited number of activities (e.g., the chlorination of municipal sewage discharges) that may result in or involve PCB concentrations below 50 ppm. In the applicability section ([§ 761.1(b)] the final rule states that unless otherwise specified in the rule itself, the term "PCB", as used in the rule, is intended to include only substances or combinations of substances with 50 ppm or greater PCBs. Accordingly, it should be clear that such activities are not within the scope of the rule. As a consequence, the definitions concerning "commercial purposes" are not necessary and may be confusing, especially because § 6(e) is not limited by the statute to activities "for commercial purposes".

2. Disposal of Small PCB Capacitors

The PCB Disposal and Marking Rule excluded most small PCB Capacitors, primarily those contained in small appliances and fluorescent light ballasts, from special disposal requirements. These small capacitors may be disposed of as municipal solid waste. Only small capacitors owned by persons who manufacture capacitors or PCB Equipment are subject to special disposal requirements.

These requirements are not changed by this final rule. EPA has not identified a feasible regulatory alternative that would result in disposal of a substantial portion of the remaining small PCB Capacitors in facilities other than municipal solid waste sites. In addition, the random disposal of PCB Equipment in municipal solid waste sites by householders and other infrequent disposers does not present an environmental hazard. Accordingly, EPA has no current plans to further regulate the disposal of these small capacitors.

However, the disposal of large quantities of small PCB Capacitors by commercial and industrial activities poses a somewhat larger environmental risk. Therefore, EPA encourages commercial and industrial firms that use and dispose of large quantities of small PCB Capacitors to establish voluntarily a collection and disposal program that would result in the waste capacitors going to chemical waste landfills or high temperature incinerators. Proper disposal of small PCB Capacitors is mandatory for all manufacturers of PCB Equipment. This would result in better environmental control than normal municipal solid waste disposal by preventing large concentrations of capacitors from being placed in sanitary landfills. It should also be noted that any PCB spillage that might result from failure of or from damage to a large number of small capacitors could be considered an illegal disposal, which is the case for other spills of PCBs.

3. State Preemptions

In the Disposal and Marking Rule, EPA stated that State and local requirements regarding disposal of PCBs are exempt from Federal preemption as long as the requirements are not less restrictive than those prescribed by EPA. EPA took this position to avoid interfering with existing PCB disposal requirements in Michigan, Oregon, Indiana, Minnesota, and Wisconsin, where the State requirements are at least as stringent as the Federal requirements.

In the past several months, EPA has become concerned that actions by local and State governments to prohibit disposal of PCBs and other substances in their jurisdictions could frustrate the national goal of properly disposing of hazardous chemical substances. While EPA has always believed that States should have the right to set pollution control standards more restrictive than the Federal standards, it would be a matter of national concern if this principle were to become the basis for refusal by States to share in the national responsibility for finding safe means for the proper disposal of hazardous substances. EPA has decided not to make any changes in its PCB preemption policy at this time. However, EPA will be considering the preemption issue further in its administration of the Resource Conservation and Recovery Act.

VII Relationship of Section 6(e)(2) to Section 6(e)(3)

Section 6(e)(2) of TSCA prohibits manufacturing, processing, distribution in commerce, and use of PCBs after January 1, 1978, unless conducted in a totally enclosed manner. Section 6(e)(2)(B) provides that the Administrator may, by rule, authorize continuation of an otherwise prohibited activity if the Administrator finds that the activity "will not present an unreasonable risk of injury to health or the environment".

Section 6(e)(3) prohibits all manufacturing, processing, and distribution in commerce of PCBs (including activities conducted in a totally enclosed manner). The manufacturing prohibition is effective on July 2, 1979 and the other prohibitions are effective on July 1, 1979. Section 6(e)(3)(B) authorizes the Administrator to exempt activities from section 6(e)(3) prohibitions if he finds that the activity will not result in an unreasonable risk to health or the environment and that good faith efforts have been made to develop a substitute for the PCB.

It is obvious that, with respect to manufacturing, processing, and distribution in commerce, the provisions of section 6(e)(2) are entirely duplicative of the corresponding provisions of section 6(e)(3) once those provisions of section 6(e)(3) become effective. For example, once the manufacturing prohibition of section 6(e)(3) is effective the manufacturing prohibition of section 6(e)(2) adds nothing whatever to protection of health and the environment since section 6(e)(3) is broader in coverage and somewhat more restrictive in terms of waivers (exemptions). Similarly, on July 1, 1979, the section 6(e)(3) prohibitions of processing and distribution in commerce entirely supersede the corresponding prohibitions in section 6(e)(2). It is clear that with respect to manufacturing, processing, and distribution in commerce of PCBs, Congress intended section 6(e)(2) as only an interim measure. Moreover, to continue to implement the section 6(e)(2) prohibitions on these activities after the corresponding prohibitions of section 6(e)(3) are effective would result in waste and confusion with absolutely no increase in protection from PCBs.

Therefore, EPA will consider the prohibitions in section 6(e)(2) to be superseded and no longer in effect when the corresponding prohibitions of section 6(e)(3) for each PCB activity go into effect. What this means is that the section 6(e)(2) prohibition on manufacturing of PCBs is considered to be no longer in effect now that the section 6(e)(3) prohibition on manufacturing is in effect. The provisions of section 6(e)(3) will be considered the exclusive authority under section 6(a) to prohibit PCB manufacturing. However, the section 6(e)(2) prohibitions on processing, distribution in commerce and use are effective as of July 2, 1979. The processing and distribution in commerce prohibitions of section 6(e)(2) will be considered to continue in effect until July 1, 1979, when they will be superseded by section 6(e)(3). Because the section 6(e)(2) use prohibition has no counterpart in section 6(e)(3) it remains in effect indefinitely.

VIII. Authorizations and Exemptions

A. Explanation of Authorizations and Exemptions

Section 6(e) of TSCA provides for two types of exceptions to the prohibitions of PCB activities: authorizations and exemptions. The purpose of this discussion is to clarify the distinctions between these exceptions and explain EPA's policy to simplify implementation by having a combined procedure for authorizations and exemptions.

An authorization is an exception to the TSCA section 6(e)(2) January 1, 1978

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ban of non-totally enclosed activities. To authorize an activity, EPA must find that continuation of the activity does not present an unreasonable risk of injury to human health or the environment. Since the intent of the law is for PCB activities to be banned, it must be clearly evident that the risk from an activity is not unreasonable. In the absence of such evidence, an activity is banned.

Although not subject to section 6(c)(1) of TSCA, EPA used the criteria in section 6(c)(1) to determine whether or not the risk from a non-totally enclosed activity is "unreasonable". These factors include: (1) the effect of such substance or mixture on health and the magnitude of exposure of human beings to such substance or mixture, (2) the effects of such substance or mixture on the environment and the magnitude of the exposure of the environment to such substance and mixture, (3) the benefits of such substance or mixture for various uses and the availability of substitutes for such uses, and (4) the reasonably ascertainable economic consequences of the rule, after consideration of the effect on the national economy, small business, technological innovation, the environment, and public health.

An exemption is an exception to either (1) the TSCA section 6(e)(3)(A)(i) January 1, 1979 complete ban of all PCB manufacture or (2) the TSCA section 6(e)(3)(A)(ii) July 1, 1979 complete ban of all PCB processing and distribution in commerce. To grant an exemption, EPA must determine both that an unreasonable risk is not present and that good faith efforts have been made to develop substitutes for the PCBs used in the activity to be exempted.

In addition to the difference in criteria for granting these two exceptions, there are several other important distinctions between an authorization and an exemption.

First, an authorization may be valid for any time period that EPA finds appropriate, but an exemption is only valid for one year and must be granted annually through a formal rulemaking. However, the complete bans of manufacture, processing, and distribution in commerce contained in section 6(e)(2) of TSCA supersede the corresponding bans contained in section 6(e)(2), as explained above. Since EPA must make *more* stringent findings under section 6(e)(3) than under section 6(e)(2), there is no reason to require petitioners to have an authorization if they have been granted an exemption for the same activity (see preamble section VII). Therefore, a PCB processing or distribution in commerce activity cannot be authorized after July 1, 1979. After this date, persons who process or distribute PCBs *must* petition for and be granted an exemption annually by EPA in order to continue these activities.

Second, EPA may propose and promulgate an authorization without a specific request from the persons who will benefit from the authorization. This is not the case for exemptions, which must be petitioned for by those who would benefit from them. The requirements regarding exemption petitions are discussed below.

Third, because section 6(e)(3) of TSCA completely bans the manufacture, processing, *and* distribution in commerce of PCBs and not the use of PCBs, all PCB use activities are covered only by section 6(e)(2) of TSCA. This means that a use activity never needs an exemption, and, therefore, must fall into one of three categories: (1) totally enclosed with no need for an authorization; (2) not totally enclosed and authorized; or (3) not totally enclosed and not authorized. Only the third group of use activities is prohibited by this rule. *Activities* that are included in the first two categories are described in section IX of the preamble, while those in the third category are described in section X.

1. Manufacturing Exemptions

No exemptions are promulgated in this rule. These are being handled in a separate rulemaking. The rulemaking procedures for PCB manufacturing exemptions were printed in the Federal Register on November 1, 1978, at page 50903. Examples of manufacturing activities that require an exemption to continue after July 2, 1979, include, but are not limited to: the manufacture of PCB for use in transformers or capacitors; the manufacture of PCB in small quantities for research and development; the manufacture of PCB for use in microscopy; the manufacture of PCB as an impurity or byproduct in or associated with other chemicals (e.g., pigments); and the importation of PCBs, including bulk form or in mixtures and PCB Articles for any purpose other than disposal. As discussed in section VI.B.1 above, importation of PCB Equipment may continue until July 1, 1979.

Persons who have submitted petitions for a manufacturing exemption in accordance with the November 1, 1978, rulemaking procedures will not be subject to the PCB manufacturing ban until EPA acts upon their petitions (see 44 FR 108, January 2, 1979). Many of the petitions are moot because of changes in the final rule that permit the manufacture of PCB Equipment until July 1, 1979. These manufacturers are required to comply with all other applicable portions of this rule, such as requirements for disposal, marking, storage, and recordkeeping.

2. Processing and Distribution in Commerce Exemptions

In the near future, EPA will issue procedures for applications for exemptions from the processing and distribution bans, which are effective July 1, 1979. The procedures may incorporate revisions from those applicable to manufacturing exemptions. Under the existing procedures, each person who wants an exemption must submit a separate petition. EPA is considering revising this requirement to reduce the number of individual petitions because substantially more persons will be affected by the processing and distribution bans than by the manufacturing ban. In addition, EPA anticipates that the petitions will fall into several principal categories. Instead of requiring petitioners to duplicate efforts in cases where their requests are essentially identical, EPA may accept certain class petitions submitted on behalf of more than one petitioner. Trade associations for example, may be permitted to develop a single petition, as appropriate, on behalf of their members, or manufacturers or processors may be permitted to petition on behalf of persons distributing their products.

Activities that will require an exemption from the July 1, 1979, processing and distribution in commerce bans include, but are not limited to: the manufacture of PCB Equipment; the sale of PCB Equipment; the sale of PCB Capacitors; the processing and distribution in commerce of PCBs for servicing PCB Transformers, PCB-Contaminated Transformers, railroad transformers, mining equipment, electromagnets, and hydraulic equipment; the processing and distribution in commerce of pigments and other chemicals that contain 50 ppm or greater PCB; and the processing and distribution in commerce of PCBs for microscopy and in small quantities for research and development.

B. General Changes in § 761.31: Authorizations

Three changes have been made from the proposal that affect all authorizations. These changes are discussed here while changes in individual authorizations are discussed in section IX of this preamble.

1. Reporting and Recordkeeping Requirements

Virtually all reporting and recordkeeping requirements have been deleted from § 761.31. Several proposed authorizations would have required persons to submit reports to EPA and to retain records for a variety of non-totally enclosed activities. EPA recognizes the burden on manufacturers and others who would have been required to prepare and maintain these records and has determined that these requirements are largely unnecessary, because most of the information will be submitted in the annual petitions for

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exemptions. The only exceptions to this policy are owners of railroad transformers, hydraulic systems, and heat transfer systems who must retain records of the PCB analyses that they are required to perform.

2. Length of Use Authorizations

Unlike all other activities that may be subject to an authorization under TSCA section 6(e)(2)(B), use activities are not prohibited under TSCA section 6(e)(3)(A). Accordingly, there is no automatic limit to the length of use authorizations. In deciding how long to authorize each use, EPA believes that it should have the opportunity to review each use in a timely way to ensure that there is no unreasonable risk associated with its continuation. In addition, improved technology or development of new PCB substitutes could reduce the need for the authorization. Accordingly, EPA proposed a five-year limit on most use authorizations. The final rule has generally extended this period to five and one-half years so that the expiration date for authorizations will coincide with the expiration of the processing and distribution exemptions. This change will permit EPA to combine administrative procedures, and thereby reduce administrative costs. Several use authorizations have shorter periods as explained under section IX below.

Since, as noted earlier, the processing and distribution prohibitions of TSCA section 6(e)(2) expire on July 1, 1979, authorizations for these activities will expire on the same date. Thereafter, these activities will be subject to TSCA section 6(e)(3) and will require annual exemptions to continue.

3. Changes in § 761.40 Annex VII

Annex VII, which provided for PCB Exposure and Control Plans, has been deleted. The proposed Annex would have imposed special requirements on persons authorized to continue activities in other than a totally enclosed manner. Specifically, Annex VII would have required detailed plans for handling PCBs, preventing spills, and otherwise reducing human and environmental exposure. The final rule no longer requires such plans because EPA is developing similar requirements under section 311 of the Clean Water Act (see proposed Spill Prevention Control and Countermeasure Plan Rule, 43 FR 39276, September 1, 1978).

IX. Specific Authorizations

Activities that are regulated by this rule and the effect of the rule on these activities are summarized in Table 3. The data referred to in this section are in the Versar Report, which is available from EPA's Office of Industry Assistance at the address given at the beginning of the preamble.

In relationship to activities regulated by this rule, dilution of PCBs is prohibited unless otherwise specifically provided for in the rule. This prohibition is necessary to prevent an unreasonable risk of human and environmental exposure to PCBs. If dilution was permitted, it would be possible to dilute all PCB liquids so that their disposal would no longer be controlled by this rule. This is clearly an unacceptable alternative since it could result in all existing PCBs entering the environment. However, for several authorized activities, dilution of PCBs is essential to the intended performance of the activities and is not performed with the intent of evading the disposal requirements for PCBs. For these activities only, dilution of PCBs is permitted and the disposal of liquid is governed by its final PCB concentration rather than its beginning PCB concentration. The following authorized activities are permitted to dilute PCBs: (1) Servicing of transformers (with restrictions); (2) Servicing of railroad transformers; (3) Use in heat transfer systems; (4) Use in hydraulic systems; (5) Processing and use of pigments; and (6) Use in natural gas.

The exemption review process for the manufacturing, processing, and distribution in commerce bans will also evaluate the need for dilution in the performance of PCB activities. Any decisions to permit dilution in exempted activities will be stated in the exemption, if granted.

A. Servicing Transformers (Other Than Railroad Transformers)

EPA considers the use of transformers as use in a totally enclosed manner. Accordingly, the use of PCBs in transformers may continue indefinitely. In addition, in this rule EPA authorizes the routine servicing of PCB Transformers (as defined in § 761.2(y)) and the routine servicing and rebuilding of PCB-Contaminated Transformers (as defined in § 761.2(z)) subject to certain conditions. The rule also authorizes the processing and distribution in commerce of PCBs for servicing transformers. The following is a summary of EPA's findings and reasoning behind these decisions.

Most large electrical transformers are designed to operate with the current-carrying coils immersed in a dielectric fluid. In the past most transformers used in buildings or other critical fire control locations were filled with non-flammable dielectric fluids containing PCBs as a major component. These PCB dielectric fluids are known by the generic term "askarel" and have been in common use since the 1930's. Currently, some 140,000 transformers, or less than one percent of all large electrical transformers in service, use askarel dielectric fluid.

PCB Ban Rule Actions

Activity	Totally enclosed	Authorized by rule [1]	Prohibited by rule	Exemption required	Type of PCB activity [2]
PCB Transformers	U (except servicing).	P, D, U (servicing).	M, Relabeling	P, D	PCB.
PCB-Contaminated Transformers	U (except servicing).	P, D, U (servicing).		P, D	Contamination.
Railroad Transformers		P, D, U	M	P, D	PCB & Contamination.
Mining Equipment		P, D, U—1/ 1/82.	Mfgr Relabeling (1/1/80).	P, D	PCB.
Heat Transfer		U	M, P, D		Contamination.
Hydraulic Systems		P, D, U	M	P, D	Contamination.
Carbonless Copy Paper		U—prohibited.	M, P, D		PCB.
Pigments		P, D, U—1/ 1/82.	M	M, P, D	Contamination.
Electromagnets	U (except servicing).	P, D, U (servicing).	M, Relabeling	P, D	PCB.
Natural Gas Pipeline Compressors		U—6/1/80	M, P, D		Contamination.
Small Quantities for R&D		P, D, U	M	M, P, D	PCB.
Microscopy		P, D, U	M	M, P, D	PCB.
PCB Capacitors	D, U		M, P	D	PCB.
PCB Beginning	M, P, D, U			P, D	PCB.
Process Contamination			M, P, D, U	M, P, D	Contamination.
Imports & Exports (except for disposal)			M, P, D	M, P, D	PCB & Contamination.
Dust Control, Sealants & Coatings (from waste oil with any PCB).			M, P, D, U		Contamination.

[1] Unless otherwise noted, all authorizations expire July 1, 1984. Processing and distribution in commerce require exemption after July 1, 1979.

[2] "PCB" indicates use of "pure" PCBs (e.g., askarel dielectric fluids) while "Contamination" indicates PCB contamination at concentrations greater than 50 ppm in non-PCB substances or mixtures from previous use of "pure" PCBs.

Abbreviations: M—Manufacturing, P—Processing, D—Distribution in Commerce, U—Use.

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A transformer is essentially a large, sealed can. The only time the can is deliberately opened is when the transformer requires certain types of servicing. Except in the event of a catastrophic failure or other extraordinary circumstance, use (except servicing) of transformers is performed in a totally enclosed manner and, as such, does not require an authorization. Under this rule, use of PCBs in transformers may continue indefinitely because this is a totally enclosed use.

1. General Discussion of Transformer Servicing

Servicing of transformers does result in exposure to PCBs. There are two general categories of servicing: routine servicing and rebuilding. Routine servicing includes testing the dielectric fluid, filtering the fluid, and replacing gaskets. Routine servicing often requires the removal of some dielectric fluid and then the return, or replacement, of that fluid. These activities result in some human and environmental exposure, but the exposure is usually limited to exposure of workers to small quantities of PCB. Good management practices and protective clothing should result in only very low levels of exposure to PCBs during routine servicing.

Rebuilding occurs after a transformer has failed or after an inspection indicates that it will soon fail. Rebuilding is an open process that involves draining the transformer, removing and disassembling the core, reworking the coil or rewinding a new coil, reassembling the core, and refilling the transformer with new fluid. Unless extraordinary precaution is taken, the shop personnel responsible for rebuilding the transformer are exposed to PCBs since the inner parts of the transformer are saturated with PCBs. Volatilization of the PCBs and leaks from both the transformer and PCB handling result in environmental exposure to PCBs.

Worker exposure during rebuilding can be moderated by protective equipment, but is inevitably greater than the exposures during routine servicing. Volatilization is difficult to control because of the large surface area exposed. Unless carefully controlled, the leaks may contaminate work areas and storage yards and may reach watercourses through uncontrolled runoff and drainage systems. Cleaning the inner surfaces of the transformers with solvents during the rebuilding process, cleanup of spillage and drippings, and scrapping of unservicable components all increase the production of liquid and non-liquid PCB wastes. In addition, the old coil must be disposed of separately from the casing, potentially increasing the environmental exposure to PCBs.

2. PCB Transformers

In developing the proposed rule, EPA considered three principal options for PCB Transformers: (1) prohibit both routine servicing and rebuilding; (2) permit routine servicing but prohibit rebuilding; and (3) permit both routine servicing and rebuilding. Option 1 would result in the greatest reduction of potential PCB exposure. Prohibition of routine servicing would, however, probably significantly increase the chances of catastrophic transformer failure because of inadequate maintenance. This hazard and the resulting exposure to PCBs may present far greater risks to health and the environment than that associated with the minimal PCB exposure during routine servicing. Option 3 could result in significant human and environmental exposure to PCBs from rebuilding transformers, as explained above. For these reasons, EPA has chosen a course of action based upon Option 2, permitting routine servicing but prohibiting rebuilding of PCB Transformers.

Routine servicing will result in minimal exposures to PCBs and allow the use of most existing transformers to continue through their useful lifetimes. EPA has concluded that this activity does not pose an unreasonable risk to human health or the environment. However, any servicing (including rebuilding) of PCB Transformers that involves removing the coils from the casing is prohibited by the rule. This prohibition will cost about $12 million the first year and steadily less each year thereafter. Removing the coils substantially increases PCB exposure. Considering the PCB exposure that would result if such servicing (including rebuilding) was permitted, EPA believes that these costs are justified by the increased risks of harm to human health and the environment and concludes that such servicing of PCB Transformers presents an unreasonable risk.

3. PCB-Contaminated Transformers

As explained below, rebuilding transformers with less than 500 ppm PCB is permitted. Because of the relatively low concentrations of PCBs, EPA believes that the risks of further contamination of the environment with PCBs due to such rebuilding will be negligible. Because these transformers comprise over 90% of all large electrical transformers, the economic impact of a rebuilding prohibition on transformers with less than 500 ppm PCBs could be extremely high. Comparing these potential costs to the relatively low threat to human health and the environment under the conditions required under the rule, EPA concludes that this activity should be authorized to continue because it does not pose an unreasonable risk to human health or the environment.

Unless there is reason to believe a transformer contains PCB (askarel) dielectric fluid or otherwise has 500 ppm PCB or greater, it may be assumed to have 50 to 500 ppm PCB. In practical terms, this means that mineral oil transformers need not be tested to determine whether they contain more than 500 ppm PCB. Available information indicates that virtually no mineral oil (non-askarel) dielectric fluid will be contaminated with PCBs above 500 ppm. Even if a small percentage of such fluid might contain somewhat more than 500 ppm PCB, EPA does not believe that the cost of testing needed to identify fluids with these slightly greater amounts is justified. Specifically, there are some 35 million transformers that would be subject to such a testing requirement. With each test costing between $80 and $100, the total cost of such testing would be as great as $3.5 billion. The additional health or environmental benefits that may result from requiring such testing and applying more stringent requirements in those few cases with more than 500 ppm would be extremely small compared to these testing costs.

For all practical purposes, testing of mineral oil dielectric fluid will only be used to determine whether the mixture contains less than 50 ppm PCB and is therefore exempt from the disposal requirements for mineral oil with over 50 ppm PCB. No testing is needed if the mineral oil will be burned in a high efficiency boiler or disposed of in any other way permitted for mineral oil contaminated with PCBs up to 500 ppm.

Many commentors questioned whether they would have to test the fluid from each transformer to determine the level of PCB contamination. Under the final rule, because such testing is optional, EPA anticipates that most persons will instead assume that the transformer contains between 50 ppm and 500 ppm PCB. If a person chooses to test, the final rule permits collection of mineral oil dielectric fluid into a single tank from more than one PCB-Contaminated Transformer. The mixture of fluids can then be sampled in a manner that reasonably represents the composite contents to determine PCB concentrations. [See preamble sections II.C and III.E above.] Draining a PCB

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Transformer into such a tank is prohibited.

4. Rebuilding PCB Transformers

The transformer service industry and several transformer owners commented that PCB Transformer rebuilding should be permitted. The industry was particularly concerned with the economic impact on owners of specially designed transformers. Because of the time required to build a new transformer on special order, a prohibition of rebuilding PCB Transformers could significantly disrupt their operations if a transformer should unexpectedly fail. However, some transformer failures are so extensive that the transformer cannot be rebuilt. In these instances, the transformer owner must do without a transformer until it can be replaced with either a new or used transformer. Even when a failed transformer can be rebuilt, the transformer owner still must do without a transformer for the length of time required to rebuild the transformer. In both situations, the transformer owner must either operate at a reduced output or shut-down for some period of time. This may cause some economic hardships for owners of transformers; however, considering the substantial human exposure during rebuilding, the Agency believes that exposure to PCBs from rebuilding presents an unreasonable risk.

The other changes in the final rule, however, will reduce some of the economic impact on transformer users. The final rule permits the reclassification of PCB Transformers as PCB-Contaminated Transformers if they have been drained and refilled with non-PCB dielectric fluid and if they are tested and found to contain less than 500 ppm PCB after at least three months of in-service use. Three months is the minimum amount of time necessary to ensure that the PCBs trapped in the interior parts of the transformer leach out into the dielectric fluid. After reclassifying a PCB Transformer to a PCB-Contaminated Transformer in this way, an owner would be permitted to rebuild that transformer. This reclassification option reduces the risk of disruption of operations that could result from the prohibition of rebuilding PCB Transformers.

If a PCB Transformer owner takes advantage of the reclassification option described above and converts it to a PCB-Contaminated Transformer, the transformer could be rebuilt. The alternative of rebuilding has several economic advantages. In general, rebuilding will be cheaper than replacement. In addition, the production losses will probably be less if a failed transformer can be rebuilt rather than replaced. On the other hand, rebuilding PCB Transformers may result in a substantial increase in human and environmental PCB exposure. Considering these factors, EPA has decided to permit rebuilding but only of PCB-Contaminated Transformers. To rebuild the PCB Transformer the owner would first have to reduce the concentration of PCBs to less than 500 ppm according to the schedule contained in § 761.31(a)(5) and then rebuild.

5. Contents of Authorization

The previous discussion explains EPA's rationale for authorizing the servicing of transformers and the processing and distribution in commerce of PCBs for such servicing. The authorization, contained in § 761.31(a), is valid for persons who service their own transformers until July 1, 1984. Persons who process or distribute PCBs in conjunction with servicing transformers must be granted an exemption by EPA to continue these activities after July 1, 1979.

The authorization for servicing (including rebuilding) is subject to the following six conditions. First, regardless of its PCB concentration, dielectric fluid containing less than 500 ppm PCB that is mixed with fluids containing 500 ppm or greater PCB must not be used as dielectric fluid in any transformer. This condition is intended to prevent deliberate dilution of PCBs. Dielectric fluid from PCB-Contaminated Transformers may be assumed to have less than 500 ppm. Second, persons servicing or rebuilding PCB-Contaminated Transformers must use dielectric fluids that contain less than 500 ppm PCB. Third, any servicing (including rebuilding) of PCB Transformers that requires the removal of the transformer coil from the transformer casing is prohibited. Fourth, PCBs removed in servicing or rebuilding must be captured and either reused as dielectric fluid or disposed of in accordance with the requirements of Subpart B. Fifth, a PCB Transformer may be converted to a PCB-Contaminated Transformer, as described above. Sixth, any PCB dielectric fluid that is used to service or repair any PCB Transformer must be stored in accordance with the storage for disposal requirements of Annex III (§ 761.42 of this rule). This requirement is intended to minimize the possibility of spills and other accidental releases of PCBs in the environment as they are stored prior to use. Finally, any person who wishes to process and distribute in commerce PCBs for purposes of servicing transformers after July 1, 1979, may do so only if granted an exemption by EPA. Persons may continue to service transformers that they own without such an exemption.

B. Use and Servicing of Railroad Transformers

Transformers in approximately 1,000 electric railroad locomotives and self-powered cars operated in the northeastern United States by Amtrak, Conrail and five intracity transit authorities contain PCB fluid. PCB fluids are frequently spilled onto roadbeds when these transformers overheat and when rocks and debris damage these transformers. Workers and other persons near rail lines are potentially exposed to PCBs as a result of these spills. In addition, runoff from roadbeds probably contains increased PCB concentrations. PCBs are also volatilized during overheating and servicing. PCB exposure from servicing operations is similar to non-railroad transformer servicing and is largely confined to service shops. Because of the human and environmental exposure to PCB that results from these activities, neither the use nor the servicing of railroad transformers is considered to be totally enclosed.

EPA considered various regulatory options for PCB-containing railroad transformers in implementing section 6(e) of TSCA. In proposing the rule, EPA assumed that the 1,000 railroad transformers could not be immediately replaced without an unacceptably severe curtailment of railroad service, especially in the Northeast Corridor, and attendant adverse economic and social consequences. The proposed rule would have authorized the use of the transformers if PCB concentrations were lowered to four percent in 15 months and then to 1,000 ppm in 30 months. In addition, the proposed authorization would have allowed servicing or rebuilding if non-PCB dielectric fluid was used. While the proposal would not have disrupted service, the affected railroad and transit companies would have had to invest an estimated $12.2 million over a three-year period to comply.

The affected parties criticized the timetable for lowering PCB concentrations. A recently initiated study of the safety of PCB-containing railroad transformers that have been refilled with non-PCB fluids is not expected to be completed until late 1979. The comments emphasized the importance of first assessing the feasibility of refilling with respect to

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transformer performance and potential hazards from explosion and fires as a result of the use of alternate fluids. Some comments also questioned whether a residual concentration of four percent PCB could be routinely achieved by refilling. These comments stated that a slightly higher level of six percent could be met on a routine basis. Other comments explained that, consistent with the Railroad Revitalization and Recovery Act of 1976, the Northeast Corridor railroads are changing the power supply specifications in mid-1981. Accordingly, some transformers are scheduled to be replaced and these comments suggested that to require the refilling of these transformers would impose a needless cost. As explained below, the 1981 date has changed.

The final rule takes these comments into account and authorizes continued use and servicing (including rebuilding) of these transformers as a non-totally enclosed use until July 1, 1984, subject to requirements that EPA believes will promote conversion to other types of transformers or dielectric fluids at the earliest feasible time. Persons may process or distribute PCBs in conjunction with servicing railroad transformers but must be granted an exemption by EPA to continue these activities after July 1, 1979. EPA is requiring that railroad transformers contain no more than six percent PCB by January 1, 1982, about 21 months later than proposed. This will give EPA more time to evaluate the safety of refilling these transformers with non-PCB fluid and will substantially reduce the costs of compliance. These transformers must either be replaced or be drained, flushed, and refilled with non-PCB fluid by that deadline. Before then, the use of PCB dielectric fluid for servicing (including rebuilding) railroad transformers is authorized. After that date, railroad transformers may only be serviced with fluid containing 6 percent PCBs or less.

By January 1, 1984, the concentration of PCBs in the transformers must not exceed 1,000 ppm. This is approximately 18 months later than proposed. EPA believes that the environmental and health risks that may be associated with continued use of PCB in these transformers over this period are outweighed by: (1) the yet undetermined safety risks of fire and explosion that may be associated with use of non-PCB fluid in refilled transformers; (2) the approximately $80 million cost that would be imposed if immediate conversion or replacement was required; and (3) the additional costs resulting from the disruption of critical transportation services. Therefore, EPA finds that this activity, as authorized, does not present an unreasonable risk.

Railroad transformers must be tested for PCBs immediately after the completion of any servicing conducted for the purpose of reducing the PCB concentration in the transformer's dielectric fluid and between one and two years after such servicing. Records of the results of this testing must be retained until January 1, 1991, which is five years after the last testing requirement of this rule.

EPA estimates that the total cost of complying with the final rule will be no more than $12.2 million over a five year period. Although comments indicated that some of the equipment will have been scrapped as a result of the planned change-over in mid-1981, the Department of Transportation has recently announced that this change-over will not occur until at least the Fall of 1983. The requirement to refill these transformers by January 1, 1982 provides at least 20 months of use before the change-over forces the older units out of service. Accordingly, these units could be in use for well over two years before phase-out would be required.

C. Use and Servicing of Mining Equipment

Under this authorization, PCBs may be used in mining equipment, including for purposes of servicing (including rebuilding) until January 1, 1982. However, rebuilding of continuous miner motors is permitted only until December 31, 1979. In addition, PCBs may be processed and distributed in commerce for purposes of servicing mining equipment in a manner other than a totally enclosed manner until July 1, 1979. After July 1, 1979, persons who process and distribute in commerce PCBs in conjunction with the servicing or use of mining equipment may do so only if granted an exemption by EPA to continue these activities.

There are two types of mining equipment that use PCBs as a coolant in electric motors: loaders and continuous miners. Although the manufacture of mining equipment using PCB fluids has ceased, approximately 517 such motors in loaders and 72 such motors for continuous miners are either in use or in existing inventories. PCBs may leak while the equipment is in service in underground mines or during servicing procedures, performed either in the shop or in the field. Exposure to PCBs during servicing primarily results from volatilization, spills, and direct human contact with PCBs when the inner parts of the motor are removed or rebuilt. Thus, the use and servicing of these motors are not totally enclosed activities.

To require replacement of these motors by the effective date of this rule would not be technically and economically feasible. There is only one company that currently converts PCB loader motors to air-cooled or other non-PCB motors, and PCB motors in continuous miners cannot be converted to non-PCB motors. Because of the location of the motor in continuous miners, this means that the entire machine has to be replaced. In both cases, lead time is essential to convert or replace the equipment. Prohibiting use of the equipment in the interim could result in a shut-down of approximately ten percent of the underground bituminous coal production in the United States. The impact of a prohibition of the use of PCB mining equipment can be significantly reduced by permitting more time for a phase-out. EPA believes that a phased approach is reasonable. As compared to an immediate prohibition, the risks to human health and the environment are only slightly increased, while the costs are substantially lower.

The final rule is essentially the same as proposed. To avoid the adverse consequences caused by an immediate use ban, EPA proposed a phase-out of these PCB motors. Different compliance schedules for loaders and continuous miners were proposed since they pose different problems. Because of the cutting head design, the motors on continuous miners cannot be rebuilt as non-PCB motors. The only feasible alternative is replacement of the entire continuous miner unit. Because of the lead time necessary to order and manufacture this type of equipment, EPA proposed to permit the rebuilding of PCB continuous miner motors until December 31, 1979. Rebuilding differs from servicing in that rebuilding involves removing the motor from the miner and disassembling the motor. Servicing is permitted until January 1, 1982. Service companies and others who want to process or distribute PCBs for rebuilding or servicing these motors after June 30, 1979, may do so only if granted an exemption by EPA to continue these activities. The use of continuous miners containing PCBs after January 1, 1982, is prohibited.

The PCB motors on loaders can be replaced with, or rebuilt as, air-cooled or other non-PCB motors. EPA is requiring that these motors be replaced or be rebuilt as air-cooled or other non-PCB motors when they are returned to

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service shops for maintenance, but, in no event, can PCB motors be used later than January 1, 1982. Rebuilding or replacement of existing PCB motors using normal maintenance patterns should take no longer than three years. Accordingly, use of these loaders is authorized until January 1, 1982.

Since normal maintenance practices will permit an orderly rebuilding or replacement of motors with relatively modest costs, and with little additional exposure to PCBs, this gradual replacement requirement is a reasonable approach. However, no justification exists for permitting any PCB motors on loaders to remain in service after January 1, 1982, and therefore the use is prohibited after that date. Topping-off the motor fluid levels in the field with PCB fluids is also prohibited after January 1, 1982.

The authorization for mining equipment is essentially unchanged from the proposed rule. The estimated cost to owners of the equipment is estimated to be $2.9 to $4.3 million spread over 2 years.

D. Use in Heat Transfer Systems

Section 761.31(d) of the final rule authorizes the use of PCBs in heat transfer systems until July 1, 1984, subject to conditions regarding testing and reducing PCB concentrations. This authorization for use includes servicing of heat transfer systems. Heat transfer systems that are used in the manufacture or processing of any food, drug, cosmetic, or device, as defined in § 201 of the Federal Food, Drug, and Cosmetic Act, are authorized to use heat transfer fluid containing 50 ppm or greater PCB only until November 1, 1979.

PCBs were used as a heat transfer fluid in certain applications from 1962 to 1972. In the period from 1970 to 1972, approximately 90% of the heat transfer systems that used PCB fluid were refilled with non-PCB fluid. In spite of this refilling, most systems contain residual PCB concentrations. Heat transfer systems are, by and large, relatively, but not totally, enclosed systems and therefore their use of PCBs is not in a totally enclosed manner. The primary source of human and environmental exposure to PCBs from these systems comes from leaks in pump motor seals. However, good maintenance practices will minimize the quantity of fluids that may be lost. For most systems, the loss of PCB fluid is well controlled and the corresponding amount of top-off fluid added to these systems is very small.

An authorization for the use of heat transfer systems containing PCBs was not proposed because EPA had insufficient data to judge whether the use of these systems would pose an unreasonable risk. The preamble to the proposed rule solicited comments on this issue. According to the comments received, the PCB problem in heat transfer systems is generally one of residual PCB contamination of the non-PCB replacement fluids. In many respects, heat transfer systems are similar to hydraulic systems. For these reasons, the conditions of this authorization regarding the reduction of PCB concentrations are identical to those contained in the authorization for hydraulic systems: (1) any heat transfer system that ever contained PCB heat transfer fluid must be tested by October 1, 1979, and at least annually thereafter until the system reaches 50 ppm PCB; (2) any system that contains 50 ppm PCB or greater must be drained of the PCBs and refilled with non-PCB fluid (i.e., fluid containing less than 50 ppm PCB) within six months of the test showing the PCB concentration is 50 ppm or greater; (3) PCBs may not be added to heat transfer systems; and (4) records of the testing required under (1) must be retained for five years after the heat transfer system reaches 50 ppm PCB. The testing under (1) must be done at least three months after the most recent servicing conducted to reduce the PCB concentration. This time delay is to permit residual PCBs to leach out into the fluid before it is tested.

An exception to these requirements has been made for heat transfer systems used in the manufacture or processing of any food, drug, cosmetic, or device, as defined in section 201 of the Federal Food, Drug, and Cosmetic Act. These systems are authorized to use dielectric fluid containing 50 ppm or greater PCB only until November 1, 1979. After this date, these systems must contain less than 50 ppm PCB. This exception was made because, in the event of a heat transfer system rupture, PCBs would contaminate a product that would come in direct contact with humans, either through ingestion or through application to the skin. Unlike the rupture of a heat transfer system used in the manufacture of a product that is rarely in contact with humans, leakage of PCBs into a food, drug, cosmetic, or device provides a direct avenue for PCBs to enter the human body. Since the Food and Drug Administration required the removal of PCB heat transfer fluids from these systems several years ago, this restricted authorization should not present a problem to companies owning these systems.

EPA finds that this activity, as authorized, does not present an unreasonable risk to health or the environment. The total cost for the requirements described above is estimated to range from $12.2 to $17.8 million spread over three years.

E. Use in Hydraulic Systems

Under this authorization, PCBs may be used in hydraulic systems until July 1, 1984, subject to conditions regarding testing and reducing PCB concentrations. This authorization for use includes servicing of hydraulic systems. Processing and distribution in commerce for purposes of servicing, such as filtering, distilling, or otherwise reducing the concentration of PCBs in hydraulic systems, is authorized only until July 1, 1979. After July 1, 1979, persons are prohibited from processing and distributing in commerce PCBs for this purpose unless EPA grants them an exemption.

This authorization is necessary because a large number of die casting systems currently in use were once filled with PCB hydraulic fluid. Although this use of PCBs has been discontinued, equipment containing PCB hydraulic fluid is still in service. Some systems have been topped-off with non-PCB fluids, and others have been drained and flushed in an attempt to reduce PCB contamination. However, systems may still be contaminated with residual PCBs that either remain after flushing or are gradually released from interior surfaces. As a consequence, hydraulic systems can contain concentrations of PCB ranging from less than 10 ppm to thousands of parts per million PCB. These systems normally leak fluid, even when properly maintained. In addition, some of the fluid volatilizes as a result of the high operating temperatures. These losses result in PCB-contaminated water effluents as well as air emissions, both of which have contributed to existing levels of PCB contamination in the environment. Therefore, this use of PCBs is clearly not use in a totally enclosed manner.

Mandatory immediate removal of these systems from service to remove the PCBs could affect as many as one thousand companies and disrupt important sectors of industry, especially those using die castings. The extent of PCB exposure from these systems does not justify incurring such severe costs. On the other hand, the continued uncontrolled use of these systems would result in releases of substantial amounts of PCBs into the environment and cannot be allowed to continue. EPA proposed authorizing the continued

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servicing and use of PCB-contaminated hydraulic fluid in hydraulic die casting systems subject to certain conditions. One condition was that any system that contained 50 ppm or more PCB had to be drained and refilled with non-PCB fluid within one year. In addition, testing and servicing or replacement of the fluid was required at least every six months until the PCB concentration was consistently below 50 ppm.

The authorization in the final rule makes certain changes from the proposal. First, the proposed authorization covered only hydraulic die casting systems. Comments indicated that there are other types of hydraulic systems that used PCBs in high temperature environments such as in steel mills and foundries. Accordingly, the authorization has been extended to apply to the use of PCBs in all hydraulic systems.

Under the final rule, each hydraulic system must be tested no later than November 1, 1979. If the concentration of PCBs is found to be greater than 50 ppm, the whole system must be drained and refilled with non-PCB fluid within six months of the test. EPA anticipates that most of the PCBs will be removed during the initial refilling process. Subsequent draining and refilling may be necessary to remove residual PCBs. Under the final rule, persons who own hydraulic systems are required to test for the concentration of PCB annually instead of every six months as under the proposal. Comments indicated that removing a hydraulic system from use every six months would be disruptive. Most systems undergo repair or overhaul at least annually. The revised requirement would be consistent with these practices and, accordingly, result in substantial first year cost savings with little increase in PCB exposure. Records of this testing must be retained for five years after the hydraulic system reaches 50 ppm.

Many comments emphasized that requiring the draining of hundreds of gallons of fluids that may contain residual quantities of PCBs is not a cost-effective way to achieve reduction in PCB concentrations. Hydraulic systems are routinely topped-off with non-PCB hydraulic fluids. Comments argued that the addition of non-PCB fluids should effectively reduce the concentrations of PCBs. While topping-off is permitted for purposes of reducing the levels of PCBs at any time, EPA believes that an annual requirement to test and drain any fluids that contain more than 50 ppm is essential to reduce, as expeditiously as possible, the potential for PCB exposure. Although EPA does not believe that topping-off alone will reduce PCB concentrations quickly enough in all systems, many systems will be able to meet the requirements of the rule solely by topping-off. Allowing concentrations of PCBs above 50 ppm in these systems over time is not acceptable to EPA in terms of the significant risks to health and the environment associated with the leakage from these systems.

It is estimated that the costs to owners of affected hydraulic systems will total $14.6 to $25 million spread over the first two years, with insignificant costs in the subsequent years. These costs are similar to the total cost of $19.7 million estimated in the proposal, but the final rule considered 1750 machines rather than the 1000 machines estimated in the proposal. This reduction in cost per machine is due to the annual, rather than semi-annual, testing requirement and more accurate cost information obtained as a result of the proposal. These costs are reasonable in light of the resulting reduction in human and environmental exposure to PCBs.

EPA finds that this activity, as authorized, does not present an unreasonable risk to health or the environment.

F. Use in Carbonless Copy Paper

Under this authorization, existing PCB carbonless copy paper may be used indefinitely. Prior to 1971, carbonless copy paper distributed by NCR Corporation was made with ink containing PCBs. There does not appear to be a way to distinguish PCB carbonless copy paper from non-PCB carbonless copy paper except perhaps by dates or other indications on unused inventories. A large portion of the PCB carbonless copy paper that has not been destroyed is probably in files. An enormous undertaking would be required of both business and government to purge existing files of PCB carbonless copy paper. Moreover, the amount of PCB on each sheet of carbonless copy paper is extremely small. In view of these practical considerations and because the potential PCB exposure and risks to human health or the environment are negligible, EPA has concluded that this activity does not present an unreasonable risk and is authorizing the continued use of existing PCB carbonless copy paper.

In the proposal, EPA limited this authorization to five years. However, EPA does not now believe that a method for inexpensively separating PCB from non-PCB carbonless copy paper will be developed in the near future. Accordingly, EPA is authorizing the use of existing PCB carbonless copy paper indefinitely.

G. Pigments

This rule authorizes the use of diarylide and phthalocyanine pigments containing more than 50 ppm PCB until January 1, 1982, and the processing and distribution in commerce of these pigments until July 1, 1979. After July 2, 1979, these pigments cannot be manufactured and after July 1, 1979, these pigments cannot be processed or distributed in commerce unless EPA grants exemptions for these activities.

Diarylide and phthalocyanine pigments contain PCBs as an impurity in concentrations ranging from several thousand parts per million to less than 50 ppm. Most of these pigments have PCB concentrations in the range of several hundred parts per million. These PCBs cannot easily be separated from the pigments because of the structural similarity of the PCBs to the pigments. Once manufactured, the pigments are mixed with other substances to form paints, inks, and a variety of other products. The PCB concentrations in these final products are less than 50 ppm.

Competitive pressure to market pigments with decreased PCB contamination is causing pigment manufacturers to change their processes. Comments indicate that within two years the industry will have made the changes necessary to reduce PCB contamination levels to less than 50 ppm.

In deciding whether to authorize pigment activities, EPA considered the relatively limited exposure and the economics associated with use of these pigments. The greatest potential for exposure is in the application of paints and inks using these pigments. These products contain far less than 50 ppm PCB because of the dilution that takes place when the pigment is mixed with the medium it is coloring. As a result, the health and environmental risks are not unreasonable. As discussed above, the industry is changing its processes to reduce the level of PCB contamination to below 50 ppm in the next two years. At the present time, these particular pigments are a major segment of the pigment market. For example, diarylide pigments form about 60% of the yellow pigment market. This ban will, therefore, affect a substantial number of pigment-related industries. However, the impact of the regulation of the pigment industry, as well as its customers in the paint and graphic arts industries, will be further

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considered during the rulemaking on manufacturing exemptions.

The potential costs of compliance are greatly reduced if the requirements are implemented over a few years. The increased health and environmental risk is relatively small. If exemptions are granted to permit more time for the conversion to alternative manufacturing processes, the cost of conversion will total $6.6 million. Based on these considerations, EPA has concluded that the processing and distribution in commerce until July 1, 1979, and the use of these pigments until January 1, 1982, will not present an unreasonable risk to health and the environment and should be permitted.

H. Use and Servicing of Electromagnets

As explained below, EPA considers the use of electromagnets containing PCBs to be used in a totally enclosed manner. Accordingly, this use does not require authorization. Processing and distribution in commerce of PCBs to service electromagnets is authorized, as explained below.

While no new PCB electromagnets have been manufactured since mid-1976, historically PCBs have been used in some electromagnets to reduce fire hazard. PCB electromagnets are used primarily over conveyor belts to remove tramp iron from non-magnetic commodities such as coal. PCB-containing electromagnets still in use are found in enclosed areas such as coal mines, coal preparation plants, and coal-fired generating stations where there is a danger of producing explosive dusts. PCB electromagnets may also be used over conveyor belts in grain handling systems, but EPA does not have information on specific locations at this time.

Electromagnets are similar to transformers in construction. An electromagnet is a completely welded piece of equipment. Any leakage would be the result of deteriorating equipment or accidental damage rather than design characteristics. EPA has concluded that use of PCBs in electromagnets under normal circumstances is a use in a totally enclosed manner. For coal-handling systems, if leakage does occur, there will be negligible risks as the coal is handled automatically and eventually burned in combustion devices capable of destroying almost all of the PCBs. While EPA is not certain that electromagnets containing PCBs are currently in use over grain conveyors, accidental leakage in such situations may contaminate food supplies and thus pose a threat to human health. For these reasons, EPA will consider use of electromagnets over grain conveyors that leak to be a violation of this rule as a non-totally enclosed use of PCBs. In addition, EPA is notifying the U.S. Department of Agriculture and the Food and Drug Administration of this potential problem.

The servicing of PCB electromagnets is similar to servicing of PCB Transformers. Accordingly, this rule authorizes the same type of servicing of PCB electromagnets with PCB dielectric fluid. As in the case of PCB Transformers, any servicing (including rebuilding) that requires the removal of the coil from the casing is prohibited. Most of the discussion of the servicing of PCB Transformers in section IX.A of this preamble pertains to servicing PCB electromagnets. EPA has similarly concluded that this servicing, as long as it does not include removal of the coil from the casing, will not present an unreasonable risk to health or the environment. Because of limited information, EPA was unable to ascertain the costs of not granting such authorization.

I. Use in Natural Gas Pipeline Compressors

The final rule authorizes the use, including servicing, of PCBs in natural gas pipeline compressors until May 1, 1980. An authorization was not proposed for this use of PCBs because EPA had virtually no knowledge of it. Several comments on the proposed rule indicate that compressors used in natural gas pipelines contain residual PCB concentrations greater than 50 ppm. In general, these systems were drained of high concentration PCB fluid several years ago, thereby removing most of the PCBs. This authorization will allow these compressors to be drained and refilled with non-PCB fluid to further reduce the PCB concentration until it is below 50 ppm. The authorization is effective until May 1, 1980, giving persons time to work on the systems to reduce the concentration of PCBs during the summer months when demand for natural gas is lower. Use and servicing of these compressors are not a totally enclosed activity because of limited environmental exposure that may occur during servicing and use.

An immediate use prohibition could have a serious effect on natural gas distribution. Permitting more than a half a year to complete the draining and refilling significantly reduces costs and disruptions in service while causing little or no increase in exposure to PCBs. The total cost of these decontamination operations is $200,000. Because of the small quantities and low concentrations of PCBs involved, EPA believes that this authorization will not result in exposure to PCBs that presents an unreasonable risk to health or the environment.

J. Use of Small Quantities for Research and Development

EPA is authorizing the use of PCBs in "small quantities for research and development", as defined in § 761.12(ee), until July 1, 1984. Processing and distribution in commerce of PCBs for this purpose is authorized until July 1, 1979. After July 2, 1979, PCBs cannot be manufactured for this use, and after July 1, 1979, they cannot be processed or distributed in commerce, unless persons interested in continuing these activities have been granted an exemption.

Because of the importance of on-going research on the effects of PCBs and the need to have reference standards for analytical purposes, EPA believes that the extremely limited exposures associated with these activities do not present an unreasonable risk to health and the environment. The term "Small Quantities for Research and Development" is defined very narrowly. Specifically, PCBs must be contained in hermetically-sealed, five milliliter containers. EPA believes this constraint is sufficient precaution against the risks of human or environmental exposure to justify such use in light of the possible benefits of continued research. The proposed rule would have excluded these activities from the prohibitions in § 761.30; however, EPA believes it is more appropriate to authorize (and if appropriate exempt) these activities.

K. Use in Microscopy

EPA is authorizing the use of PCBs as a mounting medium for microscopic slides until July 1, 1984, and the processing and distribution in commerce of PCBs for this purpose until July 1, 1979. After July 1, 1979, persons who want to continue processing and distribution in commerce activities must be granted an exemption by EPA. Persons who want to manufacture PCBs for this use after July 2, 1979, must also be granted an exemption by EPA.

When PCBs are used as a mounting medium for slides, extremely small quantities are used on each slide. This use is particularly important to scientists who need to preserve, for future reference, a microscope particle. PCBs are also used in air pollution and criminology labs for microscopic particle identification and they play a vital role in the study and conservation of art and historic objects through use of microscopic slides. In mounting, a particle is placed in a PCB medium and

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covered with a cover slip, usually for permanent reference. No substitutes with the necessary physical properties exist for this use.

Because of the small quantities of PCBs used at any one time and the careful nature of laboratory work, exposure to PCBs used as a mounting medium is minimal. Because of the substantial benefits of this use of PCBs and the very limited risks involved, EPA believes that this activity will not present an unreasonable risk and that it is appropriate to authorize this use of PCBs.

X. PCB Activities Not Authorized by This Rule

A. Manufacture of PCB Capacitors

PCBs have been used as a dielectric fluid in alternating current capacitors manufactured in the United States from the mid-1930's through the mid-1970's. Although the manufacture of PCB Capacitors is considered to be "processing" of PCBs and could continue under section 6(e)(3) until July 1, 1979, the activity is not totally enclosed and accordingly is prohibited under section 6(e)(2) after July 2, 1979.

In the past, manufacture of PCB Capacitors has been a major source of PCB release into the environment. For example, the upper reaches of the Hudson River are closed to fishing because of PCB contamination caused by capacitor manufacturing. The Support Document to the final rule (Chapter II) discusses this and other examples of environmental damage caused by this activity. In addition, there are substitutes available as discussed in Chapter III of the Support Document to the final rule. For these reasons, EPA has determined that the continued manufacture of PCB Capacitors presents an unreasonable risk to human beings and the environment and has not authorized it under section 6(e)(2). It is EPA's understanding that no company is planning to manufacture PCB Capacitors after the effective date of this rule.

B. Manufacture of PCB Transformers

The use of PCBs as a transformer dielectric fluid dates back to the 1930's. The manufacture of PCB Transformers is also considered to be "processing" PCBs under TSCA but is not a totally enclosed activity. Under section 6(e)(2), it may not continue after July 2, 1979. Significant quantities of PCB may enter the environment during the manufacture of PCB Transformers. Production of PCB Transformers has been responsible for major river damage, notably the Coosa River in Northwest Georgia. Because of the environmental and human exposure to PCBs that occurs in the manufacture of these transformers and because of the availability of substitutes, EPA has determined that the manufacture of PCB Transformers presents an unreasonable risk and, therefore, has not authorized this activity. It is EPA's understanding that the manufacture of PCB Transformers in the United States ceased in 1977.

C. Other PCB Activities

All manufacturing of PCBs is prohibited after July 2, 1979. Persons who have submitted a petition for a manufacturing exemption in accordance with the November 1, 1978 rulemaking procedures (43 FR 50906) will not be subject to this ban until EPA acts upon their petitions (see 44 FR 108, January 2, 1979).

All processing, distribution in commerce, and use of PCBs in other than a totally enclosed manner is prohibited after July 2, 1979, unless specifically authorized in § 761.31 of this rule.

XI. Manufacturing, Processing, or Distribution in Commerce of PCBs for Export

Section 12(a) of TSCA states, in general, that no provision of TSCA shall apply to the manufacture, processing, or distribution in commerce of a chemical intended solely for export from the United States. However, if the Administrator finds that the manufacture, processing, or distribution in commerce of a chemical substance solely for export presents an unreasonable risk to health or the environment in the United States, those activities may be regulated under TSCA.

It is the clear intent of TSCA to minimize the addition of PCBs to the environment of the United States. The extreme persistance of this substance and the ease with which it is transported has made it a global problem. There is considerable evidence of PCB contamination that is far from any known source (see Chapter II of the Final Support Document). Therefore, PCBs used outside the United States can cause PCB contamination of this country. Moreover, manufacturing, processing, and distribution in commerce of PCBs in this country for purposes of export is likely to cause significant release of PCBs in this country through air and water emissions, leaks and spills, and other means. Instances of severe PCB releases from manufacturing, processing, transportation, and other activities involving PCBs are well documented. Because of these factors, EPA has determined that the manufacture, processing, and distribution in commerce of PCBs for export constitutes an unreasonable risk to health and the environment in the United States.

The final rule prohibits: (1) any manufacture of PCBs for export after the effective date of this rule; and (2) the *non-totally* enclosed processing and distribution in commerce of PCBs for export as of the effective date of this rule; and (3) any processing or distribution in commerce of PCBs for export after July 1, 1979, except solely for purposes of disposal in accordance with § 761.10. These prohibitions are essentially the same as proposed. Like domestic manufacturers, processors, and distributors in commerce, persons wishing to manufacture, process, or distribute in commerce PCBs or PCB *Items solely for export* may petition EPA for an exemption as discussed in the preamble section VIII.A above.

In addition, section 12(b)(2) of TSCA requires any person who exports or intends to export a chemical substance or mixture for which a rule has been proposed under section 6 to notify the Administrator of such export or intent to export. This requirement applies to any export of PCBs except the export of wastes which require a special report as discussed in VI.B.2 above. The requirement does not apply to the export of PCB Equipment, although the export of such equipment requires an exemption after July 1, 1979. The export of PCBs in small quantities for research and development (as defined in § 761.2(ee)), for example, does require notice to EPA.

Interim procedures regarding this requirement can be found at 43 FR 24618 (June 7, 1978). In summary, these procedures require that notices be submitted for the exports of all PCBs and PCB *Items (except* PCB Equipment), and the following information is to be included:

(a) The name and address of the exporter; (b) the dates of each shipment or intended shipment; (c) the country (countries) of import; and (d) a statement that notice is being submitted pursuant to Section 12(b) and 40 CFR Part 761.

Notices shall be sent to the Document Control Officer, (TS-793), Office of Toxic Substances, U.S. Environmental Protection Agency, 401 M Street S.W., Washington, DC 20460.

XII. Test Procedures for PCB

Test procedures for determining the PCB concentration in various media

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were not included in the proposed PCB Ban Rule. A number of comments on the rule suggested that EPA provide additional information on test methods.

EPA has been involved in the development of test methods for several media and has made much of this information available to the public. Specifically, test procedures have been made available for determining PCB concentrations in air, soil, water, and sediments using an American Society of Testing and Materials method (ASTM D 3304) and in industrial effluents using EPA methods (primarily for low concentration of PCB in water) (40 CFR 136). In addition, an interim guidance package containing two test procedures (one for spills in soil and one for water) was made available to EPA Regional Offices in February 1978 for distribution to the public. In the final step of analyzing the sample, all of these procedures rely on a gas chromatograph with an electron capture detector. The primary differences between the procedures are in the methods used to separate the water-soluble fraction from the organic-soluble fraction. The latter fraction contains the PCBs and is the portion used in the gas chromatograph.

Several comments were critical that EPA did not have more specific test procedures for PCBs, in particular for mineral oil dielectric fluid and pigments. The contamination of mineral oil dielectric fluid with PCBs is a major subject of this rule and the problem affects a large number of utilities and industries. EPA has experience in the analysis of contaminated oils and has included a test procedure (described below) in an additional guidance package that will be distributed to EPA Regional Offices. Pigments represent a different type of analytical problem. Pigments are a complex analytical media, and analytical chemists in that industry who have the most knowledge on resolving analytical chemistry problems with that substance have developed techniques to quantify PCBs in pigments.

Pigment manufacturers have developed thus far several test procedures and are currently working to validate one of them. With respect to other substances or mixtures that may be contaminated with PCBs, EPA also presumes that persons who manufacture such substances have the expertise to analyze their product and are best equipped to determine whether, and to what extent, their product is contaminated with PCB.

EPA will make use of industry-developed test procedures in conducting surveys or inspections and will use data from such tests in enforcement actions where appropriate. EPA may also examine industry-developed test procedures and make modifications, if possible, that would increase the accuracy and sensitivity of the test. Such modifications will be made publicly available. Persons who manufacture or process chemicals in a manner that could result in the production of PCBs as a primary product, impurity, intermediate, precursor, or byproduct are responsible for determining whether PCBs have been produced. They will have to conduct tests using good analytical chemistry and investigate ways to improve their ability to detect and quantify PCBs.

For the testing of PCB contaminated oils, EPA uses the following analytical procedure which consists of three successive clean-up steps: at least one run through an activated silica gel column, a run through an activated basic alumina column, and a final run through an activated silica gel column followed by analysis on the gas chromatograph equipped with an electron capture detector. This procedure can be used on any waste oil. For a mineral oil dielectric fluid that is relatively clean, an alternative procedure that would yield a less accurate PCB concentration with less effort and lower cost would be to substitute a liquid-liquid clean-up step for the column clean-up. This clean-up involves mixing the oil sample with concentrated sulfuric acid and then draining of the oil fraction. The oil fraction is then run through the gas chromatograph. This clean-up step removes oxidized organic material, thiophenes, and moisture from the oil sample. This alternative is not as accurate as the column clean-up method, but for "clean" oils, it provides a less expensive, more expedient test procedure.

EPA recognizes that these procedures are subject to experimental errors and that any procedure, no matter how simple, can be run improperly. However, persons who are subject to this rule will be expected to exercise good judgment on testing decisions. For example, if, in the case of the two procedures described above for PCB contaminated oils, the more rigorous procedure may yield results of ±1 ppm PCB while the quicker procedure may yield results of ±15 ppm PCB (these estimates of error are only used as illustrative examples and are not based on actual test data) and a sample is tested by the more accurate procedure and results in a value of 30 ppm PCB, then a person could be reasonably certain that the sample falls into the less than 50 ppm category. However, if using the less accurate procedure results in a value of 45 ppm, then a person has two choices: either treat the sample as a greater than 50 ppm PCB or test the sample again with the more accurate test procedure. In this case, EPA will not consider it to be good judgment to assume that the sample has less than 50 ppm PCB because the experimental error of the procedure overlaps the cut-off point.

XIII. Compliance and Enforcement

EPA will devote a major enforcement effort to ensure compliance with the requirements of these regulations. EPA intends to take vigorous action to assure that all facilities which manufacture, process, distribute in commerce, or use PCBs, handle and dispose of PCBs properly. While EPA will be reasonable in interpreting the application of these requirements, persons who are or may be subject to these regulations should be aware that failure to properly comply with these regulations may subject them to serious civil and criminal sanctions.

Section 16 of TSCA authorizes the imposition of a civil penalty of up to $25,000 for each violation of these rules. Each day a violation continues constitutes a separate violation for the purpose of § 16. A knowing or willful violation of these rules may, in addition to any civil penalty, lead to the imposition of criminal penalties in the amount of up to $25,000 for each day of violation and imprisonment for up to one year. In addition, EPA has the authority under section 17 of TSCA to compel persons to take actions to rectify or clean up after violations.

EPA will seek stringent penalties in any situation in which significant dispersion of PCBs occurs due to a violation. Civil penalties will be scaled according to the severity of the violation. Facilities that violate approval, exemption, or authorization conditions shall also be subject to penalties under §§ 15 and 16 of TSCA, as well as the revocation of their approval, exemption or authorization. In addition, in these situations, EPA will use TSCA section 17 injunctive and seizure powers to reduce or eliminate the risks of a PCB regulation violation. For violations which risk no direct dispersion of PCBs, EPA is less likely to seek severe penalties. Facilities may be simply put on notice of certain violations and compelled to rectify any observed violations.

"Any person" who violates these regulations will be subject to an enforcement action. This includes individuals, such as corporate officials

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and employees, as well as violating companies. EPA takes the position that persons may not contract away their responsibility or liability for violation of these rules, i.e. a PCB user who contracts for PCB disposal or storage with a company that he knows or should know has inadequate disposal or storage facilities, may himself be the subject of an enforcement action. This policy applies to all remedies EPA may seek for a violation.

EPA will be directing its resources to the discovery of significant instances of exposures of PCBs to the environment and developing accurate information depicting the flow of PCBs to proper disposal. Using information developed during inspections and using the records required to be kept under § 761.45, EPA will be able to focus its efforts upon areas which show the greatest potential for violation.

XIV. Relationship of PCB Disposal Under TSCA to Hazardous Waste Disposal Under RCRA

The disposal requirements of this rule specify the actions that must be taken when disposing of PCBs.

In addition, the rule contains Annexes that delineate specifications for disposal facilities that are to be used for the disposal of PCBs. These facilities are also addressed in the hazardous waste disposal rules proposed under the Resource Conservation and Recovery Act (RCRA) on December 18, 1978 (43 FR 58946). Several options for integrating the PCB rule with the RCRA rules are discussed in the preamble to the RCRA rules at 43 FR 58983 and comments were requested on the alternatives. Prior to the promulgation of the RCRA rules, EPA will resolve the differences between these two rules. Because of the special disposal problems presented by PCBs, EPA could choose to continue special provisions for the disposal of PCBs. EPA's decision will be announced when the rules under RCRA are promulgated.

XV. Summary of Economic Consequences

Section 6(e) of TSCA prohibits (1) the use of PCBs in a non-totally enclosed manner unless the use is authorized and (2) all manufacture, processing, and distribution in commerce of PCBs unless they are otherwise exempted by the Administrator. These authorizations and exemptions, however, are discretionary and can be granted only upon a finding that a particular PCB activity does not pose an unreasonable risk to health or the environment.

The impacts of both the statute and the regulation have been assessed and are discussed below. Additional information on these impacts is contained in *PCB Manufacturing, Processing, Distribution in Commerce, and Use Ban Regulation: Economic Impact Analysis* (the Versar Report) which can be obtained from the Industry Assistance Office of the Office of Toxic Substances upon request (see the beginning of this preamble for the address and telephone number).

A. Impact of the Statute

It was the clear intent of Congress, as expressed in Section 6(e) and in the pertinent legislative history, that the manufacture of PCBs should cease. Since no more PCBs will be made (unless exemptions are granted), it follows that there can be no future manufacturing of PCB Transformers or Capacitors. Consequently, the costs attributed to the cessation of the manufacture of PCB chemical substance, PCB Transformers, and PCB Capacitors are considered impacts of the statute, not of the regulation.

These costs are attributable to the statute and not to the regulation and include $13-$30 million per year in increased capacitor costs that will be borne by utility and industrial users. This results from an across-the-board increase in capacitor prices of 10-20 percent due to the higher costs of PCB substitutes. This cost will continue indefinitely, unless the cost of these substitutes falls. Purchasers of Non-PCB Transformers will incur increased costs of up to $10 million per year, depending on the particular substitute dielectric fluid selected. This cost will also continue indefinitely. These increased costs of transformers and capacitors will be passed on through a minimal increase in the cost of electricity to consumer and industrial users.

B. Impact of the Rule

The total first year cost of this rule is expected to range between $58 million and $105 million. By 1985 the annual costs will drop to between $30 million and $87 million. Annual costs should continue to diminish subsequent to 1985 as the use of PCBs is discontinued.

The largest annual economic impact of this regulation may result from the prohibition of the use of waste oil containing any detectable amount of PCB for dust control on roads. Since most waste oil contains very low PCB levels, as much as 300,000,000 gallons of waste oil per year will be diverted from this use. Highway departments and private road owners will have to use substitute products which could cost them as much as $31.7 million per year for the first several years of this rule. Note that the manufacturers of substitute products assert that use of their products will substantially reduce road maintenance costs when compared to the use of waste oil for road oiling and that such a reduction would directly reduce the net cost of the rule. However, EPA is not able to verify the potential savings involved.

The ban on rebuilding transformers which contain dielectric fluid with a 500 ppm or greater PCB concentration will cost the owners of these transformers approximately $12 million in the first year of the rule. This annual cost will be gradually reduced over a period of 30 to 40 years as the transformers are replaced. Included in the $12 million estimate is an estimated $2.4 million in costs attributed to a projected increase in down-time. In other words, when a power delivery is interrupted by an electrical failure of a PCB Transformer the rule's effective requirement that the failed PCB Transformer be replaced by a new, rather than a rebuilt transformer, will cause a longer then normal interruption. About two thirds of these transformers are owned by commercial and industrial firms and the remainder by utilities. The impact of this rule with respect to transformers is expected to have a negligible effect on the cost of electricity, and no significant impact on non-utility owners.

The cost of disposing of PCB-contaminated mineral oil will be significantly less than under the proposed rule. The final rule modifies the proposed requirement and allows disposal in high efficiency boilers. It is expected that the annual costs under the changed disposal requirements will be between $3.2 million and $17.0 million. Included in both the low and the high estimates is an estimated annual disposal cost of $11.1 million which could be incurred by disposers of contaminated mineral oil who do not own high efficiency boilers. In addition, the owners of high efficiency boilers will likely incur some capital costs in the first year of the rule in order to take advantage of the new provisions.

Seven railroad and transit companies which are affected by this rule will incur total additional operating costs of $12.2 million. These costs will be spread over the next five years. The costs will be incurred because of refilling of PCB-Containing Transformers used on locomotives and self-powered cars with substitute non-PCB fluid, and in periodically removing residual PCB contamination from the new fluid. Since

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only electrically-powered units are involved, the costs will be borne solely by railroads and public transit authorities in the Northeast. These companies are in financial trouble; however, funding may be available through Federal subsidies.

Underground mining equipment will be impacted because of an older design electric motor which used PCBs as a coolant. The use of these motors will be banned as of January 1, 1983; and the total cost to users of PCB mining equipment will be $8.6 to $4.2 million. Since the ban is designed to allow a phase-out of the use of the equipment through conversion or obsolescence, it should cause no interruption of coal production. These costs are not expected to cause significant problems for the equipment owners.

Owners of hydraulic systems with PCB-containing hydraulic fluid will have to test, drain, and refill these systems periodically. As many as 1,750 systems including metal die casting and foundry equipment are believed to be affected by the rule and costs for the initial two years are expected to total between $14.0 and $23 million; costs for subsequent years should be insignificant.

Owners of heat transfer systems with PCB-containing heat transfer fluid will also have to test, drain, and refill these systems periodically. As many as 800 systems are believed to be affected by the rule, and costs for the first three years are expected to total between $12.2 and $17.8 million; cost for subsequent years should be insignificant.

There are a number of commercial chemical processes which produce PCBs as an unintentional byproduct in concentrations over 50 ppm. For instance, the presence of PCBs (in excess of 50 ppm) in phthalocyanine and diarylide yellow pigments has been detected. It is estimated that the pigment industry can change its production process within two years at a cost of approximately $8.6 million so that unintentional PCB production will no longer be a problem. Little is known about the cost or feasibility of eliminating PCB contamination from other chemical production processes. However, since all of these problems of PCB-contamination in the production of pigments and other chemical products will be dealt with on a case-by-case basis in exemption rulemakings, the Agency will be able to assess these economic impacts at that time.

Also, this regulation could potentially have a very costly impact on sellers of electrical equipment containing PCB Capacitors if EPA does not provide exemptions from the prohibition on distribution in commerce of PCB Equipment. These costs will be carefully considered in the separate rulemaking concerning exemptions to the July 1, 1979, distribution in commerce ban.

Several other very minor impacts which will be incurred only during 1978 have been identified. These impacts include owners of natural gas pipeline pump compressors who are expected to spend $208,000 in 1979 to remove PCB fluid from those compressors. The ban on rebuilding the approximately 200 electromagnets containing PCBs is expected to cost users $100,000 annually and have a total cost of less than $1 million.

Most of the costs discussed above result from requirements that are part of the authorizations to permit continued use of mixtures, articles and equipment containing PCBs in a manner protective of health and the environment. If these authorizations were not promulgated, the cost and economic impact on the affected industries could be considerably greater than the costs discussed above. EPA has carefully examined the costs of this rule and does not expect any severe economic or social impacts.

Dated: April 16, 1979.

Douglas M. Costle,
Administrator.

PCB Record

Official Record of Rulemaking-PCB Ban Regulations[1]

Section 19(a)(3) of TSCA defines the term "rulemaking record" for purposes of judicial review as follows:

(A) The rule being reviewed under this section;

(B) In the case of a rule under section 4(a), the finding required by such section, in the case of a rule under section 5(b)(4), the finding required by such section, in the case of a rule under section 6(a), the finding required by section 6(f) or 6(a), as the case may be, in the case of a rule under section 6(e), the statement required by section 6(c)(1), and in the case of a rule under section 8(e), the findings required by paragraph 2(B) or 3(B) of such section, as the case may be;

(C) Any transcript required to be made of oral presentations made in proceedings for the promulgation of such rule;

(D) Any written submission of interested parties respecting the promulgation of such rule; and

(E) Any other information which the Administrator considers to be relevant to such rule and which the Administrator identified, on or before the date of the promulgation of such rule, in a notice published in the Federal Register.

In accordance with the requirements of section 19(a)(3)(E) quoted above, EPA is publishing the following list of documents constituting the record of this rulemaking. This list does not include public comments, the transcript of the rulemaking hearing, or submissions made at the rulemaking hearing or in connection with it. These documents are exempt from Federal Register listing under section 19(a)(3). A full list of these materials will be available on request from the Record and Hearing Clerk.

Federal Register Notices Pertaining to This Rule

43 FR 24802, June 7, 1978. USEPA. "Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Bans Proposed Regulation."

42 FR 28288, June 27, 1977. USEPA. "Polychlorinated Biphenyls: Open Public Meeting; Solicitation of Comments."

42 FR 61280, December 2, 1977. USEPA. "Procedures for Rulemaking Under Section 6 of the Toxic Substances Control Act."

42 FR 65294, December 30, 1977. USEPA. "Polychlorinated Biphenyls: Policy for Implementation of Section 6(e)(2) of the Toxic Substances Control Act (TSCA)."

43 FR 38067, August 25, 1978. USEPA. "Polychlorinated Biphenyls: Manufacturing, Processing, Distribution in Commerce, and Use Bans: Clarification."

43 FR 43048, September 22, 1978. USEPA. "Polychlorinated Biphenyls: Manufacturing, Processing, Distribution in Commerce, and Use Bans: Extension of Reply Comments."

44 FR 106, January 2, 1979. USEPA. "Polychlorinated Biphenyls: Policy for Implementation and Enforcement of Sections 6(e)(2) and 6(e)(3) of the Toxic Substances Control Act (TSCA)."

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USEPA, OTS, *Environmental Protection Agency Support Document/Voluntary Environmental Impact Statement for Polychlorinated Biphenyls (PCB) Manufacturing, Processing, Distribution in Commerce and Use Ban Regulation.* March 1978.

USEPA, OPM, *Microeconomic Impacts of the Proposed 'PCB Ban Regulations': May, 1978.* EPA 560/6-77-005. Versar, Inc. Contract No. 68-01-4771.

USEPA, OPM, *PCB Manufacturing, Processing, Distribution in Commerce, and Use Ban Regulation: Economic Impact Analysis.* March 30, 1978. EPA-230-12/78-008. Versar, Inc. Contract No. 68-01-4771.

[1] The official record of rulemaking for the Polychlorinated Biphenyls Marking and Disposal Regulation (43 FR 7150, February 17, 1978) is part of the record of this rulemaking. The official record of rulemaking for the PCB ban regulation also includes the official record for the Administrator's promulgation of toxic pollutant effluent standards for PCBs under section 307(a) of the Clean Water Act (42 FR 6532-6555, February 2, 1977).

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Other Information

Other "Federal Register" Notices

41 FR 7552, February 19, 1976. "Velsicol Chemical Company et al., Consolidated Heptachlor/Chlordane Hearing."

41 FR 21402, May 25, 1976. "Health Risk and Economic Impact Assessments of Suspected Carcinogens: Interim Procedures and Guidelines."

42 FR 56099, October 12, 1977. "TSCA Interagency Testing Committee-Initial Report to the Administrator, EPA."

43 FR 7150, February 17, 1978. "Polychlorinated Biphenyls (PCBs) Disposal & Marking Final Regulation."

43 FR 33812, August 2, 1978. "Addendum to Preamble and Corrections to Final Rule (PCBs)."

USEPA-Non "Federal Register" Statements

Region IV. News release in reference to fishing in Lake Hartwell and Twelve Mile Creek in Pickins County, South Carolina. Dated about September 10, 1976.

Statement of Honorable Russell E. Train, Administrator, EPA, before the Subcommittee on Fisheries and Wildlife Conservation and the Environment, Committee on Merchant Marine and Fisheries, House of Representatives, January 25, 1976.

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Statement on Retrofilling Made at Public Meeting on the Implementation of the Environmental Protection Agency's Proposed PCB Ban. July 15, 1977. Dow Corning Corp.

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Part 761 is revised to read as follows:

PART 761—POLYCHLORINATED BIPHENYLS (PCBs) MANUFACTURING, PROCESSING, DISTRIBUTION IN COMMERCE, AND USE PROHIBITIONS

Subpart A—General

Sec.

761.1 Applicability.
761.2 Definitions.

** *Disease documents cited in the Environmental Protection Agency's Support Document/Voluntary Environmental Impact Statement for Polychlorinated Biphenyls (PCB) Manufacturing Processing, Distribution in Commerce and Use Ban Regulation: March 1979*

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Subpart B—Disposal of PCBs and PCB Items

761.10 Disposal requirements.

Subpart C—Marking of PCBs and PCB Items

761.20 Marking requirement.

Subpart D—Manufacturing, Processing, Distribution in Commerce, and Use of PCBs and PCB Items

761.30 Prohibitions.
761.31 Authorizations.
761.32 [Reserved]

Subpart E—List of Annexes

Annex No. I

761.40 Incineration.

Annex No. II

761.42 Chemical waste landfills.

Annex No. III

761.42 Storage for disposal.

Annex No. IV

761.43 Decontamination.

Annex No. V

761.44 Marking formats.

Annex No. VI

761.45 Records and Monitoring.

Authority: Section 6, 8, and 12, Toxic Substances Control Act, 15 U.S.C. 2605, 2607, and 2611.

Subpart A—General

§ 761.1 Applicability.

(a) This part establishes prohibitions of, and requirements for, the manufacture, processing, distribution in commerce, use, disposal, storage, and marking of PCBs and PCB Items.

(b) This part applies to all persons who manufacture, process, distribute in commerce, use, or dispose of PCBs or PCB Items. Unless it is otherwise specifically provided, the terms PCB and PCBs are used in this rule to refer to any chemical substances and combinations of substances that contain 50 ppm (on a dry weight basis) or greater of PCBs, as defined in § 761.2(s), including any byproduct, intermediate, or impurity manufactured at any point in a process. Any chemical substances and combinations of substances that contain less than 50 ppm PCBs because of any dilution, shall be included as PCB and PCBs unless otherwise specifically provided. Substances that are regulated by this rule include, but are not limited to, dielectric fluids, contaminated solvents, oils, waste oils, heat transfer fluids, hydraulic fluids, paints, sludges, slurries, dredge spoils, soils, materials contaminated as a result of spills, and other chemical substances or combination of substances, including impurities and byproducts.

(c) Definitions of the terms used in these regulations are in Subpart A. The basic requirements applicable to disposal and marking of PCBs and PCB Items are set forth in Subpart B—Disposal of PCBs and PCB Items and in Subpart C—Marking of PCBs and PCB Items. Prohibitions applicable to PCB activities are set forth in Subpart D—Manufacture, Processing, Distribution in Commerce, and Use of PCBs and PCB Items. Subpart D also includes authorizations from the prohibitions. The Annexes in Subpart E set forth the specific requirements for disposal and marking of PCBs and PCB Items.

(d) Section 15 of the Toxic Substances Control Act (TSCA) states that failure to comply with these regulations is unlawful. Section 16 imposes liability for civil penalties upon any person who violates these regulations, and the Administrator can establish appropriate remedies for any violations subject to any limitations included in § 16 of TSCA. Section 16 also subjects a person to criminal prosecution for a violation which is knowing or willful. In addition, § 17 authorizes Federal district courts to enjoin activities prohibited by these regulations, compel the taking of actions required by these regulations, and issue orders to seize PCBs and PCB Items manufactured, processed or distributed in violation of these regulations.

(e) These regulations do not preempt other more stringent Federal statutes and regulations.

§ 761.2 Definitions.

For the purpose of this part:

(a) "Administrator" means the Administrator of the Environmental Protection Agency, or any employee of the Agency to whom the Administrator may either herein or by order delegate his authority to carry out his functions, or any person who shall by operation of law be authorized to carry out such functions.

(b) "Agency" means the United States Environmental Protection Agency.

(c) "Byproduct" means a chemical substance produced without separate commercial intent during the manufacturing or processing of another chemical substance(s) or mixture(s).

(d) "Capacitor" means a device for accumulating and holding a charge of electricity and consisting of conducting surfaces separated by a dielectric. Types of capacitors are as follows:

(1) "Small Capacitor" means a capacitor which contains less than 1.36 kg (3 lbs.) of dielectric fluid.

(2) "Large High Voltage Capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates at 2000 volts a.c. or above.

(3) "Large Low Voltage Capacitor" means a capacitor which contains 1.36 kg (3 lbs.) or more of dielectric fluid and which operates below 2000 volts a.c.

(e)(1) "Chemical Substance", except as provided in subparagraph (2) of this paragraph, means any organic or inorganic substance of a particular molecular identity, including:

(i) Any combination of such substances occurring in whole or part as a result of a chemical reaction or occurring in nature, and

(ii) Any element or uncombined radical.

(2) Such term does not include:

(i) Any mixture.

(ii) Any pesticide (as defined in the Federal Insecticide, Fungicide, and Rodenticide Act) when manufactured, processed, or distributed in commerce for use as a pesticide,

(iii) Tobacco or any tobacco product,

(iv) Any source material, special nuclear material, or by product material (as such terms are defined in the Atomic Energy Act of 1954 and regulations issued under such Act),

(v) Any article the sale of which is subject to the tax imposed by section 4181 of the Internal Revenue Code of 1954 (determined without regard to any exemptions from such tax provided by section 4182 or section 4221 or any provisions of such Code), and

(vi) Any food, food additive, drug, cosmetic, or device (as such terms are defined in section 201 of the Federal Food, Drug, and Cosmetic Act) when manufactured, processed, or distributed in commerce for use as a food, food additive, drug, cosmetic, or device.

(f) "Chemical Waste Landfill" means a landfill at which protection against risk of injury to health or the environment from migration of PCBs to land, water, or the atmosphere is provided from PCBs and PCB Items deposited therein by locating, engineering, and operating the landfill as specified in § 761.41.

(g) "Commerce" means trade, traffic, transportation, or other commerce:

(1) Between a place in a State and any place outside of such State, or

(2) Which affects trade, traffic, transportation, or commerce described in subparagraph (1) of this paragraph.

(h) "Disposal" means to intentionally or accidentally discard, throw away, or otherwise complete or terminate the useful life of PCBs and PCB Items. Disposal includes actions related to

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containing, transporting, destroying, degrading, decontaminating, or confining PCBs and PCB Items.

(i) "Distribute in Commerce" and "Distribution in Commerce" when used to describe an action taken with respect to a chemical substance, mixture, or article containing a substance or mixture means to sell, or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of the substance, mixture, or article; or to hold or the holding of, the substance, mixture, or article after its introduction into commerce.

(j) "Fluorescent Light Ballast" means a device that electrically controls fluorescent light fixtures and that includes a capacitor containing 0.1 kg or less of dielectric.

(k) "Impurity" means a chemical substance which is unintentionally present with another chemical substance.

(l) "Incinerator" means an engineered device using controlled flame combustion to thermally degrade PCBs and PCB Items. Examples of devices used for incineration include rotary kilns, liquid injection incinerators, cement kilns, and high temperature boilers.

(m) "Leak" or "leaking" means any instance in which a PCB Article, PCB Container, or PCB Equipment has any PCBs on any portion of its external surface.

(n) "Manufacture" means to produce, manufacture, or import into the customs territory of the United States.

(o) "Mark" means the descriptive name, instructions, cautions, or other information applied to PCBs and PCB Items, or other objects subject to these regulations.

(p) "Marked" means the marking of PCB Items and PCB storage areas and transport vehicles by means of applying a legible mark by painting, fixation of an adhesive label, or by any other method that meets the requirements of these regulations.

(q) "Mixture" means any combination of two or more chemical substances if the combination does not occur in nature and is not, in whole or in part, the result of a chemical reaction; except that such term does include any combination which occurs, in whole or in part, as a result of a chemical reaction if some of the chemical substances comprising the combination is a new chemical substance and if the combination could have been manufactured for commercial purposes without a chemical reaction at the time the chemical substances comprising the combination were combined.

(r) "Municipal Solid Wastes" means garbage, refuse, sludges, wastes, and other discarded materials resulting from residential and non-industrial operations and activities, such as household activities, office functions, and commercial housekeeping wastes.

(s) "PCB" and "PCBs" means any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances which contains such substance. (See § 761.1(b) Applicability for applicable concentrations of PCBs). PCB and PCBs as contained in PCB Items are defined in § 761.2(x).

(t) "PCB Article" means any manufactured article, other than a PCB Container that contains PCBs and whose surface(s) has been in direct contact with PCBs. "PCB Article" includes capacitors, transformers, electric motors, pumps, pipes and any other manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end use function(s) dependent in whole or in part upon its shape or design during end use, and (3) which has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the PCB Article.

(u) "PCB Article Container" means any package, can, bottle, bag, barrel, drum, tank or other device used to contain PCB Articles or PCB Equipment, and whose surface(s) has not been in direct contact with PCBs.

(v) "PCB Container" means any package, can, bottle, bag, barrel, drum, tank, or other device that contains PCBs or PCB Articles and whose surface(s) has been in direct contact with PCBs.

(w) "PCB Equipment" means any manufactured item, other than a PCB Container or a PCB Article Container, which contains a PCB Article or other PCB Equipment, and includes microwave ovens, electronic equipment, and fluorescent light ballasts and fixtures.

(x) "PCB Item" is defined as any PCB Article, PCB Article Container, PCB Container, or PCB Equipment, that deliberately or unintentionally contains or has as a part of it any PCB or PCBs at a concentration of 50 ppm or greater.

(y) "PCB Transformer" means any transformer that contains 500 ppm PCB or greater.

(z) "PCB-Contaminated Transformer" means any transformer that contains 50 ppm or greater of PCB but less than 500 ppm PCB (See § 761.31(a)(3) for provisions permitting reclassifying PCB Transformers to PCB-Contaminated Transformers).

(aa) "Person" means any natural or judicial person including any individual, corporation, partnership, or association; any State or political subdivision thereof; any interstate body; and any department, agency, or instrumentality of the Federal Government.

(bb) "Process" means the preparation of a chemical substance or mixture, after its manufacture, for distribution in commerce:

(1) In the same form or physical state as, or in a different form or physical state from, that in which it was received by the person so preparing such substance or mixture, or

(2) As part of an article containing the chemical substance or mixture.

(cc) "Sale for Purposes Other than Resale" means sale of PCBs for purposes of disposal and for purposes of use, except where use involves sale for distribution in commerce. PCB Equipment which is first leased for purposes of use any time before July 1, 1979, will be considered sold for purposes other than resale.

(dd) "Significant Exposure" means any exposure of human beings or the environment to PCBs as measured or detected by any scientifically acceptable analytical method.

(ee) "Small Quantities for Research and Development" means any quantity of PCBs (1) that is originally packaged in one or more hermetically sealed containers of a volume of no more than five (5.0) milliliters, and (2) that is used only for purposes of scientific experimentation or analysis, or chemical research on, or analysis of, PCBs, but not for research or analysis for the development of a PCB product.

(ff) "Storage for Disposal" means temporary storage of PCBs that have been designated for disposal.

(gg) "Transport Vehicle" means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (e.g., trailer, railroad freight car) is a separate transport vehicle.

(hh) "Totally Enclosed Manner" means any manner that will ensure that any exposure of human beings or the environment to any concentration of PCBs will be insignificant; that is, not measurable or detectable by any scientifically acceptable analytical method.

(ii) "Waste Oil" means used products primarily derived from petroleum, which include, but are not limited to, fuel oils,

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motor oils, gear oils, cutting oils, transmission fluids, hydraulic fluids, and dielectric fluids.

Subpart B—Disposal of PCBs and PCB Items

Note.—This Subpart does not require removal of PCBs and PCB items from service and disposal earlier than would normally be the case. However, when PCBs and PCB items are removed from service and disposed of, disposal must be undertaken in accordance with these regulations. PCBs (including soils and debris) and PCB items which have been placed in a disposal site are considered to be "in service" for purposes of the applicability of this Subpart. This Subpart does not require PCBs and PCB items landfilled prior to February 17, 1978 to be removed for disposal. However, if such PCBs or PCB items are removed from the disposal site, they must be disposed of in accordance with this Subpart. Other Subparts are directed to the manufacture, processing, distribution in commerce, and use of PCBs and may result in some cases in disposal at an earlier date than would otherwise occur.

§ 761.10 Disposal requirements.

(a) *PCBs.* (1) Except as provided in subparagraphs (2), (3), (4), and (5) of this paragraph, PCBs must be disposed of in an incinerator which complies with Annex I.

(2) Mineral oil dielectric fluid from PCB-Contaminated Transformers containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, must be disposed of in one of the following:

(i) In an incinerator that complies with Annex I § 761.40;

(ii) In a chemical waste landfill that complies with Annex II § 761.41 if information is provided to the owner or operator of the chemical waste landfill that shows that the mineral oil dielectric fluid does not exceed 500 ppm PCB and is not an ignitable waste as described in § 761.41 (b) (8) (iii) of Annex II;

(iii) In a high efficiency boiler provided that:

(A) The boiler complies with the following criteria:

(*1*) The boiler is rated at a minimum of 50 million BTU hours;

(*2*) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*3*) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*4*) The mineral oil dielectric fluid does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(*5*) The mineral oil dielectric fluid is not fed into the boiler unless the boiler is operating at its normal operating temperature (this prohibits feeding these fluids during either start up or shut down operations);

(*6*) The owner or operator of the boiler:

(*i*) Continuously monitors and records the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning mineral oil dielectric fluid; or

(*ii*) If the boiler will burn less than 30,000 gallons of mineral oil dielectric fluid per year, measures and records the carbon monoxide concentration and excess oxygen percentage in the stack gas at regular intervals of no longer than 60 minutes while burning mineral oil dielectric fluid.

(*7*) The primary fuel feed rates, mineral oil dielectric fluid feed rates, and total quantities of both primary fuel and mineral oil dielectric fluid fed to the boiler are measured and recorded at regular intervals of no longer than 15 minutes while burning mineral oil dielectric fluid.

(*8*) The carbon monoxide concentration and the excess oxygen percentage are checked at least once every hour that mineral oil dielectric fluid is burned. If either measurement falls below the levels specified in this rule, the flow of mineral oil dielectric fluid to the boiler shall be stopped immediately.

(B) Thirty days before any person burns mineral oil dielectric fluid in the boiler, the person gives written notice to the EPA Regional Administrator for the EPA Region in which the boiler is located and that the notice contains the following information:

(*1*) The name and address of the owner or operator of the boiler and the address of the boiler;

(*2*) The boiler rating in units of BTU/hour;

(*3*) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when mineral oil dielectric fluid is burned; and

(*4*) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack.

(C) When burning mineral oil dielectric fluid, the boiler must operate at a level of output no less than the output at which the measurements required under subparagraph (B)(*3*) were taken.

(D) Any person burning mineral oil dielectric fluid in a boiler obtains the following information and retains the information for five years at the boiler location:

(*1*) The data required to be collected under subparagraphs (A)(*6*) and (A)(*7*) of this paragraph; and

(*2*) The quantity of mineral oil dielectric fluid burned in the boiler each month;

(iv) In a facility that is approved in accordance with § 761.10(e). For the purpose of burning mineral oil dielectric fluid, an applicant under § 761.10(e) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in subparagraph (iii), or an Annex I approved incinerator.

(3) Liquids, other than mineral oil dielectric fluid, containing a PCB concentration of 50 ppm or greater, but less than 500 ppm, shall be disposed of:

(i) In an incinerator which complies with Annex I;

(ii) In a chemical waste landfill which complies with Annex II if information is provided to the owner or operator of the chemical waste landfill that shows that the waste does not exceed 500 ppm PCB and is not an ignitable waste as described in § 761.41(b)(8)(iii) of Annex II.

(iii) In a high efficiency boiler provided that:

(A) The boiler complies with the following criteria:

(*1*) The boiler is rated at a minimum of 50 million BTU/hour;

(*2*) If the boiler uses natural gas or oil as the primary fuel, the carbon monoxide concentration in the stack is 50 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*3*) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is 100 ppm or less and the excess oxygen is at least three (3) percent when PCBs are being burned;

(*4*) The waste does not comprise more than ten (10) percent (on a volume basis) of the total fuel feed rate;

(*5*) The waste is not fed into the boiler unless the boiler is operating at its normal operating temperature (this prohibits feeding these fluids during either start up or shut down operations);

(*6*) The owner or operator of the boiler must:

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(*i*) Continuously monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack gas while burning waste fluid; or

(*ii*) If the boiler will burn less than 30,000 gallons of waste fluid per year, measure and record the carbon monoxide concentration and excess oxygen percentage in the stack gas at regular intervals of no longer than 60 minutes while burning waste fluid;

(*7*) The primary fuel feed rate, waste fluid feed rate, and total quantities of both primary fuel and waste fluid fed to the boiler must be measured and recorded at regular intervals of no longer than 15 minutes while burning waste fluid; and

(*8*) The carbon monoxide concentration and the excess oxygen percentage must be checked at least once every hour that the waste is burned. If either measurement falls below the levels specified in this rule, the flow of waste to the boiler shall be stopped immediately.

(B) Prior to any person burning these liquids in the boiler, approval must be obtained from the EPA Regional Administrator for the EPA Region in which the boiler is located and any persons seeking such approval must submit to the EPA Regional Administrator a request containing at least the following information:

(*1*) The name and address of the owner or operator of the boiler and the address of the boiler;

(*2*) The boiler rating in units of BTU/hour;

(*3*) The carbon monoxide concentration and the excess oxygen percentage in the stack of the boiler when it is operated in a manner similar to the manner in which it will be operated when low concentration PCB liquid is burned;

(*4*) The type of equipment, apparatus, and procedures to be used to control the feed of mineral oil dielectric fluid to the boiler and to monitor and record the carbon monoxide concentration and excess oxygen percentage in the stack;

(*5*) The type of waste to be burned (e.g., hydraulic fluid, contaminated fuel oil, heat transfer fluid, etc.);

(*6*) The concentration of PCBs and of any other chlorinated hydrocarbon in the waste and the results of analyses using the American Society of Testing and Materials (ASTM) methods as referenced below: carbon and hydrogen content using ASTM D–3178, nitrogen content using ASTM E–258, sulfur content using ASTM D–3764, D–1266, or D–129, chlorine content using ASTM D–808, water and sediment content using either ASTM D–2709 or D–1796, ash content using D–482, calorific value using ASTM D–240, carbon residue using either ASTM D–2158 or D–524, and flash point using ASTM D–93;

(*7*) The quantity of wastes estimated to be burned in a thirty (30) day period;

(*8*) An explanation of the procedures to be followed to insure that burning the waste will not adversely affect the operation of the boiler such that combustion efficiency will decrease.

(C) On the basis of the information in (B) above and any other available information, the Regional Administrator may, at his discretion, find that the alternate disposal method will not present an unreasonable risk of injury to health or the environment and approve the use of the boiler;

(D) When burning PCB wastes, the boiler must operate at a level of output no less than the output at which the measurements required under subparagraph (B)(*3*) were taken; and

(E) Any person burning liquids in boilers approved as provided in (C) above, must obtain the following information and retain the information for five years at the boiler location:

(*1*) The data required to be collected in subparagraphs (A)(*6*) and (A)(*7*) of this paragraph;

(*2*) The quantity of low concentration PCB liquid burned in the boiler each month.

(*3*) The analysis of the waste required by subparagraph (B)(*6*) of this paragraph taken once a month for each month during which low concentration PCB liquid is burned in the boiler.

(iv) In a facility that is approved in accordance with § 761.10(e). For the purpose of burning liquids, other than mineral oil dielectric fluid, containing 50 ppm or greater PCB, but less than 500 ppm PCB, an applicant under § 761.10(a) must show that his combustion process destroys PCBs as efficiently as does a high efficiency boiler, as defined in § 761.10(a)(2)(iii), or an Annex I incinerator.

(4) Any non-liquid PCBs in the form of contaminated soil, rags, or other debris shall be disposed of:

(i) In an incinerator which complies with Annex I; or

(ii) In a chemical waste landfill which complies with Annex II.

Note: Except as provided in § 761.41(b)(6)(ii), liquid PCBs shall not be processed into non-liquid forms to circumvent the high temperature incineration requirements of § 761.10(a).

(5) All dredged materials and municipal sewage treatment sludges that contain PCBs shall be disposed of:

(i) In an incinerator which complies with Annex I;

(ii) In a chemical waste landfill which complies with Annex II; or

(iii) Upon application, using a disposal method to be approved by the Agency's Regional Administrator in the EPA Region in which the PCBs are located. Applications for disposal in a manner other than prescribed in (i) or (ii) above must be made in writing to the Regional Administrator. The application must contain information that, based on technical, environmental, and economic considerations, indicates that disposal in an incinerator or chemical waste landfill is not reasonable and appropriate, and that the alternate disposal method will provide adequate protection to health and the environment. The Regional Administrator may request other information that he or she believes to be necessary for evaluation of the alternate disposal method. Any approval by the Regional Administrator shall be in writing and may contain any appropriate limitations on the approved alternate method for disposal. In addition to these regulations, the Regional Administrator shall consider other applicable Agency guidelines, criteria, and regulations to ensure that the discharges of dredged material and sludges that contain PCBs and other contaminants are adequately controlled to protect the environment. The person to whom such approval is issued must comply with all limitations contained in the approval.

(6) When storage is desired prior to disposal, PCBs shall be stored in a facility which complies with Annex III.

(b) *PCB Articles.* (1) Transformers.

(i) PCB Transformers shall be disposed of in accordance with either of the following:

(A) In an incinerator that complies with Annex I; or

(B) In a chemical waste landfill which complies with Annex II; provided that the transformer is first drained of all free flowing liquid, filled with solvent, allowed to stand for at least 18 hours, and then drained thoroughly. PCB liquids that are removed shall be disposed of in accordance with paragraph (a) of this section. Solvents may include kerosene, xylene, toluene and other solvents in which PCBs are readily soluble. Precautionary measures should be taken, however, that the solvent flushing procedure is conducted in accordance with applicable safety and health standards as required by Federal or State regulations.

(ii) PCB-Contaminated Transformers shall be disposed of by draining all free flowing liquid from the transformer and disposing of the liquid in accordance

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with paragraphs (a)(2) above. The disposal of the drained transformer is not regulated by this rule.

(2) PCB Capacitors. (i) The disposal of any capacitor normally used in alternating current circuits shall comply with all requirements of this subpart unless it is known from label or nameplate information, manufacturer's literature, or chemical analysis that the capacitor does not contain PCBs.

(ii) Any person may dispose of PCB Small Capacitors as municipal solid waste, unless that person is subject to the requirements of subparagraph (iv).

(iii) Any PCB Large High or Low Voltage Capacitor owned by any person shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator that complies with Annex I; or

(B) Until January 1, 1980, disposal in a chemical waste landfill that complies with Annex II.

(iv) Any PCB Small Capacitor owned by any person who manufactures or at any time manufactured PCB Capacitors or PCB Equipment and acquired the PCB Capacitors in the course of such manufacturing shall be disposed of in accordance with either of the following:

(A) Disposal in an incinerator which complies with Annex I; or

(B) Until January 1, 1980, disposal in a chemical waste landfill which complies with Annex II.

(3) PCB Hydraulic Machines. PCB hydraulic machines such as die casting machines may be disposed of as municipal solid waste or salvage provided that the machines are drained of all free-flowing liquid and the liquid is disposed of in accordance with the provisions of § 761.10(a). If the PCB liquid contains 1000 ppm PCB or greater, then the hydraulic machine must be flushed prior to disposal with a solvent containing less than 50 ppm PCB (see transformer solvents at § 761.10(b)(1)(i)(B)) and the solvent disposed of in accordance with § 761.10(a).

(4) Other PCB Articles must be disposed of:

(i) In an incinerator that complies with Annex I; or

(ii) In a chemical waste landfill that complies with Annex II, provided that all free-flowing liquid PCBs have been thoroughly drained from any articles before the articles are placed in the chemical waste landfill and that the drained liquids are disposed of in an incinerator that complies with Annex I.

(5) Storage of PCB Articles—Except for a PCB Article described in subparagraph (b)(2)(ii) and hydraulic machines that comply with the municipal solid waste disposal provisions described in subparagraph (b)(3), any PCB Article shall be stored in accordance with Annex III prior to disposal.

(c) *PCB Containers.* (1) Unless decontaminated in compliance with Annex IV or as provided in (2) below, a PCB Container shall be disposed of:

(i) In an incinerator which complies with Annex I, or

(ii) In a chemical waste landfill that complies with Annex II; provided that if there are PCBs in a liquid state, the PCB Container shall first be drained and the PCB liquid disposed of in accordance with paragraph (a) of this section.

(2) Any PCB Container used to contain only PCBs at a concentration less than 500 ppm shall be disposed of as municipal solid wastes; provided that if the PCBs are in a liquid state, the PCB Container shall first be drained and the PCB liquid shall be disposed of in accordance with paragraph (a) of this section.

(3) Prior to disposal, a PCB container shall be stored in a facility which complies with Annex III.

(d) *Spills.* (1) Spills and other uncontrolled discharges of PCBs constitute the disposal of PCBs.

(2) PCBs resulting from spill clean-up and removal operations shall be stored and disposed of in accordance with paragraph (a) of this section. In order to determine if a spill of PCBs has resulted in a contamination level that is 50 ppm of PCBs or greater in soil, gravel, sludge, fill, rubble, or other land based substances, the person who spills PCBs should consult with the appropriate EPA Regional Administrator to obtain information on sampling methods and analytical procedures for determining the PCB contamination level associated with the spill.

(3) This paragraph does not exempt any person from any actions or liability under other statutory authorities, including section 311 of the Clean Water Act and the Resource Conservation and Recovery Act.

(e) Any person who is required to incinerate any PCBs and PCB Items under this subpart and who can demonstrate that an alternative method of destroying PCBs and PCB Items exists and that this alternative method can achieve a level of performance equivalent to Annex I incinerators or high efficiency boilers as provided in § 761.10(a)(2)(iv) and § 761.10(a)(3)(iv), may submit a written request to the Regional Administrator for an exemption from the incineration requirements of Annex I. The applicant must show that his method of destroying PCBs will not present an unreasonable risk of injury to health or the environment. On the basis of such information and any available information, the Regional Administrator may, in his discretion, approve the use of the alternate if he finds that the alternate disposal method provides PCB destruction equivalent to disposal in an Annex I incinerator and will not present an unreasonable risk of injury to health or the environment. Any approval must be stated in writing and may contain such conditions and provisions as the Regional Administrator deems appropriate. The person to whom such waiver is issued must comply with all limitations contained in such determination.

(f)(1) Each operator of a chemical waste landfill, incinerator, or alternative to incineration approved under paragraph (e) shall give the following written notices to the state and local governments within whose jurisdiction the disposal facility is located:

(i) Notice at least thirty (30) days before a facility is first used for disposal of PCBs required by these regulations; and

(ii) At the request of any state or local government, annual notice of the quantities and general description of PCBs disposed of during the year. This annual notice shall be given no more than thirty (30) days after the end of the year covered.

(2) Any person who disposes of PCBs under a §761.10(a)(5)(iii) incineration or chemical waste landfilling waiver shall give written notice at least thirty (30) days prior to conducting the disposal activities to the state and local governments within whose jurisdiction the disposal is to take place.

(g) *Testing Procedures.*

(1) Owners or users of mineral oil dielectric fluid transformers may use the following procedures to determine the concentration of PCBs in the dielectric fluid:

(i) Dielectric fluid removed from mineral oil dielectric fluid transformers may be collected in a common container, provided that no other chemical substances or mixtures are added to the container.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common containers or the individual transformers to determine the PCB concentration, *except that* if any PCBs at a concentration of 500 ppm or greater have been added to the container then the total container contents must be considered as having a PCB concentration of 500 ppm or greater

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for purposes of complying with the disposal requirements of this subpart. For purposes of this subparagraph, representative samples of mineral oil dielectric fluid are either samples taken in accordance with American Society of Testing and Materials method D-923 or samples taken from a container that has been thoroughly mixed in a manner such that any PCBs in the container are uniformly distributed throughout the liquid in the container.

(2) Owners or users of waste oil may use the following procedure to determine the PCB concentration of waste oil:

(i) Waste oil from more than one source may be collected in a common container, provided that no other chemical substances or mixtures, such as non-waste oils, are added to the container.

(ii) For purposes of complying with the marking and disposal requirements, representative samples may be taken from either the common container or individual containers to determine the PCB concentration *except that* if any PCBs at a concentration of 500 ppm or greater have been added to the container then the total container contents must be considered as having a PCB concentration of 500 ppm or greater for purposes of complying with the disposal requirements of this subpart. For purposes of this subparagraph, representative samples of waste oil are either samples taken in accordance with American Society of Testing and Materials D-923 method or samples taken from a container that has been thoroughly mixed in a manner such that any PCBs in the container are uniformly distributed throughout the liquid in the container.

(b) Requirements for export and import of PCBs for purposes of disposal and PCB Items for purposes of disposal are found in § 761.30.

Subpart C—Marking of PCBs and PCB Items

§ 761.20 Marking requirements.

(a) Each of the following items in existence on or after July 1, 1978 shall be marked *as illustrated in Figure 1 in* Annex V—§ 761.44(a). The mark illustrated in Figure 1 is referred to as M_1 throughout this subpart.

(1) PCB Containers;

(2) PCB Transformers at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal from use if not already marked. [Marking of PCB—Contaminated Transformers is not required];

(3) PCB Large High Voltage Capacitors at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal from use if not already marked;

(4) Equipment containing a PCB Transformer or a PCB Large High Voltage Capacitor at the time of manufacture, at the time of distribution in commerce if not already marked, and at the time of removal of the equipment from use if not already marked;

(5) PCB Large Low Voltage Capacitors at the time of removal from use;

(6) *Electric motors* using PCB coolants (See also § 761.20(e)).

(7) Hydraulic systems using PCB hydraulic fluid (See also § 761.20(e));

(8) Heat transfer systems (other than PCB Transformers) using PCBs (See also § 761.20(e));

(9) PCB Article Containers containing articles or equipment that must be marked under provisions (1) through (8) above;

(10) Each storage area used to store PCBs and PCB Items for disposal.

(b) As of October 1, 1978, each *transport vehicle* shall be marked on each end and side with M_1 as described in Annex V—§ 761.44(a) if it is loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of PCBs in the liquid phase or with one or more PCB Transformers (See also § 761.20(e)).

(c) As of January 1, 1979, the following PCB Articles shall be marked with mark M_1 as described in Annex V—§ 761.44(a):

(1) All PCB Transformers not marked under paragraph (a) of this section (Marking of PCB-Contaminated *Transformers is not* required);

(2) All PCB Large High Voltage Capacitors not marked under paragraph (a) of this section.

(i) Will be marked individually with mark M_1, or

(ii) If one or more PCB Large High Voltage Capacitors are installed in a protected location such as on a power pole, or structure, or behind a fence; the pole, structure, or fence shall be marked with mark M_1, and a record or procedure identifying the PCB Capacitors shall be maintained by the *owner or operator* at the protected location.

(d) As of January 1, 1979, all PCB Equipment containing a PCB Small Capacitor shall be marked at the time of manufacture with the statement, "This equipment contains PCB Capacitor(s)". The mark shall be of the same size as the mark M_1.

(e) As of October 1, 1979, applicable PCB Items in paragraphs (a)(1), (6), (7), and (8) containing PCBs in *concentrations of 50 to 500 ppm and* applicable transport vehicles in paragraph (b) loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of liquid PCBs in concentrations of 50 ppm to 500 ppm shall be marked with mark M_1 as described in Annex V—§ 761.44(a).

(f) Where mark M_1 is specified but the PCB Article or PCB Equipment is too small to accomodate the smallest permissible size of mark M_1, mark M_2 as described in Annex V—§ 761.44(b), may be used instead of mark M_1.

(g) Each large low voltage capacitor, each small capacitor normally used in alternating current circuits, and each fluorescent light ballast manufactured ("manufactured", for purposes of this sentence, means built) between July 1, 1978 and July 1, 1986 that do not contain PCBs shall be marked by the manufacturer at the time of manufacture with the statement, "No PCBs". The mark shall be of similar durability and readability as other marking that indicate electrical information, part numbers, or the manufacturer's name. For *purposes of this subparagraph* marking requirement only is applicable to items built domestically or abroad after June 30, 1978.

(h) All marks required by this subpart must be placed in a position on the exterior of the PCB Items or transport vehicles so that the marks can be easily read by any persons inspecting or servicing the marked PCB Items or transport vehicles.

(i) Any chemical substance or mixture that is manufactured after the effective date of this rule and that contains less than 500 ppm PCB (0.05% on a dry weight basis), including PCB that is a byproduct or impurity, must be marked in accordance with any requirements contained in the exemption granted by EPA to permit such manufacture and is not subject to any other requirement in this Subpart unless so specified in the exemption. This paragraph applies only to containers of chemical substances or mixtures. PCB articles and equipment into which the chemical substances or mixtures are processed, are subject to the marking requirements contained elsewhere in this Subpart.

Subpart D—Manufacturing, Processing, Distribution in Commerce, and Use of PCBs and PCB Items

§ 761.30 Prohibitions.

Except as authorized in § 761.31, the activities listed in paragraphs (a) and (d) of this section are prohibited pursuant to section 6(e)(2) of TSCA. The requirements set forth in paragraphs (b)

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and (c) of this section concerning export and import of PCBs for purposes of disposal and PCB Items for purposes of disposal are established pursuant to section 6(e)(1) of TSCA. Subject to any exemptions granted pursuant to section 6(e)(3)(B) of TSCA, the activities listed in paragraphs (b) and (c) of this section are prohibited pursuant to section 6(e)(3)(A) of TSCA. In addition, the Administrator hereby finds, under the authority of section 12(a)(2) of TSCA, that the manufacture, processing, and distribution in commerce of PCBs and PCB Items for export from the United States presents an unreasonable risk of injury to health within the United States. This finding is based upon the well-documented human health and environmental hazard of PCB exposure; the high probability of human and environmental exposure to PCBs and PCB Items from manufacturing, processing, or distribution activities; the potential hazard of PCB exposure posed by the transportation of PCBs or PCB Items within the United States; and the evidence that contamination of the environment by PCBs is spread far beyond the areas where they are used. In addition, the Administrator hereby finds that any exposure of human beings or the environment to PCBs as measured or detected by any scientifically acceptable analytical method is a significant exposure, as defined in § 761.2(dd). Section 761.2(hh) and TSCA section 6(e)(2)(C) define the term totally enclosed manner as "any manner which will ensure that any exposure of human beings or the environment to a polychlorinated biphenyl will be insignificant. . . ." Since any exposure to PCBs is found to be a significant exposure, a totally enclosed manner is a manner that results in no exposure of humans or the environment to PCBs. The following activities are considered totally enclosed: distribution in commerce and use (except servicing) of intact, non-leaking PCB Transformers or PCB-Contaminated Transformers (except those used in railroad locomotives or self-propelled cars); distribution in commerce and use (except servicing) of intact, non-leaking PCB electromagnets; distribution in commerce and use of intact, non-leaking PCB Capacitors; and processing, distribution in commerce, and use of PCB Equipment containing an intact, non-leaking PCB Capacitor.

(a) No person may process, distribute in commerce, or use any PCB or PCB Item in any manner other than in a totally enclosed manner within the United States or export any such PCB or PCB Item from the United States unless authorized under § 761.31 of this Subpart. Section 761.30(a) is superseded by § 761.30(c) for processing and distribution in commerce of PCBs and PCB Items on the dates when that section becomes effective.

(b) No person may manufacture PCBs for use within the United States or manufacture PCBs for export from the United States without an exemption except that:

(1) PCBs or PCB Items may be imported for purposes of disposal until May 1, 1980, provided that the disposal is in accordance with § 761.10; and

(2) PCBs or PCB Items may be exported for disposal until May 1, 1980, in accordance with the requirements of § 761.30(c)(3).

(c) Effective July 1, 1979, no person may process or distribute in commerce any PCB or PCB Item for use within the United States or for export from the United States without an exemption except that:

(1) PCBs or PCB Items sold before July 1, 1979, for purposes other than resale may be distributed in commerce only in a totally enclosed manner after that date;

(2) PCBs or PCB Items may be processed and distributed in commerce in compliance with the requirements of this Part for purposes of disposal in accordance with the requirements of § 761.10;

(3) PCBs or PCB Items may be exported for disposal until May 1, 1980, if an export notice is submitted at least thirty (30) days before the first shipment in any calendar year leaves the customs territory of the United States. Export notices must be submitted to the Document Control Officer (TS-793), Office of Toxic Substances, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. The generator of the PCB waste material intended for disposal, or an agent acting on his behalf, must certify to the best of his knowledge and belief that the information is complete and accurate. Each notice should contain the following information:

(i) Name, company name, address, and telephone number of the owner of the PCB waste material to be exported and the name and address of any person or agent acting on his behalf;

(ii) Estimated quantity of wastes to be shipped during the calendar year and the estimated number of shipments to be made and the dates when such shipments are expected to leave the customs territory of the United States;

(iii) Description of the PCBs or PCB Items being exported;

(iv) Country(s) of destination for the shipments;

(v) Name and address of facility(s) receiving the shipment and person(s) responsible for receiving the shipment(s).

(vi) Method(s) of disposal and precautions taken to control release into the environment.

(vii) No less than 30 days after the end of each calendar quarter (March 31, June 30, September 30, and December 31) during which PCBs were exported for disposal, each person exporting the PCBs must submit a report to the Document Control Officer (TS-793), Office of Toxic Substances, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. The report shall list the quantity of PCB wastes in each shipment made during the quarter and include the date when each shipment left the customs territory of the United States and the information specified in subparagraphs (i) and (iii) through (vi) above. If the quantity of wastes shipped during the calendar year exceeds by 25 percent or more the estimated quantities reported in (ii) above, a special export notice must be submitted to the Document Control Officer (TS-793) at the address given in paragraph (3) at least 30 days before any additional shipments leave the customs territory of the United States and the notice shall include the information specified in subparagraphs (i) through (vi) above.

(viii) Any person expecting to export PCB wastes for disposal in calendar year 1980 must submit an export notice at least thirty (30) days before the first shipment leaves the customs territory of the United States to the Document Control Officer (TS-793) at the address given in paragraph (3), and the notice shall contain the information listed in subparagraphs (i) through (vi).

(d) The use of waste oil that contains any detectable concentration of PCB as a sealant, coating, or dust control agent is prohibited. Prohibited uses include, but are not limited to, road oiling, general dust control, use as a pesticide or herbicide carrier, and use as a rust preventative on pipes.

§ 761.31 Authorizations.

The following non-totally enclosed PCB activities are authorized pursuant to § 6(e)(2)(B) of TSCA:

(a) *Servicing Transformers (Other Than Railroad Transformers).* PCBs may be processed, distributed in commerce, and used for the purposes of servicing including rebuilding transformers (other than transformers for railroad locomotives and self-

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propelled railroad cars) in a manner other than a totally enclosed manner until July 1, 1984, subject to the following conditions:

(1) Regardless of its PCB concentration, dielectric fluids containing less than 500 ppm PCB that are mixed with fluids that contain 500 ppm or greater PCB must not be used as dielectric fluid in any transformer. Dielectric fluid from PCB-Contaminated Transformers may be assumed to have less than 500 ppm PCBs.

(2) PCB-Contaminated Transformers (as defined in § 761.2(z)) may only be serviced (including rebuilding) with dielectric fluid containing less than 500 ppm PCB.

(3) Any servicing (including rebuilding) of PCB Transformers (as defined in § 761.2(y)) that requires the removal of the transformer coil from the transformer casing is prohibited. PCB Transformers may be topped off with PCB dielectric fluid.

(4) PCBs removed during servicing of a PCB Transformer or PCB-Contaminated Transformer or during rebuilding of a PCB-Contaminated Transformer must be captured and either reused as dielectric fluid or disposed of in accordance with the requirements of Subpart D. PCBs from PCB Transformers must not be mixed with or added to dielectric fluid from PCB-Contaminated Transformers.

(5) A PCB Transformer may be converted to a PCB-Contaminated Transformer by draining, refilling, and otherwise servicing the transformer with non-PCB dielectric fluid so that after a minimum of three months of in-service use subsequent to the last servicing conducted for the purpose of reducing the PCB concentration in the transformer, the transformer's dielectric fluid contains less than 500 ppm PCB (on a dry weight basis).

(6) Any PCB dielectric fluid that is on hand to service a PCB Transformer or a PCB-Contaminated Transformer must be stored in accordance with the storage for disposal requirements of Annex III (§ 761.42).

(7) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing transformers is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(b) *Use in and Servicing of Railroad Transformers.* PCBs may be used in transformers in railroad locomotives or railroad self-propelled cars ("railroad transformers") and may be processed and distributed in commerce for purposes of servicing these transformers in a manner other than a totally enclosed manner until July 1, 1984, subject to the following conditions:

(1) *Use Restrictions:*

(i) After January 1, 1982, use of railroad transformers that contain dielectric fluids with a PCB concentration greater than 50,000 ppm (5.0% on a dry weight basis) is prohibited;

(ii) After January 1, 1984, use of railroad transformers which contain dielectric fluids with a PCB concentration greater than 1000 ppm (0.10% on a dry weight basis) is prohibited;

(iii) The concentration of PCBs in the dielectric fluid contained in railroad transformers must be measured:

(A) Immediately upon completion of any authorized servicing of a railroad transformer conducted for the purpose of reducing the PCB concentration in the dielectric fluid in the transformer; and

(B) Between 12 and 24 months after each servicing conducted in accordance with subparagraph (A);

(C) The data obtained as a result of subparagraphs (A) and (B) above shall be retained until January 1, 1991.

(2) *Servicing Restrictions:*

(i) If the coil is removed from the casing of a railroad transformer (e.g., the transformer is rebuilt), after January 1, 1982, the railroad transformer may not be refilled with dielectric fluid containing a PCB concentration greater than 50 ppm;

(ii) After January 1, 1982, railroad transformers may only be serviced with dielectric fluid containing less than 60,000 ppm PCBs, except as provided in (i) above;

(iii) After January 1, 1984, railroad transformers may only be serviced with dielectric fluid containing less than 1000 ppm PCB, except as provided in (i) above;

(iv) Dielectric fluid may be filtered through activated carbon or otherwise industrially processed for the purpose of reducing the PCB concentration in the fluid;

(v) Any PCB dielectric fluid that is used to service PCB railroad transformers must be stored in accordance with the storage for disposal requirements of Annex III (§ 761.42);

(vi) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing railroad transformers is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(c) *Use in and Servicing of Mining Equipment.* PCBs may be used in mining equipment and may be processed and distributed in commerce for purposes of servicing mining equipment in a manner other than a totally enclosed manner until January 1, 1982, subject to the following conditions:

(1) PCBs may be added to motors in mining equipment in mines or mining areas until January 1, 1982;

(2) PCB motors in loader-type mining equipment must be rebuilt as air-cooled or other non-PCB-containing motors whenever the motor is returned to a service shop for servicing;

(3) PCB motors in continuous miner-type equipment may be rebuilt as PCB motors until January 1, 1980;

(4) Any PCBs that are on hand to service or repair mining equipment must be stored in accordance with the storage for disposal requirements of Annex III (§ 761.42);

(5) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing mining equipment is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(d) *Use in Heat Transfer Systems.* PCBs may be used in heat transfer systems in a manner other than a totally enclosed manner until July 1, 1984, subject to the following conditions:

(1) Each person who owns a heat transfer system that ever contained PCBs must test for the concentration of PCBs in the heat transfer fluid of such a system no later than November 1, 1979, and at least annually thereafter. All test sampling must be performed at least three months after the most recent fluid refilling. When a test shows that the PCB concentration is less than 50 ppm, testing under this subparagraph is no longer required;

(2) Within six (6) months of a test performed under subparagraph (1) that indicates that a system's fluid contains 50 ppm or greater PCB (0.005% on a dry weight basis), the system must be drained of the PCBs and refilled with fluid containing less than 50 ppm PCB. Topping-off with non-PCB heat transfer fluids to reduce PCB concentrations is permitted;

(3) After November 1, 1979, no heat transfer system that is used in the manufacture or processing of any food, drug, cosmetic, or device, as defined in § 201 of the Federal Food, Drug, and Cosmetic Act, may contain heat transfer fluid with 50 ppm or greater PCB (0.005% on a dry weight basis);

(4) Addition of PCBs to a heat transfer system is prohibited.

(5) Data obtained as a result of subparagraph (1) must be retained for five (5) years after the heat transfer system reaches 50 ppm PCB.

(e) *Use in Hydraulic Systems.* PCBs may be used in hydraulic systems and

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may be processed and distributed in commerce for purposes of filtering, distilling, or otherwise reducing the concentration of PCBs in hydraulic fluids in a manner other than a totally enclosed manner until July 1, 1984, subject to the following conditions:

(1) Each person who owns a hydraulic system that ever contained PCBs must test for the concentration of PCBs in the hydraulic fluid of each such system no later than November 1, 1979, and at least annually thereafter. All test sampling must be performed at least three months after the most recent fluid refilling. When a test shows that the PCB concentration is less than 50 ppm, testing under this subparagraph is no longer required;

(2) Within six (6) months of a test under subparagraph (1) that indicates that a system's fluid contains 50 ppm or greater PCB (0.005% on a dry weight basis), the system must be drained of the PCBs and refilled with fluid containing less than 50 ppm PCB. Topping-off with non-PCB hydraulic fluids to reduce PCB concentrations is permitted;

(3) Addition of PCBs to a hydraulic system is prohibited;

(4) Hydraulic fluid may be drained from a hydraulic system and filtered, distilled, or otherwise serviced in order to reduce the PCB concentration below 50 ppm;

(5) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing hydraulic systems is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B);

(6) Data obtained as a result of subparagraph (1) above must be retained for five years after the hydraulic system reaches 50 ppm.

(f) *Use in Carbonless Copy Paper.* Carbonless copy paper containing PCBs may be used in a manner other than a totally enclosed manner indefinitely.

(g) *Pigments.* Diarylide and Phthalocyanin pigments that contain 50 ppm or greater PCB may be processed, distributed in commerce, and used in a manner other than a totally enclosed manner until January 1, 1982, except that after July 1, 1979, processing and distribution in commerce of diarylide or phthalocyanin pigments that contain 50 ppm or greater PCB is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(h) *Servicing Electromagnets.* PCBs may be processed, distributed in commerce, and used for the purpose of servicing electromagnets until July 1, 1984, in a manner other than a totally enclosed manner subject to the following requirements:

(1) PCBs removed during servicing must be captured and either returned to the electromagnet, reused as a dielectric fluid, or disposed of in accordance with Subpart B (§ 761.10);

(2) Servicing of PCB electromagnets (including rebuilding) which requires the removal of the coil from the casing is prohibited.

(3) Any PCBs that are on hand to service a PCB electromagnet must be stored in accordance with the storage for disposal requirements of Annex III (§ 761.42);

(4) After July 1, 1979, processing and distribution in commerce of PCBs for purposes of servicing electromagnets is permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

(i) *Use in Natural Gas Pipeline Compressors.* PCBs may be used in natural gas pipeline compressors until May 1, 1980, in a manner other than a totally enclosed manner.

(j) *Small Quantities for Research and Development.* PCBs may be processed, distributed in commerce, and used in small quantities for research and development, as defined in § 760.2(ee), in a manner other than a totally enclosed manner until July 1, 1984, except that after July 1, 1979, processing and distribution in commerce of PCBs in small quantities for research and development is permitted only for persons who have been granted an exemption under TSCA section 6(e)(3)(B).

(k) *Microscopy Mounting Medium.* PCBs may be processed, distributed in commerce, and used as a mounting medium in microscopy in a manner other than a totally enclosed manner until July 1, 1984, except that after July 1, 1979, processing and distribution in commerce of PCBs for purposes of use as a mounting medium in microscopy are permitted only for persons who are granted an exemption under TSCA section 6(e)(3)(B).

Subpart E—List of Annexes

Annex I

§ 761.40 Incineration.

(a) *Liquid PCBs:* An incinerator used for incinerating PCBs shall be approved by the Agency Regional Administrator pursuant to paragraph (d) of this section. The incinerator shall meet all of the requirements specified in subparagraph (1) through (9) of this paragraph, unless a waiver from these requirements is obtained pursuant to paragraph (d)(3) of this section. In addition, the incinerator shall meet any other requirements which may be prescribed pursuant to paragraph (d)(4) of this section.

(1) Combustion criteria shall be either of the following:

(i) Maintenance of the introduced liquids for a 2-second dwell time at 1200°C(±100°C) and 3 percent excess oxygen in the stack gas; or

(ii) Maintenance of the introduced liquids for a 1½ second dwell time at 1600°C(±100°C) and 2 percent excess oxygen in the stack gas.

(2) Combustion efficiency shall be at least 99.9 percent computed as follows:

$$\text{Combustion efficiency} = \frac{Co_2}{Co_2 + Co} \times 100$$

where

Co_2 = Concentration of carbon dioxide.
Co = Concentration of carbon monoxide.

(3) The rate and quantity of PCBs which are fed to the combustion system shall be measured and recorded at regular intervals of no longer than 15 minutes.

(4) The temperatures of the incineration process shall be continuously measured and recorded. The combustion temperature of the incineration process shall be based on either direct (pyrometer) or indirect (wall thermocouple-pyrometer correlation) temperature readings.

(5) The flow of PCBs to the incinerator shall stop automatically whenever the combustion temperature drops below the temperatures specified in subparagraph (1) of this paragraph.

(6) Monitoring of stack emission products shall be conducted:

(i) When an incinerator is first used for the disposal of PCBs under the provisions of this regulation;

(ii) When an incinerator is first used for the disposal of PCBs after the incinerator has been modified in a manner which may affect the characteristics of the stack emission products; and

(iii) At a minimum such monitoring shall be conducted for the following parameters: (a) O_2; (b) CO; (c) CO_2; (d) Oxides of Nitrogen (NO_x); (e) Hydrochloric Acid (HCl); (f) Total Chlorinated Organic Content (RCl); (g) PCBs; and (h) Total Particulate Matter.

(7) At a minimum monitoring and recording of combustion products and incineration operations shall be conducted for the following parameters whenever the incinerator is incinerating PCBs: (i) O_2; (ii) CO; and (iii) CO_2. The monitoring for O_2 and CO shall be continuous. The monitoring for CO_2 shall be periodic, at a frequency specified by the Regional Administrator.

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(8) The flow of PCBs to the incinerator shall stop automatically when any one or more of the following conditions occur unless a contingency plan is submitted by the incinerator owner or operator and approved by the Regional Administrator and the contingency plan indicates what alternative measures the incinerator owner or operator would take if any of the following conditions occur:

(i) Failure of monitoring operations specified in subparagraph (7) of this paragraph;

(ii) Failure of the PCB rate and quantity measuring and recording equipment specified in subparagraph (3) of this paragraph; or

(iii) Excess oxygen falls below the percentage specified in subparagraph (1) of this paragraph.

(9) Water scrubbers shall be used for HCl control during PCB incineration and shall meet any performance requirements specified by the appropriate EPA Regional Administrator. Scrubber effluent shall be monitored and shall comply with applicable effluent or pretreatment standards, and any other State and Federal laws and regulations. An alternate method of HCl control may be used if the alternate method has been approved by the Regional Administrator. (The HCl neutralizing capability of cement kilns is considered to be an alternate method.)

(b) *Non-liquid PCBs.* An incinerator used for incinerating non-liquid PCBs, PCB Articles, PCB Equipment, or PCB Containers shall be approved by the Agency Regional Administrator pursuant to paragraph (d) of this section. The incinerator shall meet all of the requirements specified in subparagraphs (1) and (2) of this paragraph unless a waiver from these requirements is obtained pursuant to paragraph (d)(5) of this section. In addition, the incinerator shall meet any other requirements that may be prescribed pursuant to paragraph (d)(4) of this section.

(1) The mass air emissions from the incinerator shall be no greater than 0.001g PCB/kg of the PCB introduced into the incinerator.

(2) The incinerator shall comply with the provisions of § 761.60(a)(2), (3), (4), (6), (7), (8)(i) and (ii), and (9).

(c) *Maintenance of data and records.* All data and records required by this section shall be maintained in accordance with Annex VI—§ 761.65, Records and Monitoring.

(d) *Approval of incinerators.* Prior to the incineration of PCBs and PCB Items the owner or operator of an incinerator shall receive the written approval of the Agency Regional Administrator for the Region in which the incinerator is located. Such approval shall be obtained in the following manner:

(1) *Initial Report.* The owner or operator shall submit to the Regional administrator an initial report which contains:

(i) The location of the incinerator;

(ii) A detailed description of the incinerator including general site plans and design drawings of the incinerator;

(iii) Engineering reports or other information on the anticipated performance of the incinerator;

(iv) Sampling and monitoring equipment and facilities available;

(v) Waste volumes expected to be incinerated;

(vi) Any local, State, or Federal permits or approvals; and

(vii) Schedules and plans for complying with the approval requirements of this regulation.

(2) *Trial burn.* (i) Following receipt of the report described in subparagraph (1) of this paragraph, the Regional Administrator shall determine if a trial burn is required and notify the person who submitted the report whether a trial burn of PCBs and PCB Items must be conducted. The Regional Administrator may require the submission of any other information that the Regional Administrator finds to be reasonably necessary to determine the need for a trial burn. Such other information shall be restricted to the types of information required in subparagraph (1)(i) through (1)(vii) of this paragraph.

(ii) If the Regional Administrator determines that a trial burn must be held, the person who submitted the report described in subparagraph (1) of this paragraph shall submit to the Regional Administrator a detailed plan for conducting and monitoring the trial burn. At a minimum, the plan must include:

(A) Date trial burn is to be conducted;

(B) Quantity and type of PCBs and PCB Items to be incinerated;

(C) Parameters to be monitored and location of sampling points;

(D) Sampling frequency and methods and schedules for sample analyses; and

(E) Name, address, and qualifications of persons who will review analytical results and other pertinent data, and who will perform a technical evaluation of the effectiveness of the trial burn.

(iii) Following receipt of the plan described in subparagraph (2)(ii) of this paragraph, the Regional Administrator will approve the plan, require additions or modifications to the plan, or disapprove the plan. If the plan is disapproved, the Regional Administrator will notify the person who submitted the plan of such disapproval, together with the reasons why it is disapproved. That person may thereafter submit a new plan in accordance with subparagraph (2)(ii) of this paragraph. If the plan is approved (with any additions or modifications which the Regional Administrator may Prescribe), the Regional Administrator will notify the person who submitted the plan of the approval. Thereafter the trial burn shall take place at a date and time to be agreed upon between the Regional Administrator and the persons who submitted the plan.

(3) *Other information.* In addition to the information contained in the report and plan described in subparagraphs (1) and (2) of this paragraph, the Regional Administrator may require the owner or operator to submit any other information that the Regional Administrator finds to be reasonably necessary to determine whether an incinerator shall be approved.

Note.—The Regional Administrator will have available for review and inspection an Agency manual containing information on sampling methods and analytical procedures for the parameters required in § 761.60(a)(3), (4), (6), and (7) plus any other parameters he may determine to be appropriate. Owners or operators are encouraged to review this manual prior to submitting any report required in this Annex.

(4) *Contents of Approval.* (i) Except as provided in subparagraph (5) of this paragraph, the Regional Administrator may not approve an incinerator for the disposal of PCB and PCB Items unless he finds that the incinerator meets all of the requirements of paragraphs (a) and/or (b) of this section.

(ii) In addition to the requirements of paragraphs (a) and/or (b) of this section, the Regional Administrator may include in an approval any other requirements that the Regional Administrator finds are necessary to ensure that operation of the incinerator does not present an unreasonable risk of injury to health or the environment from PCBs. Such requirements may include a fixed period of time for which the approval is valid.

(5) *Waivers.* An owner or operator of the incinerator may submit evidence to the Regional Administrator that operation of the incinerator will not present an unreasonable risk of injury to health or the environment from PCBs, when one or more of the requirements of paragraphs (a) and/or (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator may in his discretion find that any requirement of paragraph (a) and (b) is

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not necessary to protect against such a risk, and may waive the requirements in any approval for that incinerator. Any finding and waiver under this subparagraph must be stated in writing and included as part of the approval.

(6) *Persons Approved.* An approval will designate the persons who own and who are authorized to operate the incinerator, and will apply only to such persons, except as provided in paragraph (8) below.

(7) *Final Approval.* Approval of an incinerator will be in writing and signed by the Regional Administrator. The approval will state all requirements applicable to the approved incinerator.

(8) *Transfer of Property.* Any person who owns or operates an approved incinerator must notify EPA at least 30 days before transferring ownership in the incinerator or the property it stands upon, or transferring the right to operate the incinerator. The transferor must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA incinerator approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for the transferor's name, or EPA may require the transferee to apply for a new incinerator approval. In the latter case, the transferee must abide by the transferor's EPA approval until EPA issues the new approval to the transferee.

Annex II

§ 761.41 Chemical waste landfills.

(a) *General.* A chemical waste landfill used for the disposal of PCBs and PCB items shall be approved by the Agency Regional Administrator pursuant to paragraph (c) of this section. The landfill shall meet all of the requirements specified in paragraph (b) of this section, unless a waiver from these requirements is obtained pursuant to paragraph (c)(4) of this section. In addition, the landfill shall meet any other requirements that may be prescribed pursuant to paragraph (c)(3) of this section.

(b) *Technical Requirements.* Requirements for chemical waste landfills used for the disposal of PCBs and PCB Items are as follows:

(1) *Soils.* The landfill site shall be located in thick, relatively impermeable formations such as large-area clay pans. Where this is not possible, the soil shall have a high clay and silt content with the following parameters:

(i) In-place soil thickness, 4 feet or compacted soil liner thickness, 3 feet;

(ii) *Permeability (cm/sec), equal to or less than* 1×10^{-7};

(iii) Percent soil passing No. 200 Sieve, >30;

(iv) Liquid Limit, >30; and

(v) *Plasticity Index* >15.

(2) *Synthetic Membrane Liners.* Synthetic membrane liners shall be used, when, in the judgment of the Regional Administrator, the hydrologic or geologic conditions at the landfill require such a liner in order to provide at least a permeability equivalent to the soils in (1) above. Whenever a synthetic liner is used at a landfill site, special precautions shall be taken to insure that its integrity is maintained and that it is chemically compatible with PCBs. Adequate soil underlining and soil cover shall be provided to prevent excessive stress on the liner and to prevent rupture of the liner. The liner must have a minimum thickness of 30 mils.

(3) *Hydrologic Conditions.* The bottom of the landfill shall be above the historical high groundwater table as provided below. Floodplains, shorelands, and groundwater recharge areas shall be avoided. There shall be no hydraulic connection between the site and standing or flowing surface water. The site shall have monitoring wells and leachate collection. The bottom of the landfill liner system or natural in-place soil barrier shall be at least fifty feet from the historical high water table.

(4) *Flood Protection.* (i) If the landfill site is below the 100-year floodwater elevation, the operator shall provide surface water diversion dikes around the perimeter of the landfill site with a minimum height equal to two feet above the 100-year floodwater elevation.

(ii) If the landfill site is above the 100-year floodwater elevation, the operators shall provide diversion structures capable of diverting all of the surface water runoff from a 24-hour, 25-year storm.

(5) *Topography.* The landfill site shall be located in an area of low to moderate relief to minimize erosion and to help prevent landslides or slumping.

(6) *Monitoring Systems.* (i) *Water Sampling.* (A) For all sites receiving PCBs, the ground and surface water from the disposal site area shall be sampled prior to commencing operations under an approval provided in § 761.41(c) for use as baseline data.

(B) Any surface watercourse designated by the Regional Administrator using the authority provided in § 761.41(c)(3)(ii) shall be sampled at least monthly when the landfill is being used for disposal operations.

(C) Any surface watercourse designated by the Regional Administrator using the authority provided in § 761.41(c)(3)(ii) shall be sampled for a time period specified by the Regional Administrator on a frequency of no less than once every six months after final closure of the disposal area.

(ii) *Groundwater Monitor Wells.* (A) If underlying earth materials are homogeneous, impermeable, and uniformly sloping in one direction, only three sampling points shall be necessary. These three points shall be equally spaced on a line through the center of the disposal area and extending from the area of highest water table elevation to the area of the lowest water table elevation on the property.

(B) All monitor wells shall be cased and the annular space between the monitor zone (zone of saturation) and the surface shall be completely backfilled with Portland cement or an equivalent material and plugged with Portland cement to effectively prevent percolation of surface water into the well bore. The well opening at the surface shall have a removable cap to provide access and to prevent entrance of rainfall or stormwater runoff. The well shall be pumped to remove the volume of liquid initially contained in the well before obtaining a sample for analysis. The discharge shall be treated to meet applicable State or Federal discharge standards or recycled to the chemical waste landfill.

(iii) *Water Analysis.* As a minimum, all samples shall be analyzed for the following parameters, and all data and records of the sampling and analysis shall be maintained as required in Annex VI—§ 761.65(d)(1). Sampling methods and analytical procedures for these parameters shall comply with those specified in 40 CFR Part 136 as amended in 41 FR 52779 on December 1, 1976.

(A) PCBs.

(B) pH.

(C) Specific Conductance.

(D) Chlorinated Organics.

(7) *Leachate Collection.* A leachate collection monitoring system shall be installed above the chemical waste landfill. Leachate collection systems shall be monitored monthly for quantity and physicochemical characteristics of leachate produced. The leachate should be either treated to acceptable limits for discharge in accordance with a State or Federal permit or disposed of by another State or Federally approved method. Water analysis shall be conducted as

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provided in subparagraph (6) (iii) of this paragraph. Acceptable leachate monitoring/collection systems shall be any of the following designs, unless a waiver is obtained pursuant to paragraph (c)(4) of this section.

(i) Simple Leachate Collection. This system consists of a gravity flow drainfield installed above the waste disposal facility liner. This design is recommended for use when semi-solid or leachable solid wastes are placed in a lined pit excavated into a relatively thick, unsaturated, homogenous layer of low permeability soil.

(ii) Compound Leachate Collection. This system consists of a gravity flow drainfield installed above the waste disposal facility liner and above a secondary installed liner. This design is recommended for use when semi-liquid or leachable solid wastes are placed in a lined pit excavated into relatively permeable soil.

(ii) Suction Lysimeters. This system consists of a network of porous ceramic cups connected by hoses/tubing to a vacuum pump. The porous ceramic cups or suction lysimeters are installed along the sides and under the bottom of the waste disposal facility liner. This type of system works best when installed in a relatively permeable unsaturated soil immediately adjacent to the bottom and/or sides of the disposal facility.

(6) *Chemical Waste Landfill Operations.* (i) PCBs and PCB Items shall be placed in a landfill in a manner that will prevent damage to containers or articles. Other wastes placed in the landfill that are not chemically compatible with PCBs and PCB Items including organic solvents shall be segregated from the PCBs throughout the waste handling and disposal process.

(ii) An operation plan shall be developed and submitted to the Regional Administrator for approval as required in paragraph (c) of this section. This plan shall include detailed explanations of the procedures to be used for recordkeeping, surface water handling procedures, excavation and backfilling, waste segregation burial coordinates, vehicle and equipment movement, use of roadways, leachate collection systems, sampling and monitoring procedures, monitoring wells, environmental emergency contingency plans, and security measures to protect against vandalism and unauthorized waste placements. EPA guidelines entitled "Thermal Processing and Land Disposal of Solid Waste" (39 FR 26937, August 14, 1974) are a useful reference in preparation of this plan. If the facility is to be used to dispose of liquid wastes containing between 50 ppm and 500 ppm PCB, the operations plan must include procedures to determine that liquid PCBs to be disposed of at the landfill do not exceed 500 ppm PCB and measures to prevent the migration of PCBs from the landfill. Bulk liquids not exceeding 500 ppm PCBs may be disposed of provided such waste is pretreated and/or stabilized (e.g., chemically fixed, evaporated, mixed with dry inert absorbent) to reduce its liquid content or increase its solid content so that a non-flowing consistency is achieved to eliminate the presence of free liquids prior to final disposal in a landfill. PCB Container of liquid PCBs with a concentration between 50 and 500 ppm PCB may be disposed of if each container is surrounded by an amount of inert sorbent material capable of absorbing all of the liquid contents of the container.

(iii) Ignitable wastes shall not be disposed of in chemical waste landfills. Liquid ignitable wastes are wastes that have a flash point less than 60 degrees C (140 degrees F) as determined by the following method or an equivalent method: Flash point of liquids shall be determined by a Pensky-Martens Closed Cup Tester, using the protocol specified in ASTM Standard D-93, or the Setaflash Closed Tester using the protocol specified in ASTM Standard D-3278.

(iv) Records shall be maintained for all PCB disposal operations and shall include information on the PCB concentration in liquid wastes and the three dimensional burial coordinates for PCBs and PCB Items. Additional records shall be developed and maintained as required in Annex VI.

(9) *Supporting Facilities.* (i) A six foot woven mesh fence, wall, or similar device shall be placed around the site to prevent unauthorized persons and animals from entering.

(ii) Roads shall be maintained to and within the site which are adequate to support the operation and maintenance of the site without causing safety or nuisance problems or hazardous conditions.

(iii) The site shall be operated and maintained in a manner to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials.

(c) *Approval of Chemical Waste Landfills.* Prior to the disposal of any PCBs and PCB Items in a chemical waste landfill, the owner or operator of the landfill shall receive written approval of the Agency Regional Administrator for the Region in which the landfill is located. The approval shall be obtained in the following manner:

(1) *Initial Report.* The owner or operator shall submit to the Regional Administrator an initial report which contains:

(i) The location of the landfill;

(ii) A detailed description of the landfill including general site plans and design drawings;

(iii) An engineering report describing the manner in which the landfill complies with the requirements for chemical waste landfills specified in paragraph (b) of this section;

(iv) Sampling and monitoring equipment and facilities available;

(v) Expected waste volumes of PCBs;

(vi) General description of waste materials other than PCBs that are expected to be disposed of in the landfill;

(vii) Landfill operations plan as required in paragraph (b) of this section;

(viii) Any local, State, or Federal permits or approvals; and

(ix) Any schedules or plans for complying with the approval requirements of these regulations.

(2) *Other Information.* In addition to the information contained in the report described in subparagraph (1) of this paragraph, the Regional Administrator may require the owner or operator to submit any other information that the Regional Administrator finds to be reasonably necessary to determine whether a chemical waste landfill should be approved. Such other information shall be restricted to the types of information required in subparagraphs (1)(i) through (1)(ix) of this paragraph.

(3) *Contents of Approval.* (i) Except as provided in subparagraph (4) of this paragraph the Regional Administrator may not approve a chemical waste landfill for the disposal of PCBs and PCB Items, unless he finds that the landfill meets all of the requirements of paragraph (b) of this Annex.

(ii) In addition to the requirements of paragraph (b) of this section, the Regional Administrator may include in an approval any other requirements or provisions that the Regional Administrator finds are necessary to ensure that operation of the chemical waste landfill does not present an unreasonable risk of injury to health or the environment from PCBs. Such provisions may include a fixed period of time for which the approval is valid.

The approval may also include a stipulation that the operator of the chemical waste landfill report to the Regional Administrator any instance when PCBs are detectable during

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monitoring activities conducted pursuant to paragraph (b)(6) of this section.

(4) *Waivers.* An owner or operator of a chemical waste landfill may submit evidence to the Regional Administrator that operation of the landfill will not present an unreasonable risk of injury to health or the environment from PCBs when one or more of the requirements of paragraph (b) of this section are not met. On the basis of such evidence and any other available information, the Regional Administrator may in his discretion find that one or more of the requirements of § 761.61(b) is not necessary to protect against such a risk and may waive the requirements in any approval for that landfill. Any finding and waiver under this paragraph will be stated in writing and included as part of the approval.

(5) *Persons Approved.* Any approval will designate the persons who own and who are authorized to operate the chemical waste landfill, and will apply only to such persons, except as provided by paragraph (7) below.

(6) *Final Approval.* Approval of a chemical waste landfill will be in writing and will be signed by the Regional Administrator. The approval will state all requirements applicable to the approved landfill.

(7) *Transfer of Property.* Any person who owns or operates an approved chemical waste landfill must notify EPA at least 30 days before transferring ownership in the property or transferring the right to conduct the chemical waste landfill operation. The transferor must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by the transferor's EPA chemical waste landfill approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for the transferor's name, or EPA may require the transferee to apply for a new chemical waste landfill approval. In the latter case, the transferee must abide by the transferor's EPA approval until EPA issues the new approval to the transferee.

Annex III

§ 761.42 Storage for disposal.

(a) Any PCB Article or PCB Container stored for disposal before January 1, 1983, shall be removed from storage and disposed of as required by this Part before January 1, 1984. Any PCB Article or PCB Container stored for disposal after January 1, 1983, shall be removed from storage and disposed of as required by Subpart B within one year from the date when it was first placed into storage.

(b) Except as provided in paragraph (c) of this section, after July 1, 1978, owners or operators of any facilities used for the storage of PCBs and PCB Items designated for disposal shall comply with the following requirements:

(1) The facilities shall meet the following criteria:

(i) Adequate roof and walls to prevent rain water from reaching the stored PCBs and PCB Items;

(ii) An adequate floor which has continuous curbing with a minimum six inch high curb. The floor and curbing must provide a containment volume equal to at least two times the internal volume of the largest PCB Article or PCB Container stored therein or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored therein, whichever is greater;

(iii) No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed area;

(iv) Floors and curbing constructed of continuous smooth and impervious materials, such as Portland cement concrete or steel, to prevent or minimize penetration of PCBs; and

(v) Not located at a site that is below the 100-year flood water elevation.

(c)(1) The following PCB Items may be stored temporarily in an area that does not comply with the requirements of paragraph (b) for up to thirty days from the date of their removal from service, provided that a notation is attached to the PCB Item or a PCB Container (containing the item) indicating the date the item was removed from service:

(i) Non-leaking PCB Articles and PCB Equipment;

(ii) Leaking PCB Articles and PCB Equipment if the PCB Items are placed in a non-leaking PCB Container that contains sufficient sorbent materials to absorb any liquid PCBs remaining in the PCB Items;

(iii) PCB Containers containing non-liquid PCBs such as contaminated soil, rags, and debris; and

(iv) PCB Containers containing liquid PCBs at a concentration between 50 and 500 ppm, provided a Spill Prevention, Control and Countermeasure Plan has been prepared for the temporary storage area in accordance with 40 CFR 112. In addition, each container must bear a notation that indicates that the liquids in the drum do not exceed 500 ppm PCB.

(2) Non-leaking and structurally undamaged PCB Large High Voltage Capacitors and PCB-Contaminated Transformers that have not been drained of free flowing dielectric fluid may be stored on pallets next to a storage facility that meets the requirements of paragraph (b) until January 1, 1983. PCB-Contaminated Transformers that have been drained of free flowing dielectric fluid are not subject to the storage provisions of Annex III. Storage under this subparagraph will be permitted only when the storage facility has immediately available unfilled storage space equal to 10 percent of the volume of capacitors and transformers stored outside the facility. The capacitors and transformers temporarily stored outside the facility shall be checked for leaks weekly.

(3) Any storage area subject to the requirements of paragraph (b) or subparagraph (c)(1) of this section shall be marked as required in Subpart C—§ 761.20(a)(10).

(4) No item of movable equipment that is used for handling PCBs and PCB Items in the storage facilities and that comes in direct contact with PCBs shall be removed from the storage facility area unless it has been decontaminated as specified in Annex IV, § 761.43.

(5) All PCB Articles and PCB Containers in storage shall be checked for leaks at least once every 30 days. Any leaking PCB Articles and PCB Containers and their contents shall be transferred immediately to properly marked non-leaking containers. Any spilled or leaked materials shall be immediately cleaned up, using sorbents or other adequate means, and the PCB-contaminated materials and residues shall be disposed of in accordance with § 761.10(a)(4).

(6) Except as provided in subparagraph (7) below, any container used for the storage of liquid PCBs shall comply with the Shipping Container Specification of the Department of Transportation (DOT), 49 CFR 178.80 (Specification 5 container without removable head), 178.82 (Specification 5B container without removable head), 178.102 (Specification 6D overpack with Specification 2S(§ 178.35) or 2SL(§ 178.35a) polyethylene containers) or 178.116 (Specification 17E container). Any container used for the storage of non-liquid PCBs shall comply with the specifications of 49 CFR 178.80 (Specification 5 container), 178.82 (Specification 5B container) or 178.115 (Specification 17C container). As an alternate, containers larger than those specified in DOT Specifications 5, 5B, or 17C may be used for non-liquid PCBs if the containers are designed and constructed in a manner that will

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provide as much protection against leaking and exposure to the environment as the DOT Specification containers, and are of the same relative strength and durability as the DOT Specification containers.

(7) Storage containers for liquid PCBs can be larger than the containers specified in (6) above provided that:

(i) The containers are designed, constructed, and operated in compliance with Occupational Safety and Health Standards, 29 CFR 1910.106, *Flammable and combustible liquids*. Before using these containers for storing PCBs, the design of the containers must be reviewed to determine the effect on the structural safety of the containers that will result from placing liquids with the specific gravity of PCBs into the containers (see 29 CFR 1910.106(b)(1)(i)(f)).

(ii) The owners or operators of any facility using containers described in (i) above shall prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan as described in 40 CFR 112. In complying with 40 CFR 112, the owner or operator shall read "oil(s)" as "PCB(s)" whenever it appears. The exemptions for storage capacity, 40 CFR 112.1(d)(2), and the amendment of SPCC plans by the Regional Administrator, 40 CFR 112.4, shall not apply unless some fraction of the liquids stored in the container are oils as defined by section 311 of the Clean Water Act.

(8) PCB Articles and PCB Containers shall be dated on the article or container when they are placed in storage. The storage shall be managed so that the PCB Articles and PCB Containers can be located by the date they entered storage. Storage containers provided in subparagraph (7) above shall have a record that includes for each batch of PCBs the quantity of the batch and date the batch was added to the container. The record shall also include the date, quantity, and disposition of any batch of PCBs removed from the container.

(9) Owners or operators of storage facilities shall establish and maintain records as provided in Annex VI.

Annex IV

§ 761.49 Decontamination.

(a) Any PCB Container to be decontaminated shall be decontaminated by flushing the internal surfaces of the container three times with a solvent containing less than 50 ppm PCB. The solubility of PCBs in the solvent must be five percent or more by weight. Each rinse shall use a volume of the normal diluent equal to approximately ten (10) percent of the PCB Container capacity. The solvent may be reused for decontamination until it contains 50 ppm PCB. The solvent shall then be disposed of as a PCB in accordance with § 761.10(a). Non-liquid PCBs resulting from the decontamination procedures shall be disposed of in accordance with the provisions of § 761.10(a)(4).

(b) Movable equipment used in storage areas shall be decontaminated by swabbing surfaces that have contacted PCBs with a solvent meeting the criteria of paragraph (a) of this section.

Note.—Precautionary measures should be taken to ensure that the solvent meets safety and health standards as required by applicable Federal regulations.

Annex V

§ 761.44 Marking formats.

The following formats shall be used for marking:

(a) *Large PCB Mark—M_L.* Mark M_L shall be as shown in Figure 1, letters and striping on a white or yellow background and shall be sufficiently durable to equal or exceed the life (including storage for disposal) of the PCB Article, PCB Equipment, or PCB Container. The size of the mark shall be at least 18.25 cm (6 inches) on each side. If the PCB Article or PCB Equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 5 cm (2 inches) on each side.

(b) *Small PCB Mark—M_S.* Mark M_S shall be as shown in Figure 2, letters and striping on a white or yellow background, and shall be sufficiently durable to equal or exceed the life (including storage for disposal) of the PCB Article, PCB Equipment, or PCB Container. The mark shall be a rectangle 2.5 by 5 cm (1 inch by 2 inches). If the PCB Article or PCB Equipment is too small to accommodate this size, the mark may be reduced in size proportionately down to a minimum of 1 by 2 cm (.4 by .8 inches).

CAUTION

CONTAINS

PCBs

(Polychlorinated Biphenyls)

A toxic environmental contaminant requiring special handling and disposal in accordance with U.S. Environmental Protection Agency Regulations 40 CFR 761—For Disposal Information contact the nearest U.S. E.P.A. Office.

In case of accident or spill, call toll free the U.S. Coast Guard National Response Center: 800-424-8802

Also Contact

Tel. No.

Figure 1

CAUTION contains **PCBs**
(Polychlorinated Biphenyls)
FOR PROPER DISPOSAL INFORMATION CONTACT U.S. ENVIRONMENTAL PROTECTION AGENCY

Figure 2

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Annex VI

§ 761.65 Records and monitoring.

(a) *PCBs and PCB Items in service or projected for disposal.* Beginning July 2, 1978, each owner or operator of a facility using or storing at one time at least 45 kilograms (99.4 pounds) of PCBs contained in PCB Container(s) or one or more PCB Transformers, or 50 or more PCB Large High or Low Voltage Capacitors shall develop and maintain records on the disposition of PCBs and PCB Items. These records shall form the basis of an annual document prepared for each facility by July 1 covering the previous calendar year. Owners or operators with one or more facilities that use or store PCBs and PCB Items in the quantities described above may maintain the records and documents at one of the facilities that is normally occupied for 8 hours a day, provided the identity of this facility is available at each facility using or storing PCBs and PCB Items. The records and documents shall be maintained for at least five years after the facility ceases using or storing PCBs and PCB Items in the prescribed quantities. The following information for each facility shall be included in the annual document:

(1) The dates when PCBs and PCB Items are removed from service, are placed into storage for disposal, and are placed into transport for disposal. The quantities of the PCBs and PCB Items shall be indicated using the following breakdown:

(i) Total weight in kilograms of any PCBs and PCB Items in PCB Containers including the identification of container contents such as liquids and capacitors;

(ii) Total number of PCB Transformers and total weight in kilograms of any PCBs contained in the transformers; and

(iii) Total number of PCB Large High or Low Voltage Capacitors.

(2) For PCBs and PCB Items removed from service, the location of the initial disposal or storage facility and the name of the owner or operator of the facility.

(3) Total quantities of PCBs and PCB Items remaining in service at the end of the calendar year using the following breakdown:

(i) Total weight in kilograms of any PCBs and PCB Items in PCB Containers, including the identification of container contents such as liquids and capacitors;

(ii) Total number of PCB Transformers and total weight in kilograms of any PCBs contained in the transformers; and

(iii) Total number of PCB Large High or Low Voltage Capacitors.

(b) *Disposal and storage facilities.* Each owner or operator of a facility (including high efficiency boiler operations) used for the storage or disposal of PCBs and PCB Items shall by July 1, 1979 and each July 1 thereafter prepare and maintain a document that includes the information required in subparagraphs (1) thru (4) below for PCBs and PCB Items that were handled at the facility during the previous calendar year. The document shall be retained at each facility for at least 5 years after the facility is no longer used for the storage or disposal of PCBs and PCB Items except that in the case of chemical waste landfills, the document shall be maintained at least 20 years after the chemical waste landfill is no longer used for the disposal of PCBs and PCB Items. The documents shall be available at the facility for inspection by authorized representatives of the Environmental Protection Agency. If the facility ceases to be used for PCB storage or disposal, the owner or operator of such facility shall notify within 60 days the EPA Regional Administrator of the region in which the facility is located that the facility has ceased storage or disposal operations. The notice shall specify where the documents that are required to be maintained by this paragraph are located. The following information shall be included in each document:

(1) The date when any PCBs and PCB Items were received by the facility during the previous calendar year for storage or disposal, and identification of the facility and the owner or operator of the facility from whom the PCBs were received.

(2) The date when any PCBs and PCB Items were disposed of at the disposal facility or transferred to another disposal or storage facility, including the identification of the specific types of PCBs and PCB Items that were stored or disposed of.

(3) A summary of the total weight in kilograms of PCBs and PCB Articles in containers and the total weight of PCBs contained in PCB Transformers, that have been handled at the facility during the previous calendar year. This summary shall provide totals of the above PCBs and PCB Items which have been:

(i) Received during the year;

(ii) Transferred to other facilities during the year; and

(iii) Retained at the facility at the end of the year. In addition the contents of PCB Containers shall be identified. When PCB Containers and PCBs contained in a transformer are transferred to other storage or disposal facilities, the identification of the facility to which such PCBs and PCB Items were transferred shall be included in the document.

(4) Total number of any PCB Articles or PCB Equipment not in PCB Containers, received during the calendar year, transferred to other storage or disposal facilities during the calendar year, or remaining on the facility site at the end of the calendar year. The identification of the specific types of PCB Articles and PCB Equipment received, transferred, or remaining on the facility site shall be indicated. When PCB Articles and PCB Equipment are transferred to other storage or disposal facilities, the identification of the facility to which the PCB Articles and PCB Equipment were transferred must be included.

Note.—Any requirements for weights in kilograms of PCBs may be calculated unless if the internal volume of containers and transformers is known and included in the reports, together with any assumptions on the density of the PCBs contained in the containers or transformers.

(c) *Incineration facilities.* Each owner or operator of a PCB incinerator facility shall collect and maintain for a period of 5 years from the date of collection the following information, in addition to the information required in paragraph (b) of this section:

(1) When PCBs are being incinerated, the following continuous and short-interval data:

(i) Rate and quantity of PCBs fed to the combustion system as required in Annex I—§ 761.40(a)(3);

(ii) Temperature of the combustion process as required in Annex I—§ 761.40(a)(4); and

(iii) Stack emission product to include O_2, CO, and CO_2 as required in Annex I—§ 761.40(a)(7).

(2) When PCBs are being incinerated, data and records on the monitoring of stack emissions as required in Annex I—§ 761.40(a)(8).

(3) Total weight in kilograms of any solid residues generated by the incineration of PCBs and PCB Items during the calendar year, the total weight in kilograms of any solid residues disposed of by the facility in chemical waste landfills, and the total weight in kilograms of any solid residues remaining on the facility site.

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(4) When PCBs and PCB Items are being incinerated, additional periodic data shall be collected and maintained as specified by the Regional Administrator pursuant to § 761.40(d)(4).

(5) Upon any suspension of the operation of any incinerator pursuant to § 761.40(e)(6), the owner or operator of such an incinerator shall prepare a document. The document shall, at a minimum, include the date and time of the suspension and an explanation of the circumstances causing the suspension of operation. The document shall be sent to the appropriate Regional Administrator within 30 days of any such suspension.

(d) *Chemical waste landfill facilities.* Each owner or operator of a PCB chemical waste landfill facility shall collect and maintain until at least 20 years after the chemical waste landfill is no longer used for the disposal of PCBs the following information in addition to the information required in paragraph (b) of this section:

(1) Any water analysis obtained in compliance with § 761.41(b)(6)(iii); and

(2) Any operations records including burial coordinates of wastes obtained in compliance with § 761.41(b)(6)(ii).

(e) *High efficiency boiler facilities.* Each owner or operator of a high efficiency boiler used for the disposal of liquids between 50 and 500 ppm PCB shall collect and maintain for a period of 5 years the following information. In addition to the information required in paragraph (b) of this section:

(1) For each month PCBs are burned in the boiler the carbon monoxide and excess oxygen data required in § 761.10(a)(2)(iii)(A)(*6*) and § 761.10(a)(3)(iii)(A)(*6*);

(2) The quantity of PCBs burned each month as required in § 761.10(a)(2)(iii)(A)(*7*) and § 761.10(a)(3)(iii)(A)(*7*); and

(3) For each month PCBs (other than mineral oil dielectric fluid) are burned, chemical analysis data of the waste as required in § 761.10(a)(3)(iii)(B)(*6*).

(f) *Retention of Special Records by Storage and Disposal Facilities.* In addition to the information required to be maintained under paragraphs (b), (c), (d) and (e) of this section, each owner or operator of a PCB storage or disposal facility (including high efficiency boiler operations) shall collect and maintain for the time period specified in paragraph (b) of this section the following data:

(1) All documents, correspondence, and data that have been provided to the owner or operator of the facility by any State or local government agency and that pertain to the storage or disposal of PCBs and PCB Items at the facility.

(2) All documents, correspondence, and data that have been provided by the owner or operator of the facility to any State or local government agency and that pertain to the storage or disposal of PCBs and PCB Items at the facility.

(3) Any applications and related correspondence sent by the owner or operator of the facility to any local, State, or Federal authorities in regard to waste water discharge permits, solid waste permits, building permits, or other permits or authorizations such as those required by Annex I—§ 761.40(d) and Annex II—§ 761.41(c).

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40 CFR Part 750

[FRL 1227-6]

Procedures for Rulemaking Under Section 6 of the Toxic Substances Control Act; Interim Procedural Rules for Exemptions From the Polychlorinated Biphenyl (PCB) Processing and Distribution in Commerce Prohibitions

AGENCY: Environmental Protection Agency.

ACTION: Interim procedures for filing and processing petitions for exemptions from the PCB processing and distribution in commerce prohibitions under section 6(e)(3)(B) of the Toxic Substances Control Act (TSCA).

SUMMARY: Section 6(e)(3)(B) of TSCA allows EPA to grant, by rule, exemptions from the prohibitions on manufacturing, processing, and distribution in commerce of PCBs established pursuant to section 6(e)(3)(A) of TSCA. Since the PCB processing and distribution in commerce prohibitions will become effective July 1, 1979, EPA wishes to inform affected parties of the procedures that will be followed for the filing and processing of petitions for exemptions from the processing and distribution in commerce bans imposed by section 6(e)(2)(A)(ii) of TSCA. As this notice is strictly procedural, notice and public comment are unnecessary, and it is effective upon publication.

DATE: Petitions for exemptions from the 1979 processing and distribution in commerce prohibitions must be received by July 2, 1979.

ADDRESS: Petitions, preferably in triplicate, are to be sent to: Document Control Officer, (TS-793), Office of Toxic Substances, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. Attn.: Document No. OTS/060002(PCB/PDE).

FOR FURTHER INFORMATION CONTACT: John B. Ritch, Jr., Director, Office of Industry Assistance, Office of Toxic Substances, (TS-799), Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. Call the toll free number (800) 424-8065 (in Washington, D.C., 554-1404).

SUPPLEMENTARY INFORMATION: Elsewhere in today's Federal Register, the final PCB Ban Rule is promulgated. The PCB Ban Rule implements the PCB manufacturing, processing, distribution in commerce, and use prohibitions of section 6(e) of TSCA. On November 1, 1978 [43 FR 50905], EPA published a notice similar to this one which provided an opportunity for the filing of petitions for exemptions from the PCB manufacturing prohibition, which ban is effective July 2, 1979. The PCB processing and distribution in commerce prohibitions are effective July 1, 1979. Section 6(e)(3)(B) provides an opportunity for affected persons to petition for an exemption from the prohibitions on processing and distribution in commerce of PCBs. Accordingly, EPA is issuing these procedures to describe the required contents of petitions, who may submit a class petition, and the procedures that EPA will follow in processing petitions for exemptions from the PCB processing and distribution in commerce prohibitions.

Unless EPA grants exemptions, all PCB processing and distribution in commerce will be banned after July 1, 1979 pursuant to section 6(e)(3)(A)(ii) of TSCA. These activities include, but are not necessarily limited to: the processing and distribution in commerce of dielectric fluid for PCB Transformers, PCB-Contaminated Transformers, PCB Railroad Transformers, and PCB Electromagnets; the distribution in commerce of PCB Articles (such as small PCB Capacitors); the processing (*i.e.*, building) and distribution in commerce of PCB Equipment (including the manufacture of fluorescent light ballasts; television sets, air conditioners and microwave ovens and the sale of such PCB Equipment); the processing and distribution in commerce of PCB-contaminated hydraulic fluid; the processing and distribution in commerce of PCBs for servicing mining equipment; the processing and distribution in commerce of chemical substances and mixtures that contain 50 ppm or greater PCB as impurities or contaminants (including diarylide and phthalocyanine

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pigments, some aluminum chloride, and some phenylchlorotoluenes).

In contrast to the Interim Procedural Rules for Exemptions from the PCB Manufacturing Prohibition, the procedural rules published today for exemptions from the processing and distribution in commerce prohibitions provide for class petitions in certain limited circumstances. Allowance of some class petitions is an administrative necessity. EPA estimates that there are thousands of potential petitioners for exemptions from the prohibitions on PCB processing and distribution in commerce. The great majority of these petitions are expected to be concentrated in the areas of distribution of PCB Equipment and distribution of PCB-contaminated substances and mixtures. For example, virtually every retail appliance store, appliance repair service, and wholesale distributor of electrical equipment could need an exemption. Thus, allowing use of class petitions for such persons is a matter of practical reality.

In addition to the sheer number of possible petitioners in a given potential class, EPA evaluated the seriousness of potential risk of injury to health and the environment that could result from permitting a PCB activity to continue if it were granted an exemption. Those persons not allowed to submit class petitions are generally those whose activities involve significant quantities and/or highly concentrated PCB fluids processed or distributed in a non-totally enclosed manner. As a result, the potential risk associated with these activities is relatively high. In such cases it is more important that EPA evaluate petitions individually.

Petitions concerning the manufacture (*i.e.*, processing) of PCB Equipment involving incorporation of PCB Articles into equipment must be submitted on an individual basis. Although this activity in itself may present a low potential risk, the activity results in the wide dissemination of small PCB Capacitors. The disposal of such capacitors is not controlled once the capacitors are processed into PCB Equipment. Since most PCB Equipment manufacturers have converted to non-PCB Capacitors, the number of potential petitioners for exemptions to manufacture PCB Equipment should be small.

These Interim Procedural Rules provide for two types of class petitions and limit the use of each type to certain activities. The two types of class petitions are: (1) a class petition requiring a listing of, and certain information about, each person covered by the petition; and (2) a class petition that does not require a listing of persons covered by the petition.

Once EPA had determined to allow class petitions for certain activities, the same factors previously described (number of potential petitioners and extent of risk) were again evaluated to determine which class petitions would have to identify each petitioner covered by the class petition. In general, those petitions thought likely to represent large numbers of potential petitioners engaged in enclosed or low concentration PCB distribution activities are those allowed to file class petitions without listing each individual petitioner.

Class petitions are not required for persons engaged in those activities permitted to submit class petitions. An individual involved in one of these activities has the choice of either submitting an individual petition or joining with others to submit a class petition. For class petitions, EPA will accept petitions prepared by one company (to which other companies may provide the required information), by a trade association on behalf of its members (as well as others), or by any other person on behalf of a group of persons requiring exemptions.

Persons who have already submitted petitions for exemptions to manufacture or import PCB Equipment pursuant to the Interim Procedural Rules of November 1, 1978 (43 FR 50905) need not submit new petitions, but must advise EPA if they still wish the Agency to act on their pending petitions. If they wish, such petitioners may submit additional information concerning their petitions. Similarly, EPA may request additional information concerning such petitions by letter to the petitioners.

All petitions for exemptions from the 1979 processing and distribution in commerce bans must be received by EPA by July 1, 1979. This deadline is being imposed to permit consolidation of all rulemaking on these petitions and to expedite the rulemaking to the greatest extent possible. The deadline is also the date on which the processing and distribution in commerce prohibitions of section 6(e)(3) of TSCA become effective. EPA estimates that a Notice of Proposed Rulemaking concerning exemptions from the processing and distribution in commerce bans will be published in September 1979, that the public hearing, if requested, will be held in October 1979, and that the Final Rule concerning exemptions will be published in January 1980. Any person who petitions EPA by July 1, 1979 to continue processing or distribution in commerce after July 1, 1979 may continue his activity until EPA rules on his petition. Persons who do not so petition EPA will be subject to the July 1, 1979 ban on all processing and distribution in commerce of PCBs and PCB Items.

In determining whether to grant a petition for exemption to the PCB ban, EPA will apply the standards enunciated in section 6(e)(3)(B) of TSCA. Section 6(e)(3)(B) reads in pertinent part as follows:

> * * * the Administrator may grant by rule such an exemption if the Administrator finds that—
>
> (i) an unreasonable risk of injury to health or environment would not result, and
>
> (ii) good faith efforts have been made to develop a chemical substance which does not present an unreasonable risk of injury to health or the environment and which may be substituted for such polychlorinated biphenyl.

Although EPA is not issuing a form for petitions, petitions must include the information described in § 750.31(d) of the Interim Procedural Rules.

Due to the need to grant or deny petitions on an expedited basis, and pursuant to the delegation of authority by the Administrator in the Preamble to the Final PCB Ban Rule, authority has been delegated to the Assistant Administrator for Toxic Substances to grant or deny petitions under section 6(e)(3)(B) of TSCA submitted pursuant to these interim procedures. The Assistant Administrator will rule on petitions subsequent to opportunity for an informal hearing.

The Interim Procedural Rules applicable to section 6(e) exemption proceedings are adapted from the TSCA section 6 procedural rules (40 CFR Part 750, 42 FR 61238, December 2, 1977, now titled Subpart A—General Procedural Rules).

EPA is aware that many participants at the informal hearings on the proposed PCB Ban and Marking and Disposal Rules presented information directly applicable to a PCB exemption rulemaking. To expedite Agency action on exemption petitions, participants in the PCB exemption informal hearing are permitted and encouraged to designate testimony from prior EPA informal rulemaking hearings on PCBs under TSCA. The exemption hearing panel is specifically authorized by the Interim Procedural Rules to reject repetitive testimony submitted earlier to EPA at a TSCA PCB informal hearing.

These rules are issued under authority of section 6(e) of the Toxic Substances Control Act, 15 U.S.C. 2605(e).

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Dated: May 11, 1979.

Marilyn C. Brennan,

Acting Assistant Administrator for Toxic Substances.

Title 40 of the Code of Federal Regulations is amended by adding two Subpart headings, Subpart A—General Procedural Rules for §§ 750.1–750.9 and Subpart B—Manufacturing Exemption Procedural Rules for §§ 750.10–750.21, to the Table of Contents and a new Subpart C as set forth below:

Subpart A—Procedures for Rulemaking under Section 6 of the Toxic Substances Control Act [§§ 750.1–750.9—Added at 42 FR 61358, December 2, 1977].

Subpart B—Interim Procedural Rules for Manufacturing Exemptions. [§§ 750.10–750.21—Added at 43 FR 20606, November 1, 1978].

Subpart C—Interim Procedural Rules for Processing and Distribution in Commerce Exemptions

Sec.

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750.41 Final rule.

Authority: Section 6(e), Toxic Substances Control Act, 15 U.S.C. 2605(e).

Subpart C—Processing and Distribution in Commerce Exemption Procedural Rules

§ 750.30 Applicability.

Sections 750.30–750.41 apply to all rulemakings under authority of section 6(e)(3)(B) of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2605(e)(3)(B) with respect to petitions for PCB processing and distribution in commerce exemptions filed pursuant to § 750.31(a) of this Part.

§ 750.31 Filing of petitions for exemption.

(a) *Who May File.* Any person seeking an exemption from the PCB processing and distribution in commerce prohibitions imposed by section 6(e)(3)(A)(ii) of TSCA may file a petition for exemption. Petitions must be submitted on an individual basis for each processor, distributor, seller or individual affected by the 1979 processing and distribution in commerce prohibitions, except as described in subparagraphs (1) through (9) below.

(1) *Processing and Distribution in Commerce of PCB-Contaminated Transformer Dielectric Fluid.* Persons who process or distribute in commerce dielectric fluid containing 50 ppm or greater PCB (but less than 500 ppm PCB) for use in PCB-Contaminated Transformers may submit a single consolidated petition on behalf of any number of petitioners. The name and address of each petitioner must be stated in the petition.

(2) *Contaminated Substances and Mixtures—Processing.* Persons who process the same chemical substance or the same mixture containing 50 ppm or greater PCB as an impurity or contaminant may submit a consolidated petition if the chemical substance or mixture is processed for the same use by each person represented by the petition. For example, persons who process a PCB-contaminated pigment into printing inks may combine their petitions into one petition. The name and address of each petitioner must be stated in the petition.

(3) *Contaminated Substances and Mixtures—Distribution in Commerce.* Persons who distribute in commerce the same chemical substance or the same mixture containing 50 ppm or greater PCB as an impurity or contaminant may submit a consolidated petition if the chemical substance or mixture is distributed in commerce for a common use. Such a petition is not required to name each person who distributes in commerce the chemical substance or mixture.

(4) *PCB Capacitor Distribution for Purposes of Repair.* Persons who distribute in commerce PCB capacitors for servicing (repair) of PCB Equipment may submit a single consolidated petition on behalf of any number of petitioners engaged in such distribution in commerce for purposes of repair. The name of each petitioner need not be stated in the petition.

(5) *Small Quantities for Research and Development.* Persons who process or distribute in commerce small quantities of PCBs for research and development may submit a single consolidated petition. The name and address of each petitioner must be stated in the petition.

(6) *Microscopy.* Persons who process or distribute in commerce PCBs for use as a mounting medium in microscopy may submit a single consolidated petition on behalf of any number of petitioners. The name and address of each petitioner must be stated in the petition.

(7) *Processing of PCB Articles into PCB Equipment.* A person who processes (incorporates) PCB Articles (such as small PCB Capacitors) into PCB Equipment may submit a petition on behalf of himself and all persons who further process or distribute in commerce the PCB Equipment built by the petitioner. For example, a builder of motors who places small PCB Capacitors in the motors may submit a petition on behalf of all persons who process or incorporate motors built by the petitioner into other pieces of PCB Equipment and all those who sell the equipment. Such a petition is not required to identify the persons who distribute in commerce or further process the PCB Equipment. A separate petition must be filed, however, by each processor of PCB Articles into PCB Equipment.

(8) *Processing of PCB Equipment into Other PCB Equipment.* A person who processes (incorporates) PCB Equipment into other PCB Equipment may submit a petition on behalf of himself and all persons who further process or distribute in commerce PCB Equipment built by the petitioner. Such a petition is not required to identify the persons who distribute in commerce or further process the PCB Equipment. If a petition has been filed under subparagraph (a)(7) by the builder of the original PCB Equipment, no other petition is required.

(9) *Distribution of PCB Equipment.* Distributors in commerce of PCB Equipment may submit a consolidated petition on behalf of persons who distribute in commerce PCB Equipment of one type (such as air conditioners). The petition is not required to name the persons who distribute in commerce the affected PCB Equipment.

(b) *Petition Filing Date.* All petitions for exemptions from the 1979 processing and distribution in commerce prohibitions under section 6(e)(3)(A)(ii) must be received by the Hearing Clerk by July 2, 1979.

(c) *Where to File.* All petitions must be submitted to the following location: Document Control Officer (TS–798), Office of Toxic Substances, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, Attn.: Docket Number OTS/080002 (PCB/PDE).

(d) *Content of Petition.* Each petition must contain the following:

(1) Name, address and telephone number of petitioner. See also subparagraphs (a)(1)–(9) for additional identification requirements applicable to certain consolidated petitions.

(2) Description of PCB processing or distribution in commerce exemption requested, including a description of the chemical substances, mixtures or items to be processed or distributed in commerce and, if processing is involved, the nature of the processing.

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(3) For processing petitions, location(s) of sites requiring exemption.

(4) Length of time requested for exemption (maximum length of exemption is one year).

(5) Estimated amount of PCBs (by pound and/or volume) to be processed, distributed in commerce, or used during requested exemption period and the manner of release of PCBs into the environment associated with such processing, distribution in commerce, or use. Where the PCB concentration is less than 500 ppm, both the total liquid volume and the total PCB volume must be provided.

(6) The basis for the petitioner's contention that under section 6(e)(3)(B)(i) of TSCA "an unreasonable risk of injury to health or environment would not result" from the granting of the petition for exemption.

(7) The basis for the petitioner's contention that under section 6(e)(3)(B)(ii) "good faith efforts have been made to develop a chemical substance which does not present an unreasonable risk of injury to health or the environment and which may be substituted for" the PCB.

(8) Quantification of the reasonably ascertainable economic consequences of denying the petition for exemption and an explanation of the manner of computation.

(9) In addition to the information in subparagraphs (1) through (8), certain petitions must contain additional information as follows:

(i) Persons who process or distribute in commerce dielectric fluids containing 50 ppm or greater PCB for use in PCB Transformers, railroad transformers, or PCB electromagnets must also state the expected number of PCB Transformers, railroad transformers, or PCB electromagnets to be serviced under the exemption. In addition, a person must identify all the facilities which he owns or operates where he services PCB transformers, railroad transformers or PCB electromagnets.

(ii) Persons filing petitions under subparagraph (a)(1) [Processing and Distribution in Commerce of PCB-Contaminated Transformer Dielectric Fluid] must also provide the expected number of PCB-Contaminated Transformers to be serviced under the requested exemption and the expected method of disposal of waste dielectric fluid. In addition, a person must identify all the facilities which he owns or operates where he services PCB-Contaminated Transformers. This information, as well as the information required by subparagraphs (d)(1), (d)(3) and (d)(5), must be provided for each person represented by the petition. All other information may be provided on a group basis.

(iii) Persons filing petitions under subparagraphs (a)(2) [Contaminated Substances and Mixtures-Processing) and (a)(3) (Contaminated Substances and Mixtures-Distribution in Commerce) must also provide a justification for the class grouping selected and a description of the uses and the human and environmental exposure associated with each use of the PCB-contaminated chemical substance or mixture for which an exemption is sought. Information may be provided on a group basis, except that the information required by subparagraphs (d)(1), (d)(3) and (d)(5), must be provided for each person represented by a petition under subparagraph (a)(2).

(iv) Persons filing petitions under subparagraph (a)(4) [PCB Capacitor Distribution for Purposes of Repair] must also provide an estimate of the expected total number of PCB Capacitors to be distributed in commerce under the requested exemption. All information may be provided on a group basis.

(v) Persons filing petitions under subparagraph (a)(7) and (a)(8) [Processing of PCB Articles into PCB Equipment and Processing of PCB Equipment into Other PCB Equipment] must provide a description of each type of PCB Equipment (including the amount of PCBs by poundage and/or volume in the PCB Equipment) to be processed and/or distributed in commerce under the exemption, the number of each type of equipment expected to be processed and/or distributed in commerce, and the approximate number of distributors or further processors covered by the petition. All information may be provided on a group basis. However, in the case of a petition under subparagraph (a)(7), the processor of PCB Articles into PCB Equipment must be identified in the petition: In the case of a petition under subparagraph (a)(8), the processor of PCB Equipment who files the petition must be identified.

(vi) Persons filing petitions under subparagraph (a)(9) [Distribution of PCB Equipment] must provide a description of each type of PCB Equipment (including the amount of PCBs by poundage and/or volume in the PCB Equipment) to be distributed in commerce under the exemption, the number of each type of equipment to be distributed in commerce, and the approximate number of distributors covered by the petition. All information may be provided on a group basis.

(vii) Persons filing petitions under subparagraphs (a)(5) and (a)(6) must provide the information required by subparagraphs (d)(1) through (d)(9) for each petitioner named in the petition.

(e) EPA reserves the right to request further information as to each petition where necessary to determine whether the petition meets the statutory tests of section 6(e)(3)(B) of TSCA prior to or after publication of the notice of proposed rulemaking required by § 750.33 of these rules.

§ 750.32 Consolidation of rulemaking.

All petitions received pursuant to § 750.31(a) will be consolidated into one rulemaking with one informal hearing held on all petitions.

§ 750.33 Notice of proposed rulemaking.

Rulemaking for PCB processing and distribution in commerce exemptions filed pursuant to § 750.31(a) will begin with the publication of a Notice of Proposed Rulemaking in the Federal Register. Each notice will contain:

(a) A summary of the information required in §750.31(d);

(b) A statement of the time and place at which the informal hearing required by section 6(c)(2)(C) of TSCA shall begin, or, to the extent these are not specified, a statement that they will be specified later in a separate Federal Register notice provided that Federal Register notice of the date and city at which any informal hearing shall begin will be given at least 30 days in advance;

(c) A statement identifying the place at which the official record of the rulemaking is located, the hours during which it will be open for public inspection, the documents contained in it as of the date the Notice of Proposed Rulemaking was issued, and a statement of the approximate times at which additional materials such as public comments, hearing transcripts, and Agency studies in progress will be added to the record. If any material other than public comments or material generated by a hearing is added to the record after publication of the notice required by this action, and notice of its future addition was not given at the time of that initial publication, a separate Federal Register notice announcing its addition to the record and inviting comment will be published;

(d) The due date for public comments, which will be (1) 30 days after publication of the notice of proposed rulemaking for main comments and (2) one week after the informal hearing for reply comments;

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(e) The name, address, and office telephone number of the Record Clerk and the Hearing Clerk for the rulemaking in question; and

(f) A nonbinding target date for issuing the final rule.

§ 750.34 Rulemaking record.

(a) No later than the date of proposal of a rule subject to this Subpart, a rulemaking record for that rule will be established. It will consist of a separate identified filing space containing:

(1) All documents required by § 750.31(d);

(2) All public comments timely received;

(3) All public hearing transcripts;

(4) All material received during an informal hearing and accepted for the record of that hearing; and

(5) Any other information that the Assistant Administrator for Toxic Substances considers to be relevant to such rule and that the Assistant Administrator identified, on or before the date of the promulgation of the rule, in a notice published in the Federal Register.

(b) All material in the record will be appropriately indexed. Each record will be available for public inspection during normal EPA business hours. Appropriate arrangements allowing members of the public to copy record materials that do not risk the permanent loss of such materials will be made. All material required to be included in the record will be added to the record as soon as feasible after its receipt by EPA.

(c) The Record Clerk for each rulemaking will be responsible for EPA compliance with the requirements of paragraph (a) of this section.

§ 750.36 Public comments.

(a) Main comments must be postmarked or received no later than the time specified in the Notice of Proposed Rulemaking and must contain all comments on and criticisms of that Notice by the commenting person, based on information which is or reasonably could have been available to that person at the time.

(b) Reply comments must be postmarked or received no later than one week after the close of all informal hearings on the proposed rule and must be restricted to comments on:

(1) Other comments;

(2) Material in the hearing record; and

(3) Material which was not and could not reasonably have been available to the commenting party a sufficient time before main comments were due.

(c) Extensions of the time for filing comments may be granted in writing by the Hearing Chairman. Application for an extension must be made in writing. Comments submitted after the comment period and all extensions of it have expired need not be added to the rulemaking record and need not be considered in decisions concerning the rule.

(d) Unless the Notice of Proposed Rulemaking states otherwise, four copies of all comments must be submitted.

§ 750.38 Confidentiality.

EPA encourages the submission of non-confidential information by petitioners and commentors. EPA does not wish to have unnecessary restrictions on access to the rulemaking record. However, if a petitioner or commentor believes that he can only state his position through the use of information claimed to be confidential, he may submit it. Such information must be separately submitted for the rulemaking record and marked "confidential" by the submitter. For the information claimed to be confidential, EPA will list only the date and the name and address of the petitioner or commentor in the public file, noting that the petitioner or commentor has requested confidential treatment. The information claimed to be confidential will be placed in a confidential file. A petitioner must also file a non-confidential petition with a non-confidential summary of the confidential information to be placed in the public file. Similarly, a commentor must supply a non-confidential summary of the information claimed to be confidential to be placed in the public file. Any information not marked as confidential will be placed in the public file. Information marked confidential will be treated in accordance with the procedures in Part 2, Subpart B of this Title.

§ 750.37 Subpoenas.

(a) Where necessary, subpoenas requiring the production of documentary material, the attendance of persons at the hearing, or responses to written questions may be issued. Subpoenas may be issued either upon request as provided in paragraph (b) or by EPA on its own motion.

(b) All subpoena requests must be in writing. Hearing participants may request the issuance of subpoenas as follows:

(1) Subpoenas for the attendance of persons or for the production of documents or responses to questions at the legislative hearing may be requested at any time up to the deadline for filing main comments.

(2) Subpoenas for production of documents or answers to questions after the legislative hearing may be requested at any time between the beginning of the legislative hearing and the deadline for submitting reply comments.

(c) EPA will rule on all subpoena requests filed under paragraph (b)(1) no later than the beginning of the informal hearing. Such requests may be granted, denied, or deferred. EPA will rule on all subpoena requests filed under paragraph (b)(2) and all deferred subpoena requests filed under paragraph (b)(1) no later than the promulgation of the final rule. Such requests will be either granted or denied.

§ 750.38 Participation in informal hearing.

(a) Each person or organization desiring to participate in the informal hearing required by section 6(c)(2)(C) of TSCA must file a written request to participate with the Hearing Clerk. This request must be received no later than seven days prior to the scheduled start of the hearing. The hearing will begin seven days after the close of the thirty day comment period or as soon thereafter as practicable. The request must include:

(1) A brief statement of the interest of the person or organization in the proceeding;

(2) A brief outline of the points to be addressed;

(3) An estimate of the time required; and

(4) If the request comes from an organization, a nonbinding list of the persons to take part in the presentation. Organizations are requested to bring with them, to the extent possible, employees with individual expertise in and responsibility for each of the areas to be addressed. No organization not filing main comments in the rulemaking will be allowed to participate at the hearing, unless a waiver of this requirement is granted in writing by the Hearing Chairman or the organization is appearing at the request of EPA or under subpoena.

(b) No later than three days prior to the start of the hearing, the Hearing Clerk will make a hearing schedule publicly available and mail or deliver it to each of the persons who requested to appear at the hearing. This schedule will be subject to change during the course of the hearing at the discretion of those presiding over it.

(c) Opening statements should be brief, and restricted either to points that could not have been made in main

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comments or to emphasizing points which are made in main comments, but which the participant believes can be more forcefully urged in the hearing context.

§ 750.38 Conduct of informal hearing.

(a) A panel of EPA employees shall preside at each hearing conducted under section 6(c)(2)(C) of TSCA. In appropriate cases, other Executive Branch employees may also sit with and assist the panel. The membership of the panel may change as different topics arise during the hearing. In general, the panel membership will consist of EPA employees with special responsibility for the final rule or special expertise in the topics under discussion. One member of the panel will be named to chair the proceedings and will attend throughout the hearing, unless unavoidably prevented by sickness or similar personal circumstances.

(b) The panel may question any individual or group participating in the hearing on any subject relating to the rulemaking. Cross-examination by others will normally not be permitted at this stage. It may be granted in compelling circumstances at the sole discretion of the hearing panel. However, persons in the hearing audience may submit questions in writing for the hearing panel to ask the participants, and the hearing panel may, at their discretion, ask these questions.

(c) Participants in the hearing may submit additional material for the hearing record and shall submit such additional material as the hearing panel may request. All such submissions will become part of the record of the hearing. A verbatim transcript of the hearing shall be made. Participants will be allowed to designate testimony from prior EPA informal rulemaking hearings concerning PCBs under TSCA. The hearing panel may reject repetitive testimony previously presented at such hearings.

§ 750.40 Cross-examination.

(a) After the close of the informal hearing conducted under § 750.38, any participant in that hearing may submit a written request for cross-examination. The request must be received by EPA within one week after a full transcript of the informal hearing becomes available and must specify:

(1) The disputed issue(s) of material fact as to which cross-examination is requested. This must include an explanation of why the questions at issue are "factual", rather than of an analytical or policy nature, the extent to which they are in "dispute" in the light of the record made thus far, and the extent to which and why they can reasonably be considered "material" to the decision on the final rule; and

(2) The person(s) the participant desires to cross-examine, and an estimate of the time necessary. This must include a statement as to how the cross-examination requested can be expected to result in "full and true disclosure" resolving the issue of material fact involved.

(b) Within one week after receipt of all requests for cross-examination under subparagraph (a), the hearing panel will rule on them. The ruling will be served by the Hearing Clerk on all participants who have requested cross-examination and will be inserted in the record. Written notice of the ruling will be given to all persons requesting cross-examination and all persons to be cross-examined. The ruling will specify:

(1) The issues as to which cross-examination is granted;

(2) The persons to be cross-examined on each issue;

(3) The persons to be allowed to conduct cross-examination; and

(4) Time limits for the examination of each witness by each cross-examiner.

(c) In issuing this ruling, the panel may determine that one or more participants who have requested cross-examination have the same or similar interests and should be required to choose a single representative for purposes of cross-examination by that single representative without identifying the representative further. Subpoenas for witnesses may be issued where necessary.

(d) Within one week after the insertion into the record of the ruling under subparagraph (b), the hearing at which the cross-examination will be conducted will begin. One or more members of the original panel will preside for EPA. The panel will have authority to conduct cross-examination on behalf of any participant, although as a general rule this right will not be exercised. The panel will also have authority to modify the governing ruling in any respect and to make new rulings on group representation under section 6(c)(3)(C) of TSCA. A verbatim transcript of the hearing will be made.

(e)(1) No later than the time set for requesting cross-examination, a hearing participant may request that other alternative methods of clarifying the record (such as informal conferences or the submittal of additional information) be used. Such requests may be submitted either in lieu of cross-examination requests, or in conjunction with them.

(2) The panel in passing on a cross-examination request may, as a precondition to ruling on its merits, require that alternative means of clarifying the record be used whether or not that has been requested under subparagraph (e)(1). In such a case, the results of the use of such alternative means will be made available to the person requesting cross-examination for a one-week comment period, and the panel will make a final ruling on cross-examination within one week thereafter.

(f) Waivers or extensions of any deadline in this section applicable to persons other than EPA may be granted on the record of the hearing by the person chairing it or in writing by the Hearing Chairman.

§ 750.41 Final rule.

(a) As soon as feasible after the deadline for submittal of reply comments, EPA will issue a final rule. EPA will also publish at that time:

(1) A list of all material added to the record (other than public comments and material from the hearing record) which has not previously been listed in a Federal Register document, and

(2) The effective date of the rule.

(b) Pursuant to the delegation of authority made in the Preamble to the Final Regulation for the PCB Manufacturing, Processing, Distribution in Commerce and Use Prohibitions, the Assistant Administrator for Toxic Substances will grant or deny petitions under section 6(e)(3)(B) of TSCA submitted pursuant to § 750.31. The Assistant Administrator will act on such petitions subsequent to opportunity for an informal hearing pursuant to this rule.

(c) In determining whether to grant an exemption to the PCB ban, EPA will apply the two standards enunciated in section 6(e)(3)(B) of TSCA.

[FR Doc. 79-16555 Filed 5-30-79; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 761]

[FRL 1227-7; OTS-066001]

Polychlorinated Biphenyls (PCBs); Proposed Rulemaking for PCB Manufacturing Exemptions

AGENCY: Environmental Protection Agency.

ACTION: Proposed PCB exemption rule; notice of informal hearing.

SUMMARY: This notice lists the petitions received by EPA for exemption from the prohibition on PCB manufacturing and importation pursuant to section 6(e)(3) of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2605(e)(3). The notice also indicates, the most cases, which petitions for exemption EPA proposes to grant and which petitions the Agency proposes to deny.

DATES: Written comments, preferably in triplicate, must be received by the Hearing Clerk by July 2, 1979. Hearing Date and Time: July 9, 1979 at 10:00 a.m. in Washington, D.C. Requests to participate in the hearing must be received by the Hearing Clerk by July 2, 1979.

ADDRESSES: Send comments and requests to participate in the hearing to: Ms. Linda Thomson, Hearing Clerk, Office of Toxic Substances (TS-794), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. Attention: Docket Number OTS/066001 (PCB/ME). The hearing will be held in Washington, D.C. The exact location of the hearing will be made available by calling the toll-free number 800-424-9065.

FOR FURTHER INFORMATION CONTACT: John B. Ritch, Director, Office of Industry Assistance (TS-799), Office of Toxic Substances, Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, telephone (800)-424-9065, or in Washington, D.C. call 554-1404.

SUPPLEMENTARY INFORMATION: Section 6(e)(3)(A) of TSCA (Pub. L. 94-469, 90 Stat. 2003, 15 U.S.C. 2601 *et seq.*) prohibits all manufacture (including importation) of PCBs as of January 1, 1979. EPA's regulation entitled PCB Manufacturing, Processing, Distribution in Commerce, and Use Prohibition Rule (PCB Prohibition Rule) which implements the prohibitions of section 6(e)(3) of TSCA, appears elsewhere in today's Federal Register. Section 6(e)(3)(B) of TSCA allows affected persons to petition EPA for exemptions from the section 6(e)(3)(A) PCB prohibitions. On November 1, 1978, EPA published Interim Procedural Rules (43 FR 50906) for the filing and processing of petitions for exemptions from the PCB manufacturing prohibition of section 6(e)(3) of TSCA. More than seventy petitions for exemption have been received. These petitions have been consolidated into one rulemaking in accordance with § 750.12 of the Interim Procedural Rules (43 FR at 50906).

On January 2, 1979, the Agency announced (44 FR 108) that persons who had filed petitions for exemptions from the PCB manufacturing ban under section 6(e)(3)(B) of TSCA could continue the manufacturing or importation activity for which the exemption is sought until EPA has acted on the applicable petition.

The Interim Procedural Rules for manufacturing exemptions (43 FR 50905) will be applicable to this rulemaking. The official record of rulemaking is located in Room 447, East Tower, Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, telephone (202)-755-0960. It will be available for viewing and copying from 8:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays. Hearing transcripts, hearing materials and submissions received will be added to the record as they become available.

To facilitate informed comment, EPA is indicating its proposed action on most exemption petitions. For EPA to grant a requested exemption, the Agency must make the findings required by section 6(e)(3)(B) of TSCA. That section reads as follows:

> • • • the Administrator may grant by rule such an exemption if the Administrator finds that—
>
> (i) An unreasonable risk of injury to health or environment would not result, and
>
> (ii) Good faith efforts have been made to develop a chemical substance which does not present an unreasonable risk of injury to health or the environment and which may be substituted for such polychlorinated biphenyl.

EPA wishes to advise commentors that for each exemption petition the Agency may request by letter additional information from the petitioner concerning his petition. This information would be supplementary to information requested in this Notice. The Agency will make such requests if it determines that it requires the information in order to adequately assess the petition. Accordingly, persons may wish to file reply comments under § 750.15 of the Interim Procedural Rules (43 FR 50909) on any additional material filed by petitioners in response to information requests from EPA.

Section 750.11(b) of the Interim Procedural Rules established a filing date of December 1, 1978 for all petitions for exemption from the TSCA section 6(e)(3) PCB manufacturing (and important) prohibition. Subsequent to the filing date, additional petitions have been received by the Agency. Due to the shortness of the original filing period of thirty days EPA has accepted all late petitions. The Agency will decide on a case-by-case whether petitions for exemptions for PCB manufacturing and importation activities filed subsequent to the date of this Notice should also be accepted. If a PCB manufacturer or importer subject to the final PCB regulation (1) now wishes to file a petition for exemption and (2) did not earlier file a petition because he had good cause to believe his PCB activity was not subject to the proposed regulation (43 FR 24602, June 7, 1978), he should indicate the basis for his prior failure to file a petition and should request EPA to accept his late petition. No late petition will be accepted unless good cause can be shown for the failure to file on time. Whether or not late petitions are accepted will be announced at the informal hearing for this rulemaking. A supplemental notice of proposed rulemaking probably will not be issued as to such petitions.

In the preamble to the final PCB Prohibition Rule (see preamble section VI.C.1.), EPA states: "... the prohibition applies to the manufacture of any substance or mixture that contains PCB at 50 ppm or greater, including PCB that is an intermediate or 'impurity' or 'byproduct'. . . . While the production of PCBs under such circumstances may not be intentional and may have no independent commercial value, section 6(e) of TSCA applies to *any* production of PCBs and, therefore, covers such activities." EPA is aware that although the proposed rule included such PCBs in its coverage, some manufacturers may not have interpreted the proposed rule to include such PCBs and, therefore, may not have submitted a petition for an exemption from the manufacturing prohibition. As discussed above, EPA will accept petitions from such persons during the comment period for this rule, if the required showing of good faith in not filing earlier is made.

Several persons requested that petitions be accepted on a class basis. They argued that PCB equipment manufacturers should be able to petition for exemptions on behalf of those customers who are also PCB equipment

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manufacturers or distributors as defined in the proposed regulation.[1] In view of the change which has been made concerning restrictions on the manufacture of PCB equipment in the final PCB Prohibition Rule,[2] EPA will not accept exemption petitions on a class basis in this rulemaking. However, the Agency has addressed the question of class petitions in the Interim Procedural Rules which establish procedures for filing and processing exemption petitions from the July 1, 1979 PCB processing and distribution in commerce prohibitions. These Interim Procedural Rules are found elsewhere in today's Federal Register.

It is the intent of EPA to grant or deny the petitions for exemption from the prohibition of the manufacture (including importation) of PCBs subject to this rulemaking prior to August 1, 1979.

Below are listed the exemption petitions that EPA has received. These exemptions have been categorized according to the nature of the petition, and the categories are indicated by a numbered key. The Agency's proposed action on the petitions follows the listing.

Petitioner and Basis for Petition

Abolite Lighting, Inc., P.O. Box 237, West Lafayette, OH 43845.[3]

Advance Transformer Co., 2950 North Western Ave., Chicago, IL 60618.[4]

Aluminum Company of America, 1501 Alcoa Building, Pittsburgh, PA 15219.[5]

American Hoechst Corp., Route 202–206 North, Somerville, NJ 08876.[6]

Binney and Smith, Inc., 1100 Church Lane, P.O. Box 431, Easton, PA 18042.[6]

Borden, Inc., Borden Chemical Division, 630 Glendale-Milford Rd., Cincinnati, OH 45215.[6]

Chemetron Pigments, Division of Chemetron Corp., 491 Columbia Ave., Holland, MI 49423.[6]

Chemical Waste Management Limited, 211 King Street, P.O. Box 1288, St. Catherines, Ontario, Canada L2R7A7.[6]

Ching Mei U.S.A. Ltd., 330 Fifth Ave., Rm. 1825, New York, NY 10001.[6]

Cincinnati Milacron Inc., 4701 Marburg Ave., Cincinnati, OH 45209.[6]

Colt Industries, Inc., Fairbanks Morse Pump Division, 3601 Fairbanks Ave., Kansas City, KS 66110.[7]

Columbia Lighting Inc., Terminal Annex, Box 2787, Spokane, WA.[4]

Control Data Corporation, Autocon Industries Inc., Subsidiary of Control Data Corp., 2800 Berkshire Lane, Minneapolis, MN 55441.[7]

Copeland Corp., Sidney, OH 45365.[6]

Crouse-Hinds Co., P.O. Box 4999, Wolf and Seventh North St., Syracuse, NY 13221.[7]

Dainichiseika Color & Chemicals, America, Inc., 30 Hook Mountain Rd., Pine Brook, NJ 07058.[6]

Dainippon Ink & Chemicals America, Inc., 200 Park Ave., New York, NY 10017.[6]

Day-Brite Lighting, 1015 South Green St., P.O. Drawer 1687, Tupelo, MS 38801.[7]

Dow Corning Corp., Midland, MI 48640.[6]

Dunham-Bush, Inc., 101 Burgess Road, Harrisonburg, VA 22801.[10]

Emerson Quiet Kool Corp., 400 Woodbine Ave., Woodbridge, NJ 07095.[6]

Emerson Electric Co., Industrial Control Division, 3300 S. Standard St., P.O. Box 1678, Santa Ana, CA 92702.[10]

Emerson Electric Company, Gearmaster Division, 1800 S. Route 31, McHenry, IL 60050.[10]

General Electric Company, 3135 Easton Turnpike, Fairfield, CT 06431.[11][12]

Globe Illumination Company, 1515 W. 178th St., Gardena, CA 90248.[7]

Guardian Chemical Corp., Eastern Chemical Division, 230 Marcus Blvd., Hauppauge, NY 11787.[13]

Guardian Light Co., 5125 W. Lake St., Chicago, IL 60644.[7]

Halstead Industries, Inc., Halstead and Mitchell/Division, Highway 72 West, Scottsboro, AL 35768.[10]

Harmon Colors Corp., 580 Belmont Ave., Haledon, NJ 07508.[6]

Harvey Hubbell, Inc., (Lighting Division), 2000 Electric Way, Christiansburg, VA 24073.[7]

Hercules, Inc., 910 Market St., Wilmington, DE 19899.[6]

Hills-McCanna Co., 409 Maple Ave., Carpentersville, IL 60110.[10]

Hilton-Davis Chemical Co., Division of Sterling Drug Inc., 2235 Langdon Farm Road, Cincinnati, OH 45237.[6]

Honeywell, Inc., 200 Smith St., Waltham, MA 02154.[10]

ICI Americas, Inc., Wilmington, DE 19897.[6]

International Telephone & Telegraph Corp., 250 Cochituate Road, Suite 108, Framington, MA 07101.[7]

Intesl Corp., 625 Third Ave., New York, NY 10022.[14]

Keene Corporation-Lighting Division, Industrial Way, Wilmington, MA 01887.[7]

Keystone Lighting Corp., Inc., U.S. 13 & Beaver Streets, Bristol, PA 19007.[7]

Krauser Trenton Co., Box 888, Trenton, NJ 08605.[10]

Lightolier, Inc., 346 Claremont Ave., Jersey City, NJ 07305.[7]

Litton Industrial Products, Inc., Louis Allis Division, 16880 West Rgerson Road, New Berlin, WI 53151.[10]

Litton Microwave Cooking, Litton Systems, Inc., P.O. Box 8001, Minneapolis, MN 55440.[10]

Litton Systems Inc., Jefferson Electric Division, 640 South 25th Ave., Bellwood, IL 60104.[7]

Marathon Electric Manufacturing Corp., P.O. Box 1407, Wausau, WI 54401.[10]

McGraw-Edison Co., Area Lighting Div., 7601 Durand Ave., Racine, WI 53406.[7]

McGraw-Edison Co., Kitchen Appliance Division, P.O. Box 1111, Chattanooga, TN 37401.[10]

Metalux Corp., P.O. Box 1267, Americus, GA 31709.[7]

The Miller Company, Lighting Division, 98 Center Street, Meridian, CT 06450.[7]

Montedison USA, Inc., 1114 Ave. of the Americas, New York City, NY 10036.[7]

Nagase America Corp., 200 Fifth Ave., New York, NY 10010.[7]

National Services Industries, Lithonia Lighting Div., 1335 Industrial Blvd. NW, Conyers, GA 30207.[7]

National Solid Waste Management Association, 1120 Connecticut Ave., NW., Washington, DC 20036.[6]

Phillips Petroleum Company, 10 C2 Phillips Bldg., Bartlesville, OK 74004.[17]

Pittsburgh Inc., 6975 Brookhaven Dr., Cincinnati, OH 45237.[6]

Pope Chemical Corp., 33 Sixth Ave., Paterson, NJ 07524.[6]

Prescolite, 1251 Doolittle Drive, San Leandro, CA 94577.[7]

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[1] See the definition of "PCB" in Section 761.3(q) of the proposed PCB Prohibition Rule (43 FR at 26615, June 7, 1978) and the definition of "PCB Equipment" in Section 761.3(v) of the final PCB Disposal and Marking Rule (43 FR at 7157, February 17, 1978).

[2] This change classifies the manufacture of PCB equipment as "processing" subject to prohibition as of July 1, 1979 under Section 6(e)(2)(A)(ii) of TSCA. The proposed regulation classified such activity as "manufacture" subject to prohibition as of January 1, 1979 under Section 6(e)(2)(A)(i). For further discussion, see Section VI.B.1.a. of the preamble to the final PCB Prohibition Rule, which appears elsewhere in today's Federal Register.

[3] Requests an exemption in order to manufacture either fluorescent or High Intensity Discharge (HID) lighting fixtures with a PCB capacitor or PCB ballast transformer.

[4] Requests an exemption in order to manufacture PCB ballast transformers which can be used by its customers in the manufacture of fluorescent and HID lighting fixtures.

[5] Requests an exemption in order to continue manufacturing aluminum chloride which is contaminated with PCBs.

[6] Requests an exemption to either manufacture or import diarylide yellow or phthaloyanine pigments.

[7] Requests an exemption in order to import into the United States PCB waste material for disposal.

[8] Requests an exemption in order to incorporate PCBs as an additive component in rigid PVC vibration damping devices used in large machine tools.

[9] Requests an exemption in order to use PCB capacitors in the manufacture of electric pumps and water and waste water control systems.

[10] Requests an exemption in order to use PCB capacitors in the manufacture of air conditioners or air conditioner sub-assemblies.

[11] Requests an exemption in order to continue manufacturing an unspecified chemical using a PCB contaminated intermediate.

[12] Requests an exemption in order to manufacture motors using a PCB capacitor or to manufacture another product or system using such a motor.

[13] Requests an exemption in order to continue manufacturing phenylchloroethanes with unintentional PCB impurities.

[14] Requests an exemption in order to sell a small quantity of PCB.

[15] Requests an exemption in order to import PCB equipment and small PCB capacitors for purposes of repair, replacement and trade-in.

[16] Requests an exemption in order to import a dielectric called Electrophenyl T-60 which is contaminated with PCB.

[17] Requests an exemption in order to use PCB capacitors in the manufacture of power conversion equipment.

[18] Requests an exemption in order to use PCB capacitors in the manufacture of microwave ovens.

[19] Requests an exemption in order to import PCBs for use in research and development of an unspecified chemical intermediate.

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Ridgeway Color & Chemical of Wheelabrator-Fry, Inc., 75 Front St., Ridgeway, PA 15853. [4]
Rollins Environmental Services, Inc., One Rollins Plaza, P.O. Box 2349, Wilmington, DE 19899. [5]
Sandoz, Inc., Sandoz Colors and Chemicals Division, 59 Route 10, East Hanover, NJ 07936. [4]
Sin-Kar Lighting Fixture Co., Inc., 601 East Cayuga Street, Philadelphia, PA 19120. [1]
Spare Electric Corp., 18222 Lanken Ave., Cleveland, OH 44119. [1]
Sta-Rite Industries Inc., Suite 3300, 777 East Wisconsin Ave., Milwaukee, WI 53202. [7]
Stauffer Chemical Company, on behalf of SWS Silicones Corp. Subsidiary, Westport, CT 06880. [10]
Steelcase Inc., 1120 36th Street, Grand Rapids, MI 49501. [1]
Sterner Lighting Systems, Inc., 351 Lewis Ave., NW., Winsted, MN 55395. [1]
Sun Chemical Corp., Pigments Division, Research & Operations Center, 4625 East Ave., Cincinnati, OH 45232. [4]
Sumitomo Corporation of America, 345 Park Ave., New York, NY 10022. [4]
Teppan Air Conditioning-Smith Jones, Inc., 208 Woodford Ave., Elyria, OH 44035. [5]
Tivian Chemical Associates, 720 Union Street, Manchester, NH 03104. [10]
Thomas Industries, Inc., Benjamin Division, P.O. Box 180, Sparta, TN 38583. [1]
Toyo Ink America, Inc., 580 Sylvan Ave., Englewood Cliffs, NJ 07632. [4]
Universal Manufacturing Corp., 39 E. 9th Street, Paterson, NJ 70508. [1]
Vivitar Corp., 1630 Stewart Street, Santa Monica, CA 90406. [10]
Weatherking, Inc., P.O. Box 20134, Orlando, FL 32814. [1]
Westinghouse Electric Corp., Lighting Business Unit, P.O. Box 824, Vicksburg, MS 39180. [1] [10]
Whiteway Manufacturing Co., 1736 Dreman Avenue, Cincinnati, OH 45223. [1]
Wide-Lite Corp., P.O. Box 608, Redwood Rd. & IH35, San Marcos, TX 78666. [1]
Wylain, Inc., Mold Cast Lighting Division, I-87 at Maple Avenue, Pine Brook, NJ 07058. [1]

EPA has completed a preliminary analysis of the above-listed petitions for exemption from the PCB Prohibition Rule which was promulgated elsewhere in today's Federal Register. The Agency has decided that it will not evaluate at this time any of the 49 requests for exemption from the prohibitions on manufacturing equipment which contains a PCB capacitor. (The requests which fall in this category are those footnoted with numbers 1, 2, 7, 8, 10, 13, 15, 16, 20.) EPA is not processing these requests in the present proceeding because, as previously noted, the Agency defines in the final PCB Prohibition Rule the activity of "manufacturing" equipment utilizing a PCB capacitor as "processing" of PCBs. Processing of PCBs is not subject to section 6(e)(3) until July 1, 1979.

EPA will consider petitions concerning PCB processing activities in a subsequent proceeding. Persons who filed requests for exemptions for this activity will not be required to refile. However, they will be required under Interim Procedural Rules, found elsewhere in today's Federal Register, to indicate to EPA in writing if they wish their petitions to be considered as requests for exemption from the July 1, 1979 prohibition on processing or distribution in commerce of PCBs.

Imports of PCB Wastes

Chemical Waste Management, Ltd., the National Solid Waste Management Association, and the Rollins Environmental Services, Inc., petitioned to continue importation of PCB waste material into the U.S. for purposes of disposal. These petitions have been mooted by the PCB Prohibition Rule published elsewhere in today's Federal Register. For the reasons explained in the preamble to that regulation, EPA has decided to allow imports and exports of PCB waste for disposal (so long as such disposal is in accordance with Subpart B of the regulation) until May 1, 1980. Accordingly, no petitions for importation of PCB wastes for disposal are required.

Manufacture and Import of Pigments

EPA proposes to grant all of the requests to either manufacture or import diarylide and phthalocyanine pigments containing more than 50 ppm PCB. (These petitions are identified in the above list with footnote number 4). Information submitted with the requests and testimony and written comments received during the rulemaking for the PCB Manufacturing, Processing, Distribution in Commerce and Use Prohibition Rule which EPA promulgated today indicates (1) granting these exemption requests would not result in an unreasonable risk of injury to health or the environment and (2) good faith efforts are being made by the pigment industry to develop alternative processes for manufacturing the diarylide and phthalocyanine pigments without PCB contamination. Most of these pigments have PCB concentrations in the range of several hundred parts per million. These PCBs cannot easily be separated from the pigments because of the structural similarity of the PCBs with the pigments. Once manufactured, the pigments are mixed with other substances to form paints, inks, and a variety of other products.

In deciding whether to permit continued pigment manufacture, EPA has considered the relatively limited human and environmental exposure to PCBs involved and the economic effects associated with prohibiting manufacture of these pigments. The greatest potential for exposure is in the application of the paints and inks using these pigments. These products contain far less than 50 ppm PCB because of the dilution that takes place when the pigment is mixed with the medium it is coloring. As a result, the health and environmental risks are relatively small. At the present time, these particular pigments account for most of the yellow and blue pigments in use and a significant portion of the total pigment market. If the manufacture of these pigments is not permitted until the conversion to alternative processes is complete, there will be a severe impact on the pigment industry as well as its customers in the paint and graphic arts industries.

The potential costs of compliance will be greatly reduced if an exemption is granted while process changes to reduce PCB contamination are made. It is anticipated that such changes can be made over a period of a year or two. The increased health and environmental risk will be relatively small as there will be limited exposure to PCBs as a result of the exemption.

Furthermore, the granting of these exemption requests will be consistent with the authorization for continued use of phthalocyanine and diarylide yellow pigments which is contained in the final PCB Prohibitions Rule.

EPA especially invites comment not only on the merits of granting the above described petitions, but also on the terms and conditions which the Agency should apply to such exemptions if granted.

Import of PCB Equipment

Honeywell Inc.'s request to be permitted to continue importing PCB equipment will not be evaluated in this proceeding but will be evaluated (if requested) in the future rulemaking dealing with exemptions from the prohibition on processing and distribution in commerce of PCBs. The PCB Prohibition Rule which EPA promulgated today treats importation of PCB equipment in the same manner as

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[10] Requests an exemption in order to continue importing a polysiloxane intermediate which is used in the manufacture of heat curable silicone rubber products and which is contaminated with 500 ppm PCBs. Chemical (polysiloxane intermediate) is described generically because petitioner has claimed confidential treatment for identity of chemical.

[11] Requests an exemption in order to continue, unspecified activity which may be subject to either January 1, 1979 or July 1, 1979 prohibitions. See later discussion in this Notice.

[12] Requests an exemption in order to use PCB capacitors in the manufacture of photographic enlargers.

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business on July 16, 1979. See Supplementary Information below.

ADDRESSES: Send comments to: Document Control Officer (TS-793), Office of Toxic Substances, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, Attn: Docket Number OTS/080000(PCB/RR). The informal hearing (if a hearing is requested) will be held in Washington, DC. The exact location of the hearing will be made available by calling the toll-free number 800-424-9065. Address requests to participate to Ms. Linda Thomsen, Hearing Clerk, Office of Toxic Substances (TS-794), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, Attn: Docket Number OTS/080000(PCB/RR) The telephone number for Ms. Thomson is (202)-755-1106.

FOR FURTHER INFORMATION CONTACT: John B. Ritch, Jr., Director, Office of Industry Assistance, Office of Toxic Substances (TS-799), Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Call the toll free number (800)-424-9065, (in Washington, DC, 554-1404).

SUPPLEMENTARY INFORMATION: The Environmental Protection Agency proposes this rule pursuant to the authority of section 6(e) of the Toxic Substances Control Act (Pub. L. 94-469; 90 Stat. 2003; 15 U.S.C. 2601 et seq., hereinafter referred to as TSCA). The procedures for rulemaking under section 6 of TSCA (40 CFR Part 750), 42 FR 61299 (December 2, 1977), will be followed. The official record of rulemaking is located in Room 447, East Tower, Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, (202)-755-0998. It will be available for viewing and copying from 9 a.m. to 4 p.m., Monday through Friday, excluding holidays. Hearing transcripts and other hearing materials will be added to the record as they become available.

I. Chemical Waste Landfill Criteria

In Annex II of Subpart E of the PCB Rule [published elsewhere in today's Federal Register], the Agency specifies criteria for chemical waste landfills to be used for the disposal of PCBs. Section 761.41(b)(3), Hydrologic Conditions, states that the bottom of the landfill liner system or natural in-place soil barrier must be at least fifty feet from the historical high water table. This requirement is essentially the same as the provisions contained in § 761.41(b)(2), Hydrology, of the PCB Disposal and Marking Rule (43 FR 7150, 7161, February 17, 1978). The earlier version of the PCB Rules will be superseded in thirty days by the PCB Rule published in final form today.

Because the distance between the bottom of a chemical waste landfill and the historical high water table cannot be fifty feet or more in many areas east of the Mississippi River due to the closeness of the water table to the surface, EPA Regional Administrators have had to use the waiver provisions of § 761.41(c)(4) to waive this criterion in order to be able to approve PCB chemical waste landfills. The Regional Administrators have been able to grant these waivers because the shorter separation between the bottom of the landfill and the groundwater was found not to present an unreasonable risk of injury to health or the environment from PCBs. After examining the circumstances related to these waivers, EPA has concluded, for the reasons stated below, that the fifty foot criterion in the rule is too stringent, and that the rule should be modified accordingly.

The state of the art in the design and construction of chemical waste landfill liner systems and leachate detection and collection systems has advanced sufficiently so that the bottom of the liner system can be as close as five feet from the historical high water table. The liner systems are designed to be virtually impermeable, and the leachate collection systems are designed as a back-up measure to help insure that the liner system is not penetrated by liquids. This approach has also been included in the proposed EPA Hazardous Waste Guidelines and Regulations (40 CFR Part 250) [see 43 FR 58946-58978, December 18, 1978] in § 250.45-2(a)(2) proposed under the authority of the Resource Conservation and Recovery Act (RCRA).

This proposed change would modify § 761.41(b)(3), Hydrologic Conditions, of the PCB Rule, to change from fifty feet to five feet the required minimum distance between the bottom of the liner system and the historical high water table.

II. Effective Date

It is the intent of EPA to make the final version of this proposed amendment effective thirty days after the date of publication in the Federal Register. The final promulgation of this rule is expected in September 1979.

Dated: May 11, 1979.

Marilyn C. Bracken,
Acting Assistant Administrator for Toxic Substances.

Pursuant to the Toxic Substances Control Act, 15 U.S.C. 2605, and pursuant to authority delegated in the *Background* section of the Preamble to the Final PCB Regulation published elsewhere in today's Federal Register, the following amendment to 40 CFR Chapter I, Part 761 is proposed:

Subpart E—List of Annexes

Annex II

Section 761.41 is amended by revising subparagraph (b)(3) to read as follows:

§ 761.41 Chemical waste landfills.

* * * * *

(b) * * *

(3) *Hydrologic Conditions.* The bottom of the landfill liner system or natural in-place soil barrier shall be at least five feet above the historical high groundwater table. Floodplains, shorelands, and groundwater recharge areas shall be avoided. There shall be no hydraulic connection between the site and standing or flowing surface water. The site shall have monitoring wells and leachate collection.

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the domestic assembly of such equipment and, therefore, such activity is not prohibited until July 1, 1979.

Other Petitions

Guardian Chemical Corporation's request to be permitted to sell small quantities of 4,4'-Dichlorodiphenyl-sulfone as a laboratory reagent also will not be evaluated now but will be evaluated (if requested) in the processing and distribution in commerce exemption proceeding. Guardian did not indicate that they in any way manufacture PCBs. However, it does appear that the activity which is seeks to continue is the "distribution in commerce" of PCBs.

Similarly, the petition submitted by Cincinnati Milacron which, if granted, would permit the company to continue to use PCBs as an additive component in their manufacture of polyvinyl chloride vibration damping devices will not be considered now but will be considered in the future proceeding, if requested. The reason for delaying the processing of Cincinnati Milacron's petition is that EPA has determined that the company's use of PCBs is "processing" as that term is defined by the PCB Prohibition Rule and is therefore not subject to this proceeding.

Exemption Requests Proposed To Be Denied

EPA proposes to deny Intsel Corporation's request to import Electrophenyl T-60 and Phillips Petroleum Company's request to import significant quantities of PCBs for unspecified research and development purposes. Neither of the requestors have shown that they are making a good faith effort to develop substitutes which do not contain 50 ppm or greater PCBs, nor that the adverse economic or other consequences of EPA's denying the requests outweigh the potential harm to health and the environment of EPA's granting the requests.

Exemption Requests for Which a Determination Is Not Proposed

EPA has not proposed its disposition of the requests received from Alcoa which respect to its manufacture of aluminum chloride and the General Electric Co. with respect to its manufacture of phenylchlorosilanes due to the technical complexity of the activities for which exemptions are sought.

Before making a determination with respect to these exemption petitions, the Agency will seek, by means of written requests to the companies and by this notice, further comments and/or data. Additional information on these petitions is given below.

Alcoa requested a one-year exemption for the manufacture of approximately 132.77 million pounds of aluminum chloride at its facility in Anderson County, Texas. The process would result in the annual production of approximately 9,294 pounds of PCBs. 95% of which is concentrated and disposed of as a PCB mixture. The remaining 5% represents an impurity in the aluminum chloride which Alcoa sells for a variety of uses. Comments and data are requested on the health and environmental risks that would be posed by granting Alcoa's exemption and also on the risks associated with using the aluminum chloride for applications other than smelting aluminum, in particular. EPA is interested in information regarding processes for the production of aluminum chloride which do not produce PCBs. In addition, EPA invites comments on the economic or other adverse impacts that denial of the exemption would have on Alcoa's users of this product.

General Electric seeks an exemption to continue the manufacture of phenylchlorosilanes with unintentional PCB impurities. The manufacturing process results in approximately 50,000 pounds per year of PCBs which are removed and concentrated for disposal in an on-site incineration facility in Waterford, New York. The phenylchlorosilanes are used in the production of a number of high performance silicone products for various industrial, aerospace, and defense applications. Comments and data are requested on the health and environmental risk associated with granting or denying General Electric's exemption petition, on alternative methods of manufacturing phenylchlorosilanes without PCB contamination, and on the impact of denying this petition on the users of this chemical.

EPA has also not proposed its disposition of the petition of Tivian Chemical Associates. EPA is seeking to clarify whether Tivian's activity for which exemption is sought is subject to the January 1, 1979 prohibition on PCB manufacture and importation, or rather to the July 1, 1979 prohibition on PCB processing and distribution in commerce.

In addition, EPA has not proposed its disposition of the petitions of Dow Corning Corporation and Stauffer Chemical Company. EPA currently does not have sufficient information to determine whether exemptions should be proposed for these companies. Dow Corning has not identified the substance which it wishes to manufacture and the amount of PCB contamination in the chemical intermediate. Stauffer has not provided sufficient information concerning the identity of products which may be subject to PCB contamination. EPA will seek, by means of written requests to both companies, to clarify the identity of the products identified in the petitions of the companies, and the nature of the manufacturing processes, which includes determining whether intermediates are contaminated during the manufacturing process.

Section 750.13 of the Interim Procedural Rules does not require EPA to announce its proposed disposition of exemption petitions in a Notice of Proposed Rulemaking. Due to the need to expedite action on the exemption petitions, EPA will not publish a subsequent notice concerning the Alcoa, General Electric, Tivian, Dow Corning and Stauffer petitions.

Dated: May 11, 1979.

Marilyn C. Brucken,

Acting Assistant Administrator for Toxic Substances.

[FR Doc. 79-16656 Filed 5-30-79; 8:45 am]

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[40 CFR Part 761]

[FRL 1227-6]

Polychlorinated Biphenyls (PCBs); Amendment to Criteria for Chemical Waste Landfills

AGENCY: Environmental Protection Agency.

ACTION: Proposed amendment to final rule; notice of informal hearing.

SUMMARY: This proposed rule would modify Annex II of Subpart K of the Polychlorinated Biphenyls regulation promulgated elsewhere in today's Federal Register under the authority of section 6(e) of the Toxic Substances Control Act. The proposed rule would amend the criteria for chemical waste landfills by reducing the required distance between the bottom of the chemical waste landfill liner system and the historical high water table from fifty feet to five feet.

DATES: Written comments, preferably in triplicate, must be received prior to the close of business July 16, 1979. Informal hearing date and time (if a hearing is requested): August 6, 1979, at 10:00 a.m. in Washington, DC. Requests to hold a hearing and to participate in the hearing must be received prior to the close of

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