ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 750 and 761

[OPPTS–66009C; FRL–5726–1]

RIN 2070-AC01

Disposal of Polychlorinated Biphenyls (PCBs)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is amending its rules under the Toxic Substances Control Act (TSCA) which address the manufacture, processing, distribution in commerce, use, cleanup, storage and disposal of polychlorinated biphenyls (PCBs). This rule provides flexibility in selecting disposal technologies for PCB wastes and expands the list of available decontamination procedures; provides less burdensome mechanisms for obtaining EPA approval for a variety of activities; clarifies and/or modifies certain provisions where implementation questions have arisen; modifies the requirements regarding the use and disposal of PCB equipment; and addresses outstanding issues associated with the notification and manifesting of PCB wastes and changes in the operation of commercial storage facilities. This rule also codifies policies that EPA has developed and implemented over the past 19 years. This rule will streamline procedures and focuses on self-implementing requirements and the elimination of duplication. Some activities currently requiring PCB disposal approvals will no longer require those approvals. EPA believes that this rule will result in substantial cost savings to the regulated community while protecting against unreasonable risk of injury to health and the environment from exposure to PCBs.

DATES: This rule shall become effective August 28, 1998. This rule shall be promulgated for purposes of judicial review at 1 p.m. eastern daylight time on July 29, 1998 (see 40 CFR 23.5, 50 FR 7271).

The information collection requirements contained in this rule have not yet been approved by the Office of Management and Budget (OMB) and are not effective until OMB approves them. Once OMB has approved the information collection requirements contained in this rule, EPA will publish another document in the **Federal Register** to announce OMB's approval and to amend 40 CFR part 9 to incorporate the assigned OMB approval number into the table of OMB control numbers for EPA regulations at 40 CFR 9.1.

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SUPPLEMENTARY INFORMATION:

Electronic Availability:

Electronic copies of the following documents: *Response to Comments Document on the Proposed Rule--Disposal of Polychlorinated Biphenyls* and *Support Document for the PCB Disposal Amendments, Final Rule* are available from the EPA Home Page at the Federal Register - Environmental Documents entry for this document under ''Laws and Regulations'' (http://www.epa.gov/fedrgstr/).

The following outline is provided to assist the reader in locating topics of interest in the preamble.

I. Regulated Entities

Entities potentially regulated by this action are those which manufacture, process, distribute in commerce, use, or dispose of PCBs. Regulated categories and entities include:

Category	Examples of Regulated Entities
Industry	Chemical manufacturers, electroindustry manufacturers, end-users of electricity, PCB waste handlers (e.g., storage facilities, landfills and incinerators), waste transporters, general contractors
Utilities and rural electric cooperatives	Electric power and light companies
Individuals, Federal, State, and Municipal Governments	Individuals and agencies which own, process, distribute in commerce, use, and dispose of PCBs

This table is not exhaustive, but lists the types of entities that could potentially be regulated by this action. Other types of entities may also be regulated. To determine whether your entity is regulated by this action, carefully examine the applicability criteria in 40 CFR part 761. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding ''FOR FURTHER INFORMATION CONTACT'' unit.

II. Background

A. General Reaction to Proposed Rule

On June 10, 1991 (56 FR 26738), EPA issued an Advanced Notice of Proposed Rulemaking (ANPR) to solicit comments on possible changes to the PCB disposal regulations promulgated under the authority of TSCA section 6(e) and codified in 40 CFR part 761. On December 6, 1994 (59 FR 62788) (FRL-4167-1), EPA issued a Notice of Proposed Rulemaking (NPRM) after considering comments and supporting data on the issues outlined in the ANPR and other issues brought to EPA's attention during the course of implementing the TSCA PCB program. After publication of the NPRM, EPA conducted a series of briefings on the

proposed amendments to better acquaint potential commenters with the potential impacts so that they could better formulate their comments. On June 6 and 7, 1995, EPA held a public hearing on the proposed amendments. A transcript of that hearing is in the public record. Almost all commenters supported the objectives EPA proposed for the PCB program, but they also provided numerous comments on how to better achieve those objectives.

EPA has prepared a Response to Comments document which addresses comments not otherwise discussed in this preamble. You may review the Response to Comments document in the TSCA Public Docket (OPPTS docket control number 66009A), Rm. B607, Northeast Mall at the Environmental Protection Agency, 401 M St., SW., Washington, DC.

B. Overview of Final Rule

This rulemaking promulgates significant amendments affecting the use, manufacture, processing, distribution in commerce, and disposal of PCBs.

These amendments add regulatory provisions authorizing certain uses of PCBs; authorizing the manufacture, processing, and distribution in commerce of PCBs for use in research and development activities; specifying additional alternatives for the cleanup and disposal of PCBs; and clarifying the processing for disposal exemption.

These amendments also add sections establishing standards and procedures for disposing of PCB remediation waste and certain products manufactured with PCBs; establishing procedures for determining PCB concentration; establishing standards and procedures for decontamination; establishing controls over the storage of PCBs for reuse; and establishing a mechanism for coordinating TSCA disposal approvals for the management of PCB wastes among various Federal programs. These amendments also update several marking, recordkeeping, and reporting requirements.

The regulatory requirements that apply to materials containing PCBs depend in part on the PCB concentration. To ensure a consistent and reproducible basis for determining PCB concentrations, § 761.1(b)(4) provides that the concentration of non-liquid PCBs must be determined on a dry weight basis; the concentration of liquid PCBs must be determined on a wet weight basis; and the concentration of multi-phasic (i.e., both non-liquid and liquid) PCBs must be determined by separating the phases and analyzing each phase.

C. Statutory Authorities

This final rule is issued pursuant to sections 6(e)(1), 6(e)(2)(B), 6(e)(3)(B) and 18(b) of TSCA. Section 6(e)(1)(A) gives EPA the authority to promulgate rules regarding the disposal of PCBs (15 U.S.C. 2605(e)(1)(A)). TSCA section 6(e)(1)(B) provides broad authority for EPA to promulgate rules that would require PCBs to be marked with clear and adequate warnings (15 U.S.C. 2605(e)(1)(B)). TSCA section 6(e)(2)(B) gives EPA the authority to authorize the use of PCBs in other than a totally enclosed manner based on a finding of no unreasonable risk of injury to health or the environment (15 U.S.C. 2605(e)(2)(B)). TSCA section 6(e)(3)(B) provides that any person may petition EPA for an exemption from the prohibition on the manufacture, processing, and distribution in commerce of PCBs (15 U.S.C. 2605(e)(3)(B)). EPA may grant an exemption based on findings that an unreasonable risk of injury to health or the environment will not result, and that the petitioner has made good faith efforts to develop a substitute for PCBs.

D. Unreasonable Risk Standard

Under TSCA section 6(e), EPA makes decisions using the concept of ''unreasonable risk.'' In evaluating whether a risk is unreasonable, EPA considers the probability that a regulatory action will harm health or the environment, and the costs and benefits to society that are likely to result from the action. See generally, 15 U.S.C. 2605(c)(1). Specifically, EPA considers the following factors:

1. *Effects of PCBs on human health and the environment.* EPA considers the magnitude of exposure and the effects of PCBs on humans and the environment. The following discussion summarizes EPA's assessment of these factors.

a. *Health effects.* EPA has determined that PCBs are toxic and persistent. PCBs can enter the body through the lungs, gastrointestinal tract, and skin, can circulate throughout the body, and can be stored in the fatty tissue. Available animal studies indicate an oncogenic potential. EPA has also found that PCBs may cause reproductive effects and developmental toxicity in humans. Chloracne may also occur in humans exposed to PCBs.

b. *Environmental effects.* Certain PCB congeners are among the most stable chemicals known, which decompose very slowly once they are released in the environment. PCBs are absorbed and stored in the fatty tissue of higher organisms as they bioaccumulate up the food chain through invertebrates, fish, and mammals. This ultimately results in human exposure through consumption of PCB-containing food sources. PCBs also have reproductive and other toxic effects in aquatic organisms, birds, and mammals.

c. *Risks.* Toxicity and exposure are the two basic components of risk. EPA has concluded that any exposure of humans or the environment to PCBs may be significant, depending on such factors as the quantity of PCBs involved in the exposure, the likelihood of exposure to humans and the environment, and the effect of exposure. Minimizing exposure to PCBs should minimize any eventual risk. EPA has quantified risks from certain exposure scenarios (See for example, Refs. 1 and 2). For example, assessments of the risks from exposure to PCBs in soil have been used as the basis for several of today's regulatory actions.

2. *Benefits of PCBs and the availability of substitutes.* The benefits to society of particular activities involving PCBs vary. PCBs were used principally because they had excellent dielectric properties. The dielectric properties were supplemented by thermal stability and even the ability to retard burning, a considerable problem with the most commonly used alternative dielectric fluid. For other uses, thermal stability and flame retardancy were enhanced by resistance to degradation by chemical oxidizers, acids and bases. Although it is difficult to estimate the financial benefits from the reduction in industrial fires from the use of PCBs, it is clear that there were far fewer fires from the use of PCBs as alternatives to other commonly used flammable and ignitable fluids. These benefits are especially significant in uses where heat was generated or where a fire from another source would be augmented and intensified by the presence of flammable fluids. Unfortunately, the properties of thermal stability and resistance to chemical degradation which made PCBs so useful industrially, make PCBs a problem when they are released to the environment, where they and their toxic effects persist for long periods. The toxic effects of PCBs do not play a role in most uses where there is little, if any, actual exposure. So long as the PCBs are used inside containers and are not available for potential exposure or release to the environment, the benefits from their continued use, versus the cost to decontaminate or dispose of and replace them, can outweigh the risks.

While some electrical equipment manufactured to contain PCBs prior to 1978 is still in use, most of the equipment in use that contains PCBs

was manufactured to use another dielectric fluid, but was contaminated with PCBs during manufacturing or servicing. In most cases, the PCB concentration is low and the industrial properties of PCBs are for all practical purposes no longer contributing to continued use of the equipment. Similarly, because of their chemical inertness, the low concentration PCBs do not interfere with or compromise the use of the contaminated alternative dielectric fluids. Therefore, the benefits from continued use of the contaminated equipment, as opposed to decontamination or disposal and replacement, can continue to be realized.

3. *Costs*. The reasonably ascertainable costs of this rulemaking are discussed in detail in ''Cost Impacts of the Final Regulation Amending the PCB Disposal Regulations at 40 CFR Part 761'' (Ref. 3).

Overall, this rulemaking is intended to protect against unreasonable risks from PCBs by providing cost-effective and environmentally protective disposal options that will reduce exposure to PCBs by encouraging their removal from the environment, thereby reducing the potential risk to human health and the environment from PCBs. The rule also authorizes certain continued uses of PCBs and materials contaminated with PCBs where exposure can be controlled and where removal and disposal of the material would be costly or impractical. More detailed analyses of unreasonable risk specific to individual regulatory provisions are included throughout the preamble.

III. Issues Not Addressed by this Rulemaking

A. Preempting Other Requirements

Several commenters raised the issue of a general preemption under TSCA of all other Federal, State, and local laws and regulations concerning the management of PCB wastes. As stated in the NPRM preamble, TSCA does not allow the Administrator to preempt State disposal rules which describe the manner or method of disposal of a chemical substance or mixture, or in this instance, the disposal of PCBs (59 FR 62832). Moreover, EPA believes that such a preemptive rule would not flow from any of the proposed changes and therefore is not within the scope of this rulemaking.

B. Toxicity of PCBs

Several commenters argued that EPA should reassess the toxicity of PCBs. In the NPRM, EPA indicated that it had undertaken a study of PCB toxicity. This study, completed in September 1996, found PCBs to be carcinogenic, but concluded that PCBs are not as potent as previously determined (Ref. 4). In today's final rule, EPA has proceeded with the TSCA PCB requirements based on the risk data relied on in the NPRM. The Agency will consider additional revisions to these TSCA regulations in the future to accommodate additional new information clarifying PCB non-cancer effects and bioaccumulation factors, and to remain consistent with regulations issued under other statutes, such as the Clean Water Act (CWA), and with other EPA policies, such as those governing response actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). EPA will follow closely the public comment process on other rulemakings, and upon completion of a balanced assessment of both the cancer and non-cancer effects, will adjust its regulatory standards on PCBs as appropriate.

In adopting this policy position, EPA weighed the potential benefits and costs associated with revising the final rule to reflect the most recent PCB cancer potency information. Such a change at this time would delay the issuance of the final rule and its anticipated large cost savings, for likely only very marginal benefits.

C. Issues Deferred for Later Rulemaking

EPA today is not finalizing provisions regarding exports of PCBs (see Unit IV.J. of this preamble), or use authorizations for non-liquid PCBs. EPA intends to address these issues in future rulemakings.

In the NPRM, EPA solicited comments on the appropriate levels for corrective action of PCB contamination under the Resource Conservation and Recovery Act (RCRA) (59 FR 62794-95). EPA is not taking final action on this part of the proposal today. Those comments will be addressed by the Office of Solid Waste and Emergency Response (OSWER) during the process for promulgating final RCRA corrective actions regulations. (For more information, see 61 FR 19432, May 1, 1996.) The Office of Pollution Prevention and Toxics will continue to work with OSWER and other Offices in the Agency to coordinate programs concerning PCBs.

In addition, EPA has issued in the **Federal Register** a Notice of Intent to implement a Performance Based Measurement System (PBMS), under which the regulated community would be able to select any appropriate analytical test method for use in complying with EPA's regulations (62 FR 52098, October 6, 1997) (FRL–5903–2). Implementation of this program for a given rule requires that EPA propose changes and seek public comment on them. EPA intends to propose such changes to the TSCA PCB regulations in the future. The Agency defines PBMS as a set of processes wherein the data quality needs, mandates, or limitations of a program or project are specified, and serve as criteria for selecting appropriate methods to meet those needs in a cost-effective manner. Where PBMS is implemented, the regulated community would be able to select any appropriate analytical test method for use in complying with EPA's regulations. It is EPA's intent that implementation of PBMS have the overall effect of improving data quality and encouraging advancement of analytical technologies. The Agency anticipates proposing amendments to certain of its regulations, as needed, to incorporate PBMS into its regulatory programs. EPA intends to implement PBMS on a program-specific basis. Each of EPA's programs is presently developing a plan for implementation. EPA intends to provide ample opportunity for the public to comment on specific aspects of PBMS implementation.

Finally, EPA is deferring final regulatory action on proposed § 761.30(q) for future rulemaking. In the NPRM, EPA solicited comments on authorizing the use of PCBs in existing applications that had not been authorized by previous PCB rulemakings (59 FR 62809, December 6, 1994). Although EPA received many comments supporting the proposed authorizations, many commenters wanted EPA to drop many, if not all, of the proposed conditions for the authorizations. EPA needed additional time to review the recently submitted risk assessment studies and also to obtain additional data for certain uses in order to reduce the uncertainties associated with the available studies. EPA therefore intends to publish a Supplemental Notice to solicit additional data on the items that EPA proposed authorizing in the NPRM. EPA is interested in any data that could be used by the Agency in its review of the risks of exposure from PCBs that might be associated with the existing applications of the PCB-containing items that were identified in the NPRM. EPA is particularly interested in data relating to the following items, when such items have been identified as containing PCBs: certain paints, caulking, and coal-tar enamel coatings used on steel water pipe and underground tanks. Due to the potential

lag time that may be necessary to either develop or assemble these data, a listing of the data elements that are required for this analysis is provided below.

1. *Wipe sample data for each of the products (or classes of products, i.e., paint) for which uses would be authorized*. These data should be collected from products that are known to contain PCBs (i.e., based on bulk sample results or from historic knowledge). Also, the detection limits for these materials should be sufficiently low to ensure that risks can be calculated down to the 10^{-6} range. Estimates of the detection limits that would be required to estimate a 10^{-6} risk level for the products for which exposure scenarios have been developed by EPA can be found in Table 1 of the document ''Support Document for the PCB Disposal Amendments, Final Rule'' (Ref. 5). This document has been placed in the docket and is available at EPA's web site under ''Laws and Regulations'' at the Federal Register-Environmental Documents entry (http://www.epa.gov/fedrgstr/).

2. *Transfer data*. Information on the transfer of PCBs to human skin from the non-liquid PCBs listed in Table 1 of the support document. EPA recognizes that these data may not be available. If such data are not available, EPA requests suggestions regarding how to factor in a value representing the likely transfer of PCBs to human skin.

3. *Air monitoring data for each of the products (or classes of products, i.e., paint) for which uses would be authorized*. These data should be collected from products that are known to contain PCBs (i.e., based on bulk sample results or from historic knowledge). Also, the detection limits for these materials should be sufficiently low to ensure that risks can be calculated down to the 10^{-6} range. See Table 1 of the support document for estimates of the detection limits that would be required to estimate a 10^{-6} risk level for the products for which exposure scenarios have been developed by EPA.

EPA is particularly interested in data that are representative of the highest concentrations of PCBs in the product (or class of products, i.e., paint). For example, commenters provided information that paint formulations with 10 to 12% PCBs were recommended in the commercial formulation manuals. Therefore, wipe sample and air monitoring data for products such as paints should come from those coatings with bulk sample levels of 10 to 12% PCBs. If only data from coatings with bulk sample levels of less than 10 to 12% PCBs are available, EPA would still be interested in receiving that data. In addition to the collected data, EPA would like a copy of the sampling plan that was used in collecting the data and a description of the quality assurance/quality control procedures that were applied to the data set.

The Supplemental Notice which EPA plans to publish later this year, will provide specific information regarding the data request and the date and location for data submissions.

IV. Notice of Final Rulemaking

A. General Requirements

1. *Applicability of regulations* The regulatory requirements that apply to materials containing PCBs depend in part on the PCB concentration. To identify what regulatory requirements apply to a material that contains PCBs, a person has two options: either to determine the PCB concentration and apply the regulations specified for that concentration and type of material, or to assume the concentration to be 500 parts per million (ppm) or greater. Under the second option, it is not necessary to determine the PCB concentration of the material, but the most restrictive regulatory requirements apply (see § 761.50(a)(5) in the regulatory text).

Where liquid samples cannot be collected, such as on contaminated surfaces, surface sampling and concentration levels have been developed (see part 761, subpart G, The PCB Spill Cleanup Policy), and are included at § 761.1(b)(3). The surface concentrations, which were based on dermal exposure, are equated to the existing PCB regulations which included economic considerations. For example, the regulations established for PCBs at concentrations of 50 to less than 500 ppm apply to contaminated surfaces at concentrations of greater than 10 to less than 100 micrograms per 100 square centimeters (>10-<100 µg/100 cm^2). In addition, specific sections of today's rule codify the relationship between surface contamination and the existing regulations based on milligrams of PCBs per liter of liquid on a dry weight basis.

a. *Determination of PCB concentrations—wet weight/dry weight*. The Agency sought to ensure a consistent and reproducible basis for determining PCB concentrations by specifying at § 761.1(b)(4) how the PCB levels were to be determined in liquids, non-liquids, or mixtures of both. If the PCBs are ''non-liquid PCBs'' as defined in § 761.3, then a person must determine PCB concentrations using dry weight (i.e., excluding the weight of water). If the PCBs are ''liquid PCBs'' as defined in § 761.3, then a person must determine PCB concentrations using wet weight. If the PCBs are multi-phasic (i.e., both non-liquid and liquid PCBs), then a person must separate the phases and perform the appropriate analysis on each phase. PCB determinations must be made on a weight-per-weight basis (e.g., milligrams per kilogram), or, for liquids, on a weight-per-volume basis (e.g., milligrams per liter) if the density of the liquid is also reported (see § 761.1(b)(2) in the regulatory text).

The Agency proposed the definition of ''non-liquid PCBs'' to mean PCBs which contain no liquids which pass through the filter when using the paint filter test method (EPA Method 9095 in ''Test Methods for Evaluating Solid Waste'' (SW-846)) (Ref. 6). Commenters indicated that if materials contain no visible liquids or contained no liquid phases, they should not be required to perform the paint filter test. The Agency has modified the definition to include visual inspection of the materials to determine that they do not flow at room temperature (25 °C or 77 °F). For all other materials, such as sludges or sediments potentially containing free liquids, EPA has retained a paint filter test to determine the presence of free liquids.

The Agency proposed the definition of ''dry weight basis'' to mean reporting chemical analysis results by excluding the weight of the water in the sample. Commenters indicated that certain methods of removing water could skew the analytical results. Since, in this instance, the Agency wants to exclude the water weight, it amended the definition of ''dry weight'' in the final rule to specify removing the weight of the water. EPA also included examples for removing water from a sample, such as air drying at ambient temperature, filtration, decantation, or heating at a low temperature followed by cooling in the presence of a desiccant. The Agency is not specifying which method to use, only that the chosen method must be applicable to measuring PCBs in the sample matrix at the concentration of concern and must be reproducible.

The Agency proposed the definition of ''wet weight basis'' to mean reporting chemical analysis results by including the weight of all dissolved water in a homogenous liquid. A commenter believes that wet weight should be the weight of the PCBs compared to the weight or the volume of all liquids, excluding the weight or volume of non-liquid materials that can be separated. Under the TSCA section 6(e) PCB regulations, EPA has always used weight/weight for determining PCB

concentrations. However, the Agency has amended the definition of ''wet weight'' in the final rule to allow sample analytical results to be reported on a weight per volume basis rather than a weight/weight basis, if the density of the liquid is also reported.

For multi-phasic wastes, the disposal requirements are generally based on the highest PCB concentration in any phase. For example, a sample of sludge containing both non-liquid and liquid phases would first need to be separated into its various phases. Then each phase must be analyzed for PCB concentration. Assume that this separation and analysis results in a non-liquid phase containing 600 ppm PCBs, an aqueous liquid phase containing 100 µg/L, and a non-aqueous phase containing 60 ppm. At the time of disposal, the sludge may either be separated into phases or disposed of without separation. If it is disposed of without separation, it must be disposed of in accordance with the requirements applicable to the phase with the highest concentration, i.e., as non-liquid waste ≥500 ppm PCBs. If the waste is separated into phases, each phase may be disposed of according to the disposal requirements applicable to that phase.

In general, the anti-dilution rule requires that even if the phases were to be disposed of separately, all phases would have to be disposed of based on the highest concentration in any phase in the sample, since the phase contaminated at a lower level was in contact with a more contaminated phase. However, in the PCB remediation waste (§ 761.61) and decontamination (§ 761.79) provisions, EPA is allowing each separated phase to be disposed of or decontaminated, respectively, based on its own PCB concentration.

Some commenters anticipated that by requiring determining PCB levels in various media or phases to be analyzed separately, EPA was also requiring that the phases be separated for disposal. Commenters consistently indicated that these additional analytical and disposal requirements would be extremely burdensome, costly, and unnecessary. EPA did not intend to require that multi-phasic waste be separated for disposal. Multi-phasic waste samples must be separated for analysis because the PCBs may have concentrated in one of the phases. Proper separation allows the multi-phasic sample to be analyzed using consistent and reproducible methods. The waste as a whole must be disposed of based on the highest concentration in any phase, but need not be separated into phases at the time of disposal.

b. *Application of the anti-dilution provision*. The ''anti-dilution'' provision at 40 CFR 761.1(b)(5) prohibits a person from avoiding specific PCB disposal requirements because a PCB concentration was reduced or shifted from one material or environmental medium to another by adding a diluent, or separating or concentrating the PCBs.

The Agency did not propose to modify this important provision, but did receive comments on it. The Agency did not find them compelling, and therefore, the anti-dilution provision remains in effect unchanged. Any specific variances from the anti-dilution provision, such as for certain PCB remediation waste, have been included in the appropriate provisions of subpart D of part 761. EPA continues to be concerned about intentional or fortuitous PCB dilution and remains committed to stringent regulation of PCB waste disposal. In finalizing several variances from the anti-dilution provision, EPA is simply recognizing that where PCBs have already been released, the critical disposal issue is to mitigate the damage from the release.

c. *PCB concentration assumptions for use*. EPA proposed to add § 761.1(g) to exempt oil-filled equipment manufactured after July 2, 1979, from the scope of the rule, provided that the equipment: (1) Had a permanent label or mark affixed by the manufacturer indicating that it contained no PCBs; or (2) had not been serviced with PCBs and was accompanied by documentation from the manufacturer certifying that the equipment contained no PCBs when manufactured.

EPA also proposed to amend the existing definition of ''PCB Transformer'' at § 761.3 to codify its policy (44 FR 31517, May 31, 1979) that certain transformers for which the PCB concentration has not been established must be assumed to contain greater than 500 ppm PCBs. EPA also requested information regarding numbers of small transformers or other pieces of electrical equipment that contain PCBs (59 FR 62820, December 6, 1994). Some examples are: potential transformers, current transformers, instrument transformers, grounding transformers, voltage transformers, and ignition transformers. These small transformers range in size from several inches to several feet in height. They can be filled with oil, epoxy, or tar-like potting compounds that contain PCBs, or they can be ''dry.'' These small transformers generally do not have nameplates and are not easily sampled. Unless the PCB concentrations were established, these transformers would have to be assumed to be PCB Transformers under the proposed revision to the definition of that term.

Many commenters stated that the proposed amendment to the definition of ''PCB Transformer'' would be burdensome and costly with no apparent environmental benefit. They indicated that changing the definition would capture many more transformers, i.e., those which had not been tested or those with no information regarding the type of dielectric fluid on their nameplate. Many of these newly captured transformers probably were manufactured after July 1979, and their nameplates might not indicate the type of dielectric fluid they contain. Commenters suggested that instead of amending the definition, EPA should require that these units be tested prior to disposal.

Commenters were also concerned that under the proposed PCB Transformer definition, EPA would drop the generic exclusions from the assumption requirement for transformers manufactured after 1979, since transformer nameplates and other records on post-1979 transformers may only indicate the type of dielectric fluid in the unit, and not the absence of PCBs.

Commenters stated that defining ''PCB Transformer'' to include small transformers was costly and burdensome because, like small capacitors, they are hard to find, cannot be easily tested without destroying their integrity, and generally do not contain information regarding dielectric fluid.

Rather than finalizing proposed § 761.1(g) and amending the PCB-Transformer definition as proposed, EPA has created new § 761.2, PCB Concentration Assumptions for Use, to set forth the PCB concentration assumptions for the use of transformers and other oil-filled electrical equipment. Section 761.2 codifies EPA's policy (the assumption policy) that the owner of mineral oil-filled electrical equipment, including transformers, that was manufactured prior to July 2, 1979, and whose PCB concentration has not been established, must assume that it is PCB-Contaminated, i.e., contains 50 ppm or greater PCB, but less than 500 ppm PCB. If the date of manufacture is unknown but the dielectric fluid is known to be mineral-oil, then the owner must assume the unit to be PCB-Contaminated.

Commenters questioned the safety of sampling pole-top transformers, and noted that the design specifications for these units, as well as for pad-mounted transformers, called for mineral-oil fluid. In addition, commenters pointed out and provided data to support the fact that pad-mounted distribution

transformers rarely (typically less than 1% of the units sampled) contained PCBs greater than or equal to 500 ppm. These comments are consistent with EPA's experience that higher concentration, non-mineral-oil PCB Transformers are generally located in secure indoor locations and in indoor electrical substations and are not mounted on utility poles or outdoor pads (47 FR 37342, August 25, 1982). Therefore, pole-top and pad-mounted distribution transformers manufactured before July 2, 1979, are assumed to be PCB-Contaminated while in use unless the concentration has been established.

Section 761.2 also allows the owner or operator of oil-filled electrical equipment, including transformers, that was manufactured after July 2, 1979, and whose PCB concentration is not established, to assume that it is non-PCB, i.e., containing less than 50 ppm PCB.

In addition, § 761.2 provides that the owner or operator of a transformer manufactured prior to July 2, 1979, and filled with a fluid other than mineral oil, whose PCB concentration has not been established, must assume that it is a PCB Transformer, i.e., containing 500 or greater ppm PCB, if it contains 1.36 kg (3 lbs) or more of fluid. The assumption requirement does not apply to ''dry'' transformers, i.e., those containing no fluid. If the date of manufacture is unknown and the type of dielectric fluid in the unit is unknown, the unit must be assumed to be PCB (i.e., ≥500 ppm).

Finally, § 761.2 provides that transformers containing less than 1.36 kg of fluid, circuit breakers, reclosers, oil-filled cable, and rectifiers whose PCB concentration has not been established may be assumed to contain <50 ppm PCBs. EPA believes this policy as applied to transformers containing less than 1.36 kg of fluid poses no unreasonable risk of injury to health or the environment. Because of the widespread and diverse nature of the use of these transformers, and the small amount of PCBs contained within each one, all regulatory approaches targeted at controlling releases from them are very expensive compared to the potential quantity of PCBs kept from the environment. Thus, EPA has not identified a reasonable cost-effective regulatory alternative that would significantly reduce the risks from the remaining PCB small transformers in service. Since these transformers contain small quantities of dielectric fluid and many of them are encapsulated, PCBs are rarely released from these transformers during their use or from the equipment using the transformers. Therefore, risks of exposure to humans, food, feed, water, or the environment from their use is low. In conclusion, EPA finds that allowing the continued use of small transformers containing PCBs is not unreasonable because the risk of exposure is low and there appears to be no practical, cost-effective risk reduction measures. They may, therefore, if the concentration is unknown, be assumed to be non-PCB while in use.

The assumption policies in § 761.2 do not apply when electrical equipment is being disposed of. At that time, the owner or operator of PCB equipment must know its actual PCB concentration and use the proper disposal method.

These modifications to the final rule should significantly reduce the burden commenters identified in the proposal. Since the Agency has revised the PCB Transformer definition to include only transformers containing 1.36 kg or more of fluid, and has specified other PCB concentration assumptions for use in § 761.2, many tranformers that would have been included under the proposed PCB Transformer definition are not now included. For example, § 761.2 eliminates the need to test, while in use, any mineral oil-filled transformer manufactured after July 2, 1979, that had no information on a permanent label or mark and had not been serviced or tested previously. EPA also believes that testing costs have decreased since 1979, so commenter's assertions that the proposed changes will increase their costs are unlikely. In addition, companies have stated that they frequently determine their equipments' PCB concentration during routine servicing. Since the PCB regulations have been in place since 1978, EPA assumes that the owners and operators of most transformers have had them serviced at some point and already know their concentration. Therefore, EPA believes that most units' PCB concentration is known, and the assumption that they are PCB-Contaminated need not apply.

Those persons wishing to establish the PCB concentration of a transformer, rather than making an assumption in accordance with today's rule, may do so. PCB concentration may be established: (1) By testing the equipment; or (2) from a permanent label (i.e., a nameplate), mark or other documentation from the manufacturer of the equipment indicating its PCB concentration at the time of manufacture; and service records or other documentation indicating the PCB concentration of all fluids used in servicing the equipment since it was first manufactured.

To assist owners or operators in identifying PCB Transformers by their dielectric trade name or common name, EPA is restating a list of names used by manufacturers for PCBs, previously published in a **Federal Register** Notice (41 FR 14136, April 1, 1976, Appendix A): Aroclor, Asbestol, Askarel, Chlorextol, Clophen, Diaclor, DK, Dykanol, Elemex, Fenclor, Hyvol, Inerteen, Kennechlor, No-Flamol, Phenoclor, Pyralene, Pyranol, Saf-T-Kuhl, and Santotherm. Additional common trade names for PCBs were listed in EPA's 1994 PCB Q&A Manual: Arochlor B, ALC, Apirolio, ASK, Adkarel, Capacitor 21, Chlorinol, Chlorphen, Chlorinol, EEC-18, Eucarel, Inclor, Kenneclor, Magvar, MCS 1489, Nepolin, Nonflammable Liquid, Pydraul, Pyroclor, and Santovac 1 and 2. The above list is not all-inclusive.

To clarify what capacitors must be assumed to contain PCBs, EPA proposed to amend the definition of ''capacitor'' in § 761.3 by inserting existing language on PCB concentration assumptions from the disposal provisions. This was intended to make evident to readers that the assumption provision on capacitors applies to all provisions, such as marking, use, and recordkeeping requirements, and not just disposal.

Several commenters protested that EPA should not ''change'' its ''current'' assumption that capacitors of unknown concentration are assumed to be PCB-Contaminated (contains 50 ppm or greater PCB, but less than 500 ppm PCB). EPA wishes to clarify that the Agency has always maintained that capacitors of unknown concentration must be assumed to be PCB (500 ppm or greater). The current assumption provisions for capacitors found at § 761.60(b)(2)(i) date back to the proposed PCB disposal and marking requirements rule of May 24, 1977 (42 FR 26564). As EPA noted on August 25, 1982, in the preamble to the final rule on use in electrical equipment (47 FR 37342 at 37347), ''virtually *all* capacitors (large and small) manufactured prior to 1978 were filled with PCB fluid at a concentration *near 100 percent.* Capacitors manufactured after 1978 did not use PCB dielectric fluid.'' Data was provided to EPA in support of the 1982 electrical use rule by the Edison Electric Institute (EEI) and the Utilities Solid Waste Activities Group (USWAG). This data indicated that of approximately 2.8 million large capacitors in the utilities industry, *100%* contained PCBs at concentrations of 500 ppm or greater (47 FR 17426; at 17428).

In today's final rule, language on assumption of capacitor concentration is found at the new § 761.2(a)(4), and the existing definition of ''capacitor'' at § 761.3 is being left unchanged. The language in § 761.2 has been modified from the proposed language to make clear that capacitors manufactured after July 2, 1979, do not need to be assumed to be PCB Capacitors, rather they are assumed to be non-PCB because they were manufactured after the ban on manufacture and processing of PCBs became effective. This includes most capacitors that have been labeled by the manufacturer with the statement ''No PCBs'' in accordance with existing § 761.40(g). In addition, a definition of ''PCB Capacitor'' has been added to § 761.3 to make clear that references to PCB Capacitors in part 761 refer only to capacitors containing 500 ppm PCBs or greater. Capacitors containing 50 ppm or greater PCB, but less than 500 ppm PCB are PCB-Contaminated.

Where the concentration of equipment has not been established and is therefore assumed based on the concentration assumptions in § 761.2, that concentration also determines the marking, recordkeeping, monitoring, and other requirements applicable to the equipment while it is in use. For example, a transformer that is assumed to be a PCB Transformer under § 761.2(a)(3) is subject to the use conditions for PCB Transformers set out at § 761.30(a).

d. *Applicability based on PCB concentration*. Almost every section of the PCB regulations is based on numerical standards, usually expressed as the weight of PCBs per weight of liquid or non-liquid matrix, or as the weight of PCBs wiped off a given surface area. These regulatory levels can differ depending on whether the rules are addressing the manufacture, use, or disposal of PCBs. Commenters requested clarification regarding the determination of weights of PCBs in the regulations. In particular, the 45 kg threshold for recordkeeping at § 761.180(a) and marking at § 761.40(b) were cited. EPA is finalizing language in today's final rule at § 761.1(b)(6) to eliminate any confusion on the application of weights or volumes cited in the rule. Unless otherwise noted in the regulations, references to weights or volumes in part 761 apply to the total weight or volume of the PCB containing material (oil, soil, etc.), not the calculated weight or volume of only the PCB molecules within that substance.

PCB wastes generally are regulated for disposal under TSCA at concentrations of 50 ppm or greater. Certain exceptions exist, such as the use of waste oil containing greater than 2 ppm and less than 50 ppm PCBs for energy recovery. Wastes containing PCBs at 500 ppm PCBs or greater may have other disposal requirements, such as destruction through combustion or other approved technologies. Where a disposal requirement is specified in the PCB rules, it cannot be avoided through dilution (see § 761.1(b)(5) of the regulatory text). Other Federal, State, or local laws or regulations may impose additional, perhaps more stringent, requirements on PCB disposal.

Once something is a PCB waste, contains PCBs, or is contaminated with PCBs at regulated levels, cleanup or decontamination may be desired or required. Today's regulations establish levels and procedures for cleanup and decontamination. Anything decontaminated under these paragraphs can be processed or distributed in commerce (see § 761.20(c)(5) of the regulatory text), reused (see § 761.30(u) of the regulatory text) or disposed of in accordance with part 761, subpart D as applicable.

The self-implementing cleanup level (i.e., the ''walk-away'' level) for soil in high occupancy (e.g., residential) areas is ≤1 ppm, or ≤10 ppm if the soil is capped (see § 761.61(a)(4)(i)(A) of the regulatory text). The cleanup level in low occupancy (e.g., electrical substation) areas is ≤25 ppm to ≤100 ppm, depending on site conditions (see § 761.61(a)(4)(i)(B)(*1*) of the regulatory text). The codified text uses parts per million (ppm) for concentration measurement of non-liquids as an equivalent to milligrams per kilogram (mg/kg).

Decontamination standards for surfaces are as follows: for non-porous surfaces in contact with liquid PCBs destined for reuse, ≤10 micrograms PCBs per 100 square centimeters (μg PCBs/100 cm^2) (see § 761.79(b)(3)(i) of the regulatory text); for non-porous surfaces in contact with liquid PCBs destined for smelting, ≤100 μg PCBs/100 cm^2 (see § 761.79(b)(3)(ii) of the regulatory text); for non-porous surfaces in contact with non-liquid PCBs destined for reuse, Visual standard No. 2, Near-White Blast Cleaned Surface Finish, of the National Association of Corrosion Engineers (NACE) (see § 761.79(b)(3)(i) of the regulatory text); for non-porous surfaces in contact with non-liquid PCBs destined for smelting, Visual standard No. 3, Commercial Blast Cleaned Surface Finish, of NACE (see § 761.79(b)(3)(ii); and for fresh spills to concrete, ≤10 μg PCBs/100 cm^2 (see § 761.79(b)(4) of the regulatory text).

Decontamination standards for liquids are as follows: for water, ≤0.5 μg PCBs/L (approximately 0.5 ppb) for unrestricted use (see § 761.79(b)(1)); and for organic and non-aqueous inorganic liquids, ≤2 mg PCBs/L (approximately 2 ppm) (see § 761.79(b)(2) of the regulatory text). The codified text uses ppm or milligrams per liter (mg/L) for concentration measurements of non-aqueous liquids and parts per billion (ppb) or micrograms per liter (μg/L) for concentrations of aqueous liquids.

The part 761 regulations do not address or preempt the regulation of non-PCB components of a waste. If the PCB component of a waste is approved for disposal at a facility, the approval for the disposal of the other regulated waste components must be addressed by all other applicable statutes or regulatory authorities. As an example, while non-liquid PCB/radioactive waste less than 50 ppm PCBs that is not the result of dilution is not regulated for disposal under TSCA, this waste would need to be disposed of in accordance with all applicable requirements for the management and disposal of the radioactive component of the waste. Disposers should be advised that site-specific permit or license conditions or local requirements may preclude such disposal. Similarly, under § 761.79(g)(2), hydrocarbon decontamination liquids having PCB concentrations less than 50 ppm may be burned and marketed in accordance with the requirements for used oil in § 761.20(e). Where such liquids had a radioactive component, burning and marketing would have to be carried out in accordance with all applicable Federal, State and local requirements for the management and disposal of the radioactive component of the waste.

In general, PCBs are banned for use unless specifically authorized. Authorizations may specify conditions for use such as marking, labeling, or recordkeeping, and can establish the level of regulatory control depending on such considerations as the type or location of use or potential for exposure (see § 761.30 of the regulatory text).

When a product is manufactured, the potential exists for it to be contaminated with PCBs as a by-product during manufacture, through contaminated feedstock, or through the addition of PCBs from another source. As a result, the product assumes the same regulatory status as the source (see § 761.1(b)(5)). In general, minimum regulatory levels for PCBs under section 6(e) of TSCA, including PCBs in manufactured items or products, are the same as the minimum regulatory levels listed above. When something is imported into the Customs Territory of the United States for use, TSCA defines

that importation as manufacture (see TSCA section 3). All imports of PCBs are banned absent a TSCA section 6(e)(3)(B) exemption, unless the import satisfies the requirement at § 761.20(b). See Unit IV.J. of this preamble. The use of PCBs or ''disposal'' of PCB wastes in a manufacturing process for a new product is not authorized.

2. *Definitions—additions and modifications*. This discussion is limited to a few of the definitions included in § 761.3. EPA also has added definitions for acronyms frequently used in part 761 (e.g., ASTM, CERCLA, DOT, RCRA, TSCA and U.S. GOP). The remaining definitions being incorporated at § 761.3 in this rulemaking are discussed in other sections of this preamble.

a. *PCB-Contaminated Electrical Equipment*. EPA proposed to clarify the current definition of ''PCB-Contaminated Electrical Equipment'' (specifically as it relates to PCB-Contaminated Transformers at § 761.3), by incorporating the ''assumption rule'' which was included in the PCB Ban rule preamble (44 FR 31517, May 31, 1979). This change would have been effected by adding the following language to the definition: ''a transformer is assumed to contain PCBs at 500 ppm or greater, if it is an untested mineral oil transformer and reasons exist to believe that the transformer was at any time serviced with fluid containing PCBs at 500 ppm or greater.''

In today's final rule, EPA codified the assumptions for PCB-Contaminated Electrical Equipment in new § 761.2 rather than in the definition of that term at § 761.3. Section 761.2 provides that mineral oil-filled electrical equipment (other than circuit breakers, reclosers, oil-filled cable, and rectifiers) that was manufactured before July 2, 1979, and whose PCB concentration is not established, must be assumed to be PCB-Contaminated Electrical Equipment, i.e., containing 50 ppm or greater PCB, but less than 500 ppm PCB. PCB concentration may be established either by testing the equipment; or by a permanent mark or other documentation from the equipment's manufacturer indicating its PCB concentration at the time of manufacture, and service records or other documentation indicating the PCB concentration of all fluids used in servicing the equipment since it was manufactured.

The final rule also clarified that the definition includes equipment with a surface concentration of greater than 10 µg PCBs/100 cm^2 to less than 100 µg/100 cm^2. Many commenters expressed confusion over EPA's intent in adding surface sampling to the definition of PCB-Contaminated Electrical Equipment. EPA's intent is to provide a way to handle equipment in the absence of liquids or when non-liquids were present. Surface sampling is not required in addition to sampling that is conducted when liquids are present.

b. *Non-porous surface*. EPA proposed to define ''non-porous surface'' as ''a smooth, unpainted solid surface that limits penetration of liquid PCBs beyond the immediate surface.''

Several commenters asked that concrete be included in the definition of ''non-porous surface.'' Data were provided in a comment to demonstrate that concrete was less porous than granite and marble. However, the data clearly indicate that the porosity of concrete can vary widely depending on its constituents and preparation. The PCB remediation waste provision addresses existing concrete, where it is doubtful that porosity testing or formulation details could be provided to make a verifiable comparison to the natural stone materials.

Some concerns raised by commenters who sought relief for cleanup of concrete are addressed in new § 761.30(p), which allows continued use of contaminated concrete under specified conditions. The authorization, however, requires disposal of the concrete at the end of its useful life, based on the bulk concentration of PCBs in the concrete, and not on surface concentration.

EPA clarifies the distinction between porosity with respect to risk for two different generic scenarios: (1) Materials used as a conduit to divert, or as a barrier to prevent precipitation or its runoff, from further transporting previously released PCBs; and (2) materials which have been subjected over time to a continuous or single release of PCBs which have not been contained or removed, but have been allowed to migrate.

In the first scenario, a concrete cap can prevent migration of water deposited on the surface. Such a cap diverts the water from passing through the concrete, preventing PCB movement in PCB remediation waste beneath the cap. In this sense the concrete is non-porous to the water. Concrete also can be ''non-porous'' when used for containment as a floor for a storage facility, because any release to the upper surface of the floor would not be allowed to persist and migrate but would be quickly cleaned up and/or recontained.

For the second scenario, concrete is porous to continued slow releases of dielectric or hydraulic fluid. Historically, this kind of release would not always have been controlled or cleaned up. Some of these releases have penetrated over 30 centimeters of concrete and have continued to migrate in soil under the concrete pad or floor for several meters. Floors and pads for most of these situations were not built to contain spills or prevent migration of fluids, but were constructed for structural support, where porosity was not a performance specification or requirement. When fluids have penetrated concrete for a long period, surface cleaning is inappropriate to remove PCBs that have migrated under the surface, and will most likely be unsuccessful. However, surface sampling may help estimate the extent of surface migration of an old or continuous release of PCB fluids onto concrete.

c. *PCB Capacitor*. EPA added this definition to clarify that the term PCB Capacitor in part 761 refers to capacitors containing 500 ppm PCBs and greater (as opposed to 50 or greater ppm). Any capacitors containing 50 ppm or greater PCB, but less than 500 ppm PCB are PCB-Contaminated. EPA is retaining the existing definition of capacitor.

d. *SW-846*. EPA provided an abbreviated name for the series of chemical procedures entitled ''SW-846, Test Methods for Evaluating Solid Waste,'' often referenced in the regulation.

3. *References*. In the NPRM, EPA described the availability of test standards developed by the American Society for Testing and Materials (ASTM) which have been incorporated by reference in 40 CFR part 761. Copies of the incorporated ASTM standards are available for inspection at the Office of the Federal Register and the TSCA Nonconfidential Information Center, or copies may be obtained directly from the ASTM in Philadelphia, PA.

Commenters wanted EPA to include the full text of these incorporated test methods in the regulations. The justifications for this recommendation included simplicity (i.e., access to requirements from a single source), costs of acquiring ASTM standards, and burdensome paperwork and delays associated with requesting the documents. EPA estimates that roughly 40 pages of text would be added to the Code of Federal Regulations (CFR) if the referenced standards were included in the PCB regulations text, at an annual estimated cost to EPA of $2,500, compared to the individual investment by affected entities of less than $300 for the 16 applicable standards. There are, however, more compelling reasons for not including the text of these standards in the regulations: (1) The

Administration's streamlining initiatives to reduce the number of pages of regulatory text in the CFR, (2) copyright restrictions, and (3) the availability of these documents through other sources. For these reasons, EPA has promulgated § 761.19 as proposed.

B. Manufacturing, Processing, Distribution in Commerce, and Use

1. *Prohibitions and exceptions*—a. *Processing for disposal.* Existing § 761.20(c)(2) states that PCBs ''may be processed . . . in compliance with the requirements of this part for purposes of disposal in accordance with the requirements of § 761.60.'' Today's final rule clarifies which processing for disposal requires an approval and which does not. Processing for disposal must not result in dilution to avoid disposal requirements.

The provisions at § 761.20(c)(2) in today's rule essentially addresses the following situations:

Processing for disposal activities which are primarily associated with and facilitate storage or transportation for disposal are disposal, but do not require a TSCA PCB disposal approval. Examples include, but are not limited to: removing PCBs from service (e.g., draining liquids); pumping liquids out of temporary storage containers or articles into drums or tank trucks for transportation to a storage facility or disposal facility; dismantling or disassembling serviceable equipment pieces and components; packaging or repackaging PCBs for transportation for disposal; or combining materials from smaller containers.

Processing for disposal activities which are primarily associated with and facilitate treatment, as defined in 40 CFR 261.10, or land disposal, require an approval unless they are part of an existing approval or a self-implementing activity (such as activities allowed under § 761.61(a) and § 761.79), or are otherwise specifically allowed under part 761, subpart D. Examples include, but are not limited to, microencapsulation; pulverization; particle size separation; employing augers or hoppers to facilitate feeding non-liquid PCBs into a disposal unit; directly piping liquid PCBs into a disposal unit from PCB Items, storage containers or bulk transport vehicles; and directly introducing non-liquid PCBs from containers, bulk transport vehicles or on pallets into a disposal unit, such as an incinerator, a high efficiency boiler, industrial furnace, alternate destruction method, or chemical waste landfill.

Processing, diluting, or otherwise blending waste (prior to introducing it into a disposal unit) for purposes of meeting a PCB concentration limit in a disposal approval shall be done in accordance with the approval, or shall comply with § 761.79 or § 761.60(a)(2) or (3).

The rate of delivering liquids or non-liquids into a PCB disposal unit shall be part of the conditions of the PCB disposal approval for the unit when an approval is required.

Commenters sought to include various forms of processing for disposal outside of a disposal approval because they felt that these activities are common industrial waste management practices. EPA finds that there are two kinds of processing for disposal activities which potentially could change the disposal status of waste through processing: (1) Dilution by blending down the PCB concentration of the waste (any kind of processing which mixes waste with other waste or non-waste lowers the concentration of the highest PCB concentration waste component(s)); and (2) complete or partial separation, such as particle size separation, of waste components. These kinds of processing must be included in an approval to assure that all regulated materials are disposed of in accordance with the disposal regulations.

b. *Sewage sludge.* Today's rule revises § 761.20(a)(4) to harmonize the TSCA regulations on use or disposal of sewage sludge containing PCBs with similar regulations promulgated under the Clean Water Act. For sewage sludge regulated under TSCA for use or disposal, blending of the sewage sludge to avoid TSCA disposal requirements is prohibited.

EPA also revised the definition of ''PCB remediation waste'' to respond to comments that by including in that definition municipal sewage treatment sludges at any concentration, EPA's proposal would supersede CWA sewage sludge regulations. EPA did not intend to do so. The definition of ''PCB remediation waste'' in the final rule excludes sewage sludge at less than 50 ppm in use under § 761.20(a)(4), and includes ''PCB sewage sludge'' as defined at 40 CFR 503.9(w) containing ≥50 ppm PCBs. However, some use and disposal activities not clearly covered by the CWA regulations are banned by TSCA even for sewage sludge containing less than 50 ppm PCBs, for example the intentional or accidental dilution of PCB wastes by mixing or blending with sewage sludge. All sewage sludge containing ≥50 ppm PCBs still falls under the definition of PCB remediation waste.

2. *Distribution in commerce after decontamination.* EPA is finalizing a conforming amendment to existing § 761.20(c)(5), which consolidates provisions proposed at § 761.20(c)(5), (c)(6), and (c)(7). The Agency is aware that during manufacture, use, and servicing of PCBs, PCB Items and other goods, PCB contamination can occur. The Agency believes that liquids and non-liquids may be used, distributed in commerce, or disposed of after contaminating PCBs have been removed or reduced in concentration as specified without posing an unreasonable risk of injury to health or the environment.

In § 761.20(c)(5) of the regulatory text, EPA is clarifying that equipment, structures, or liquid or non-liquid materials that were contaminated with PCBs ≥50 ppm may be distributed in commerce when certain conditions are met. These conditions include decontamination in accordance with: (1) A TSCA PCB disposal approval; (2) applicable decontamination standards and procedures under § 761.79; (3) applicable EPA PCB spill cleanup policies (e.g., TSCA, CERCLA, regional) at the time of decontamination; or (4) if the materials were not formerly decontaminated but now meet an applicable decontamination standard in § 761.79. Similar conditions for the use or reuse of decontaminated materials are addressed in § 761.30(u).

3. *Authorizations*—a. *Registration requirements for PCB Transformers.* To qualify for the current use authorization, all PCB Transformers were required to have been registered with local fire response personnel by December 1, 1985 (see existing § 761.30(a)(1)(vi), the fires rule). In addition, when the transformers are in use in or near commercial buildings, current regulations require them to be registered with the building owners (see existing § 761.30(a)(1)(vii)). Owners of transformers at industrial sites could fulfill the current requirement by registering with their on-site fire brigade, while owners of PCB Transformers in or near commercial buildings had to register with both the local fire department and the building owner. PCB Transformers erroneously assumed to have been contaminated at less than 500 ppm PCBs are required to be registered within 30 days of discovery of the actual contamination level (see existing § 761.30(a)(1)(xv)(D)). If the transformer owner could not demonstrate (e.g., by the production of the signed receipt from a registered or certified letter used to register the transformer with the fire response

personnel) that this registration had taken place, then that PCB Transformer was not authorized for use under § 761.30.

A review of the regulated community's compliance with these registration requirements by the Office of the Inspector General of EPA and EPA Regional personnel found that many fire departments, including those serving large cities, had not received registration information for a large percentage of those PCB Transformers which should have been registered. In addition, many owners could not demonstrate that they had registered their transformers as required in order to continue each unit's authorization for use (Ref. 7).

Pursuant to section 18(b) of TSCA, the State of Connecticut petitioned EPA for an exemption from the preemption provisions of section 18(a)(2) to allow the State to require, among other things, the registration of PCB Transformers (i.e., transformers with dielectric fluid at ≥500 ppm PCB) with the Connecticut Department of Environmental Protection (Ref. 8). Connecticut argued that this registration would provide a significantly higher degree of protection for State residents and emergency response personnel from the risks posed by PCB Transformers than the current Federal rules under TSCA because: (1) State emergency response personnel need the information because they often respond to fires and spills at sites throughout the State, and (2) the State, if it had the information, could more quickly issue warnings regarding fishing, swimming, or other activities that could increase human exposure to PCBs when fires or spills occur.

While EPA sees merit in these arguments, EPA believes that residents of every State would be better protected by a uniform, nationwide registration requirement, in which EPA would receive the data and make it available to Federal, State, and local emergency or fire response personnel and to building owners.

Therefore, in response to the State of Connecticut's Petition and the Inspector General's report documenting a lack of compliance with the existing regulation, EPA proposed to amend § 761.30(a)(1)(vii) to require all owners of PCB Transformers to register their transformers with EPA, no later than 90 days after the effective date of the final rule. EPA proposed this as a one-time registration requirement. However, under the proposed rule, owners of transformers that were subsequently identified as PCB Transformers or received from another location would have to register those transformers with EPA no later than 30 days after they identified or received the transformer. To minimize data gathering and processing, EPA proposed that transformer owners would only have to report the following information currently required under § 761.180(a) to be included on their annual document logs: (1) Transformer location (address) and number of PCB Transformers, (2) the total weight in kilograms of PCBs contained in the PCB Transformers, and (3) name, address, telephone number, and signature of the owner, operator, or other authorized representative certifying the accuracy of the information submitted. EPA proposed that if a PCB Transformer is transferred to a different location after it is registered, information concerning that transfer would be recorded in the former owner's annual document log. EPA has authority to collect registration information on transformers under section 8 of TSCA, 15 U.S.C. 2607.

Many commenters felt that instead of a new registration program, EPA should enforce its existing requirements. Although EPA agrees that effective enforcement of its regulations is important, EPA believes that the national registration program provides benefits that merely improving the enforcement of the existing fire rules cannot provide. For example, collecting the information nationally, in one data base, provides transformer location information to all emergency responders, whether they are from the local volunteer fire department, from the State (as Connecticut described in its petition), or from the Federal government.

In addition, the new registration program is designed to cure features of the existing rule that impede enforcement. For instance, the existing rule does not require transformer owners to maintain records documenting that they complied with the rule. An inspector who is not sure, based on the evidence available at an inspection, whether or not registration with the fire department occurred, must determine which fire department is the primary responder for that facility and impose on it to determine if registration, in fact, occurred. The new rule requires the transformer owner to maintain, with the annual log, proof that registration occurred. If that documentation is absent, not only is there a violation, but the inspector will easily be able to double check the national data base to determine if the registration in fact occurred.

Some commenters asked whether they could comply with the national transformer registration program by sending EPA a copy of the information that they previously sent to the primary fire response jurisdiction under the fires rule. EPA agrees that this is an appropriate method of complying with the national transformer registration program, as long as the submission contains all the information required under the new regulations, and that information has not changed since being submitted to the local fire department. Information required by the new regulations, but not by the prior fires rule, can be submitted to the Agency in a cover letter on company stationery. See below for a further discussion of the format of the required information.

Some commenters questioned how the Agency intended to manage the data it received pursuant to the national transformer registration program. The Agency intends to provide the information to state fire bureaus and other umbrella organizations for further dissemination to local fire departments. In addition, the Agency intends eventually to make the information available in an electronic data base, probably on EPA's World Wide Web Home Page. The Agency believes that the Internet has become a valuable and reliable tool in disseminating information, a situation that did not exist when the fires rule was originally promulgated in 1985.

One commenter suggested that if the purpose of the registration is the protection of emergency responders, such responders should be trained to assume that all transformers contain PCBs and act accordingly. EPA agrees that such training would be appropriate for all emergency responders, and has anecdotal evidence that some receive such training. However, EPA, in the absence of other evidence, cannot assume that all local and state emergency response personnel that may respond to a fire are so trained. Therefore, EPA believes that establishing a national data base of PCB Transformers will serve to protect all emergency responders, not just those trained to assume that all transformers contain PCBs, from the dangers of PCBs in fires.

Several commenters suggested that there is no showing of risk to justify the transformer registration program. EPA disagrees. EPA determined, in 1985, that a risk to fire response personnel existed such that the fires rule was necessary (50 FR 29170, 29174, July 17, 1985). The Agency has not received sufficient information to indicate that such a risk has abated. Therefore, the Agency believes that it is still necessary to have PCB Transformer location information available to local fire response

personnel. As discussed above, EPA believes that a national registration program will address this risk by making the information available on demand to the local fire response personnel, and will provide additional protection by making it available to others, such as state emergency response personnel, that may respond to fires. In addition, changes to the rule that will make it easier to enforce, such as requiring that proof of registration be kept with the annual log, should assist in abating the risk from fires involving PCBs by increasing the rate of compliance, therefore providing emergency response personnel with information about more PCB Transformers.

Several commenters also suggested that the creation of a new registration requirement would be duplicative of the requirements in place under section 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA), 42 U.S.C. 11001 to 11050, and at existing § 761.30(a)(1)(vi) and (a)(1)(vii). While EPA agrees that some duplication may exist, the amount of duplication is not sufficient to justify a decision not to finalize the transformer registration requirement. Moreover, the EPCRA reporting requirements have quantity or jurisdictional triggers that do not satisfy the information needed for the PCB Transformer registration program. For example, EPCRA section 304 requires that releases of certain chemicals be reported. EPA believes that it is important that emergency response personnel have information about the locations of PCB Transformers prior to releases, so that they can plan, in advance, how to respond to such releases. Sections 311 and 312 of EPCRA do require reporting, for planning purposes, to various emergency response personnel for hazardous chemicals that are present at the facility at 10,000 pounds or greater, and for extremely hazardous substances at less than 500 pounds. EPA intends this registration requirement to apply to anyone owning a PCB Transformer, as defined in the regulations, with no provision to exempt those people whose PCB Transformers do not contain, in total, 10,000 pounds or more of PCBs.

Since EPA proposed the transformer registration program in 1994, PCBs have taken on increasing importance in international negotiations regarding hazardous substances. For example, negotiations are ongoing to develop a legally binding Protocol on Persistent Organic Pollutants under the United Nations Economic Commission for Europe's Convention on Long Range Transboundary Air Pollution. In those negotiations, several European countries support a mandatory ban on PCB use to comply with a European Community Directive banning PCB use by 2010. However, having a national data base of the amounts of PCBs in transformers (the largest single source of liquid PCBs) will allow EPA to evaluate more accurately the impact of such proposals on the American economy.

EPA also requested comments on the State of Connecticut petition. In the proposal, EPA indicated that if it did not promulgate a uniform national registration requirement, then it would be inclined to promulgate an exemption under section 18(b) to allow any State to implement its own registration requirements for transformers. Commenters overwhelmingly opposed a State registration program, citing the requirement as redundant, burdensome, and a potential misuse of preemption. EPA agrees with the commenters and is not adopting the State registration requirement in this rulemaking.

Today, as a condition of the authorization for continued use, EPA is finalizing a national registration requirement for PCB Transformers at § 761.30(a)(1)(vi). This new registration requirement extends to PCB Transformers in use or in storage for reuse, even if a specific PCB Transformer was registered under the old requirements at § 761.30(a)(1)(vi). However, a person who takes possession of a PCB-Transformer after the deadline for the original registration has passed does not need to register that transformer with the EPA. Any person taking possession of a transferred PCB Transformer should assure that it was registered under the requirement of § 761.30(a)(1)(vi). PCB Transformers that are not registered are not authorized for use and must be disposed of.

In general, a person who assumes that a transformer is a PCB-Contaminated Transformer, and then discovers that it is a PCB Transformer, must register that transformer with the EPA within 30 days of discovering that it is a PCB Transformer. However, this requirement only applies if the transformer is located at an address where no other PCB Transformers are located. If other PCB Transformers are located at the same address, and those PCB Transformers are registered with EPA, the owner of the newly-identified PCB Transformer is not required to register that transformer with the EPA.

Under § 761.30(a)(1)(vi)(D), the registration requirement will be a part of the authorization for continued use for each PCB Transformer. To remove duplicate reporting, EPA is also deleting the existing requirements to register PCB Transformers with the fire department. Since this registration will be sent to EPA Headquarters, it enhances the current registration requirement by providing a central point for information collection and dissemination. However, based on comments requesting a longer period of time in which to register transformers, EPA is extending the date to have PCB Transformers registered from 90 days to 120 days from the effective date of today's rule.

The information required for this registration now includes the following: (1) Company name and address, (2) contact name and telephone number, (3) location of transformer(s) (address, or for a mobile source like a ship, the name of the ship), (4) number of PCB Transformers and the total weight of the transformers in kilograms, (5) whether any transformers at this location contain flammable dielectric fluid (optional), and (6) signature of the owner, operator, or other representative authorized to certify the accuracy of the information submitted. EPA Form No. 7720-12, provided at Unit V. of this preamble, has been submitted to OMB for review. Once OMB clears the form, it may be used for the uniform submission of registration information, but its use will be optional. In lieu of the form EPA will accept the registration information on company stationery. Where a company has multiple locations, EPA will accept one form or cover letter which provides information pertaining to the company (including a point of contact), followed by attachments that provide information (per § 761.30(a)(1)(vi)) specific to each location. Finally, anyone who no longer possesses any PCB Transformers and would like to be removed from the data base can notify EPA in writing. Notification to remove a company or location from the data base is strictly voluntary.

b. *Remove outdated material.* EPA proposed to remove provisions of 40 CFR part 761 that have become outdated due to the passage of time. All of the affected provisions were in subpart B (i.e., prohibitions and authorizations). EPA received very few comments on its proposal; no opposing comments were received regarding the proposed changes at § 761.30(b), (c), (d), and (e). EPA received a comment that § 761.30(g), which authorizes the use in other than a totally enclosed manner of 50 ppm or greater PCBs in diarylide and phthalocyanin pigments until January 1, 1982, is obsolete. This provision further restricted the processing and distribution in commerce of these pigments with PCB concentrations of 50 ppm or greater after July 1, 1979, and

their limited manufacture after July 2, 1979, to those individuals who are granted exemptions from EPA. EPA agrees with the commenter. The manufacture, processing, and distribution of products containing inadvertently generated PCBs at concentrations of less than 50 ppm are currently regulated by provisions found at §§ 761.1(f), 761.3, 761.185, 761.187, and 761.193. In today's final rule, EPA is deleting the authorization currently found at § 761.30(g) and is finalizing the proposed revisions to the authorizations at § 761.30(b), (c), (d), (e), and (h).

One commenter identified a drafting error in § 761.30(h) regarding the use conditions for electromagnets, switches, and voltage regulators which incorrectly directed individuals to inspection requirements at § 761.30(a)(1)(iii) and (a)(1)(iv). Since the use of electromagnets at concentrations of 500 ppm or greater was prohibited in areas which pose an exposure risk to food or feed after October 1, 1985, EPA is also deleting the visual inspection requirement currently found at § 761.30(h)(1)(ii). A revised (h)(1)(ii) has been included (see the discussion on voltage regulators) which changes the incorrect references to read ''§ 761.30(a)(1)(ix), (a)(1)(xiii), and (a)(i)(xiv)'' where such an inspection is now required.

EPA also proposed to remove the § 761.20(c)(3) provisions requiring submission of a notice to EPA prior to exporting PCBs or PCB Items for disposal. This proposal is not being finalized at this time. As explained in Unit IV.J. of this preamble, EPA is deferring its rulemaking on export until a later time.

c. *Voltage regulators*. Current § 761.30(a)(1)(xv) requires owners of mineral oil transformers that had been assumed to contain 50 ppm or greater PCB, but less than 500 ppm PCB, but are tested and found to contain 500 ppm or greater PCBs, to bring those units into compliance with part 761. EPA proposed the same requirements for voltage regulators (see proposed § 761.30(a)(1)(xvi)). Voltage regulators which were marked or otherwise known to contain PCBs at 500 ppm or greater would also be required to come into compliance with part 761. Under existing rules, mineral oil-filled electrical equipment (including voltage regulators) that was manufactured before July 2, 1979, and whose PCB concentration is not established is assumed to be PCB-Contaminated Electrical Equipment (i.e., contains ≥50 ppm PCB, but <500 ppm PCB).

Due to the risks associated with higher concentration PCBs, the final rule requires that voltage regulators that contain 3 pounds or more of dielectric fluid containing 500 ppm or greater PCBs must be properly marked while in service, their locations must be marked, fire-related incidents must be reported, regular inspections must be conducted, records must be kept pursuant to § 761.180, and they must be properly disposed of when they are taken out of service. These are essentially the requirements that currently apply to PCB Transformers. EPA believes the same requirements are appropriate for voltage regulators containing ≥500 ppm PCBs based on the similarity between the functions of and risks posed by the two types of equipment. Small voltage regulators (less than three pounds of PCB dielectric fluid) are subject to the disposal provisions of § 761.60, but not the use provisions mentioned above.

EPA solicited comments on the appropriateness of requiring enhanced electrical protection for voltage regulators as is the case for mineral oil transformers known or found to contain greater than or equal to 500 ppm PCBs. Commenters indicated that enhanced electrical protection cannot be installed on voltage regulators. Therefore, EPA will not require this.

In addition, EPA solicited comments on whether voltage regulators should be added to existing § 761.30(a)(1)(xv) with transformers, or placed in a separate paragraph. In response to comments, EPA added the amendments to § 761.30(h)(1), which currently addresses voltage regulators.

EPA received suggestions that it should apply the voltage regulator requirements to all mineral oil (assumed to be < 500 ppm PCBs) electrical equipment found to be greater than or equal to 500 ppm. None provided data, however, to indicate the types of unregulated electrical equipment that may contain greater than or equal to 500 ppm PCBs. As explained in the NPRM, EPA has data indicating that approximately 2% of voltage regulators contain PCBs greater than or equal to 500 ppm. Due to the lack of data on other mineral oil electrical equipment that may contain PCBs greater than or equal to 500 ppm, EPA is not applying this standard to other mineral oil filled electrical equipment.

Commenters also pointed out that many voltage regulators contain an internal PCB-containing capacitor that may rupture or leak. They felt that it was important to remove this capacitor if one was conducting a retrofill prior to reclassification to avoid fluid leaking from the capacitor and contaminating the replacement fluid. EPA agrees that this is a prudent practice and highly recommends, although is not requiring, that if such a capacitor is found in the voltage regulator, it be removed and replaced with one that is non-PCB.

d. *Natural gas pipeline systems*. EPA has worked for several years to address PCB contamination in natural gas pipelines and associated equipment, such as air compressors. The reasons for the presence and movement of PCBs in gas pipelines are not well understood, but it may have occurred through use of PCB-containing lubricating oils in compressors, fogging of pipeline systems with PCB-containing oil vapor, and PCB migration from contaminated natural gas pipeline systems. PCBs primarily move with the condensate liquids that form in the pipelines. Some natural gas pipeline systems still contain PCBs in liquid condensate despite repeated attempts to rid the systems of PCBs. (See, for example, comments of Interstate Natural Gas Association of America, May 1, 1995, C1-134).

In response to these contamination issues, EPA initiated a compliance monitoring program for companies with >50 ppm PCBs in their pipelines, where EPA presumed that any pipeline showing PCB contamination >50 ppm was contaminated along its whole length. As a result, EPA has used various administrative mechanisms to declassify or decontaminate pipeline and pipeline system components.

In the NPRM, EPA proposed changes to the use authorization for natural gas pipelines and related appurtenances which are contaminated with 50 ppm or greater PCBs. EPA requested comment on additional changes to § 761.30(i) at the June 6-7, 1995 public hearing. EPA proposed to define ''natural gas pipeline systems'' to include not only natural gas pipe and appurtenances but also natural gas compressor systems (see 59 FR 62855). EPA excluded air compressors and appurtenances and proposed a separate definition for ''compressed air systems.'' EPA proposed to expand the use authorization in § 761.30(i) to include natural gas pipeline systems contaminated with 50 ppm or more PCBs, provided the owner or operator of the pipeline notified EPA of the contamination, characterized its extent, sampled and analyzed potential sources of contamination, took remedial measures such as removing the contamination sources or reducing the PCB concentration to <50 ppm, and documenting these actions. The proposed regulations also gave EPA flexibility to adjust these requirements based on the unique needs or history of particular pipeline systems and past Federal, State or local regulatory

actions. EPA also proposed that PCB-Contaminated pipelines and appurtenances which had been drained of all free-flowing liquids could be reused in any natural gas pipeline system or distributed in commerce for other specific uses (e.g., transport of bulk hydrocarbons, chemicals, or petroleum products).

The natural gas pipeline industry strongly supported revising the use and reuse authorizations while offering specific comments regarding cost effective and flexible approaches to regulating their industry. EPA has responded to as many of these concerns as possible while ensuring that the natural gas pipeline industry continues to actively reduce PCB concentrations below 50 ppm in natural gas pipeline systems. Today's rule does not allow the introduction of PCBs into natural gas pipeline systems; instead it authorizes the use and reuse of natural gas pipeline systems that were contaminated with PCBs in the past, provided certain actions are taken. Unless use of the system was authorized, the system would have to cease operation until the PCBs were removed, burdening the public by making fuel more costly or unavailable. EPA believes this burden would outweigh the risk posed by allowing continued use of the system, so long as the PCBs are contained in the system, are regularly removed in the condensate, and, when removed, are stored and disposed of in accordance with these regulations.

Today's final rule broadens the proposed definition of ''natural gas pipeline systems'' to include natural gas gathering facilities, natural gas pipe and pipeline appurtenances, natural gas compressors, and natural gas storage facilities. Both interstate and local distribution natural gas pipeline systems are covered under today's rule. Additionally, air compressors are not included as a part of natural gas pipeline systems because their use is not unique to the natural gas pipeline industry. Air compressor systems are now defined separately in § 761.3 and their use is authorized under specific conditions in § 761.30(t).

The use authorization promulgated today in § 761.30(i) for natural gas pipeline systems is modified slightly from the NPRM in response to comments requesting more realistic time frames and flexibility (e.g., allowing the use of historical data to satisfy requirements for notification to EPA, sampling and analysis, or decontamination). The rule now authorizes the continued use of PCBs in natural gas pipeline systems at <50 ppm. The rule also authorizes the continued use of PCBs at concentrations ≥50 ppm in natural gas pipeline systems not owned or operated by a seller or distributor of natural gas; owners or operators of these systems have no obligations under § 761.30(i). For systems which are owned or operated by a seller or distributor of natural gas, continued use is authorized at concentrations ≥50 ppm if steps are taken to identify and reduce PCBs to <50 ppm in demonstrated sources of PCBs within the natural gas pipeline system. EPA has also extended the time frames under § 761.30(i). With respect to the § 761.30(i)(1)(iii)(A)(*2*) sampling requirement, EPA agrees with a commenter's suggestion that the 120–day period begin with the effective date of today's rule where pipeline owners are aware of existing PCB contamination.

Commenters noted that they could not be responsible for addressing sources of PCB contamination which resulted from companies outside their control. Any natural gas pipeline systems which do not include potential sources of PCB contamination, such as scrubbers, compressors, or filters containing PCB concentrations of 50 ppm or greater, are generally exempt from the requirements for identifying, characterizing, and reducing sources of PCBs, provided documentation regarding this is maintained. For example, the owner/operator of a local natural gas distribution system meeting these conditions would need to document that the most likely source of PCB contamination was the natural gas pipeline system that supplied their natural gas. However, any natural gas pipe or liquids which are contaminated with PCBs are subject at removal to the applicable disposal, decontamination, or reuse provisions, to reduce the PCB contamination levels in the system. Some commenters were concerned that natural gas end users, such as homeowners and businesses, would be covered by the regulations. Because end users are excluded from the definition of natural gas pipeline system in § 761.3, they are not subject to the requirements of § 761.30(i).

EPA is dropping the § 761.45(a) marking requirement for natural gas pipeline contaminated with PCBs at <50 ppm which was formerly required at § 761.30(i). Commenters stated that marking underground pipe is unworkable and unnecessary for <50 ppm PCBs. EPA, however, is requiring that aboveground pipeline system components containing PCB liquids at ≥50 ppm bear the M_L Mark in accordance with § 761.45(a) because of potential exposure to PCB liquids. (See § 761.30(i)(1)(iii)(A)(*6*) of the regulatory text). Thus, the marking requirements apply to equipment such as compressors, valves, drips or other pipeline components that are aboveground, are used to contain or collect PCB liquids, and where historical data or recent sampling data indicate PCBs at ≥50 ppm. EPA also solicited comments in the NPRM on whether it should require marking of individual natural gas pipe temporarily stored for testing prior to disposal (59 FR 62855). Commenters opposed this as too burdensome and unnecessary when the storage area is marked. EPA agrees and is not requiring marking of individual pipe in temporary storage areas.

Today's rule incorporates proposed reuse options in certain low exposure uses for PCB-Contaminated (50-<500 ppm) natural gas pipelines that have been drained of all free-flowing liquids (see § 761.30(i)(2) and (i)(3)). The basis for these options was EPA's risk assessment for natural gas pipe (Ref. 9). Some commenters requested that EPA further expand the use authorization to allow drained natural gas pipe to be melted or smelted for metal recovery. They claimed that the proposal, which required PCB-Contaminated pipe to be burned in industrial furnaces, was too restrictive (see proposed § 761.60(a)(4), finalized as § 761.72). They stated that steel melting furnaces would not accept natural gas pipe under these conditions, thereby eliminating a cost-effective and safe reuse for their pipe. EPA is addressing pipe smelting as disposal under § 761.72 (see Unit IV.E. of this preamble).

Commenters also requested use and reuse authorizations for pipelines that were presumed to contain >500 ppm PCBs due to EPA's assumption policy or historical sampling indicating such contamination. Without this authorization, commenters were concerned that legitimate reuses of contaminated natural gas pipeline and appurtenances within existing pipeline systems or for other purposes would be precluded.

The final use and reuse authorization for PCBs in natural gas pipeline systems envisions a declining PCB concentration over time to below 50 ppm. Under the new § 761.30(i)(4), EPA is allowing the characterization of natural gas pipeline liquids, components, and segments based on the actual PCB concentrations at removal, rather than former presumptions or historical data. Liquids may be collected at existing condensate collection points in the pipe or pipeline system. The level of PCB contamination found at a collection point is assumed

to extend to the next collection point downstream.Natural gas pipe appurtenances or components that do not contain free-flowing liquids must be tested for surface level PCB concentrations using the standard wipe test (see part 761, subpart M). If drained natural gas pipe or appurtenances will be reused under § 761.30(i)(2) or (i)(3), rather than disposed of, testing is not required.

In a June 6, 1988, letter, EPA stated that it would presume that natural gas pipelines in EPA's 1981 Compliance Monitoring Program were contaminated at ≥500 ppm PCBs due to the discovery of such concentrations in components of the natural gas pipeline system or because natural gas purchased from another system had shown ≥500 ppm PCBs (Ref. 10). Much progress has been made in reducing PCB concentrations in natural gas pipelines under the Compliance Monitoring Program. Thus, EPA is formally ending the Program and releasing the affected natural gas pipeline companies from any further obligations under it as of the effective date of today's rule. Therefore, EPA's 500 ppm presumption policy for natural gas pipeline systems no longer applies. EPA believes that the final rule adequately addresses remaining actions necessary to further reduce PCB concentrations in natural gas pipelines while providing regulatory flexibility and reduced compliance costs.

One commenter asked EPA to clarify the relationship between the proposed regulations and EPA Technical Guidance Documents (TGDs). The commenter requested that EPA allow regulated entities the option of using TGDs and ADPs to meet the proposed requirements (e.g., §§ 761.30(i)(5) and 761.60), particularly with respect to using existing PCB concentrations rather than presumed concentrations. The three TGDs for declassification, abandonment, and classification of stored pipe (Refs. 11, 12, and 13) were developed to implement EPA's presumption policy of PCB contamination at ≥500 ppm. As discussed above, today's rule eliminates the presumption policy and allows natural gas pipeline systems to be managed based on actual PCB concentration. Therefore, today's regulations supersede these guidance documents.

e. *Research and development (R&D).* In the NPRM, EPA addressed the manufacture, use, processing, and distribution in commerce of PCBs and PCB waste material as analytical reference standards for research and development. EPA's objective in amending the § 761.30(j) use authorization was to clarify the types of activities covered by the R&D provision. Also, EPA wanted to broaden the category of PCBs covered by the authorization to facilitate real-world PCB cleanup activities (e.g., to include analytical reference samples from PCB waste materials, rather than limiting R&D activities to the use of less than 5 milliliters of hermetically sealed vials of PCBs). EPA clarified that the kind of activities for which the use of PCBs or analytical reference samples derived from PCB waste material is authorized includes, but is not limited to, chemical analysis or analyses which examine the concentration, physical properties, toxicity, environmental fate, health effects, transport processes, and metabolic products of PCBs.

Although the use of PCBs and PCBs in analytical reference samples derived from waste material is authorized in conjunction with PCB disposal-related activities, PCB disposal activities are governed by the requirements at § 761.60. Therefore, R&D into PCB disposal-related activities using limited quantities of PCBs is addressed at § 761.60(j) and is treated differently from all other R&D uses of PCBs when the intent is the development, assessment, and/or the perfection of a disposal technology. When the intent of the activity is an R&D study of PCBs, such as those activities listed above, it is an authorized use under § 761.30(j). When the intent of the activity is to conduct a study using PCBs to develop or assess the efficiency of PCB disposal technologies, it may qualify as a self-implementing R&D activity for PCB disposal pursuant to § 761.60(j).

Under § 761.30(j), analytical reference samples derived from PCB waste materials may be used if they have been obtained from an authorized source (i.e., in accordance with § 761.80(h) or (i)) and are packaged pursuant to Hazardous Material Regulations at 49 CFR parts 171 through 180. All PCB wastes resulting from the use of these samples during PCB R&D activities are required to be stored in compliance with § 761.65(b), must be manifested during transport to an approved storage or disposal facility, and once the use of PCB waste samples is complete, they must be disposed of in accordance with all applicable Federal, State, and local laws and regulations, including 40 CFR part 761.

Commenters noted the confusion created by having two R&D provisions, one relating to disposal (§ 761.60(j)), and one to other R&D activities (§ 761.30(j)). TSCA recognizes various categories of PCB activities: manufacture, processing, distribution in commerce, use, disposal, and combinations of such activities. The regulations generally adopt that structure, and the existence of two R&D provisions is therefore not new. EPA's intent is not to integrate disposal and use activities; to do so, would cause more confusion about the PCB R&D disposal approval requirements.

Two examples raised by one commenter illustrate the scope of the two R&D provisions. First, the analysis of PCB photochemical properties is R&D, but also destroys PCBs. To determine the applicable PCB provision, one should first assess the intent of the activity. Since the stated objective is to analyze the photochemical properties of PCBs, § 761.30(j) applies. EPA recognizes that analytical procedures may destroy PCBs, but that was not the objective in this example. Nor was the objective to develop, evaluate, or refine a disposal technology--activities requiring an R&D disposal approval under the existing rules.

Second, PCB waste materials are used as quality assurance samples to measure experimental error of analytical or scientific methods for PCBs. The expansion of the R&D use authorization to include these media is in response to the need to conduct PCB analyses on ''weathered'' PCBs such as those found at cleanup sites. These wastes can be used in interlaboratory studies to determine the toxicity and potential effects to health and the environment of PCBs that have bioaccumulated in the environment over time. When the waste sample is used to develop, evaluate, or refine a disposal activity, § 761.60 applies (e.g., § 761.60(j) for PCB R&D disposal activities using less than 1 kilogram of pure PCBs, or § 761.60(i)(2) where otherwise appropriate). Otherwise, use of the waste sample in analytical procedures would be conducted pursuant to § 761.30(j).

Another commenter suggested that EPA expand § 761.30(j) to read: PCBs may be used for R&D ''as samples of environmental media or mixtures of PCBs and solid waste'' to ensure that mixtures of PCBs, such as waste oil containing PCBs, could be used in R&D. Since the comment was so general, EPA is uncertain as to whether the commenter is concerned that they would be prevented from obtaining analyses of PCB mixtures. If the commenter's concern is about acquiring laboratory services to analyze samples of PCB mixtures, no further changes are required since chemical analysis is an authorized use of PCBs under § 761.30(j). The fact that the PCBs are found in samples of waste mixtures such as waste oil or solid waste does not preclude a laboratory from analyzing

them. EPA has modified the authorization to include PCBs in analytical reference samples derived from waste materials, if such samples are processed and distributed in commerce by persons with a TSCA section 6(e)(3)(B) exemption (e.g., either an individual exemption or as a member of the class exemption).

Commenters also confused the use authorization for PCBs and PCBs in analytical reference samples derived from waste materials at § 761.30(j) with the class exemption for processors and distributors of PCBs and analytical reference samples derived from PCB waste material at § 761.80(i). Section 761.30(j) authorizes the use of these materials in research and development — TSCA bans the use of PCBs unless authorized by rule. Section 761.80(i) allows individuals covered by the class exemption to gather and package (i.e., process) PCBs and analytical reference samples derived from PCB waste material for distribution in commerce. TSCA also bans processing and distribution in commerce of PCBs, but provides the exemption process by which EPA may allow such activities. Because TSCA provides different mechanisms for allowing use of PCBs as distinct from processing and distribution in commerce, these different activities are dealt with in separate sections of the rule.

Additionally, commenters found confusing EPA's proposed limitation of the PCB volumes used for R&D. EPA has concluded that limiting the quantity of a facility's use of PCBs is not necessary since quantity limitations have been established elsewhere in the regulations contingent upon the activity being conducted (e.g., processing, distribution in commerce, R&D for PCB disposal). However, EPA has retained the definition for ''small quantities for research and development'' since provisions previously established by EPA were based on this narrowly crafted definition and contributed to EPA's determination that the constraints were a sufficient precaution against the risk of human or environmental exposure to PCBs.

Also, EPA would have required notification of the appropriate Regional Administrator at least 30 days prior to the commencement of any R&D activity authorized under § 761.30(j). Commenters questioned whether EPA really intended for laboratories to notify the Agency of their R&D use activities. EPA agrees that the notification requirement is confusing and unnecessary, and has removed it from the use authorization at § 761.30(j).

Commenters representing university laboratories interpreted the scope of the PCB regulations to exclude educational institutions, such as labs at universities, from compliance with the PCB regulations. Commenters confessed confusion regarding EPA-approved activities and viewed the proposed use authorization at § 761.30(j) as being a framework for current research activities that would enable them to be in compliance with EPA rules. Unless specifically exempt, TSCA and its implementing regulations apply to all ''persons'' as defined in the regulations, which includes educational institutions (see § 761.3). Activities involving the use of PCBs are banned unless specifically authorized by 40 CFR part 761. Individuals are encouraged, therefore, to direct their inquiries to the Office of the Director, National Program Chemicals Division (7404), Office of Pollution Prevention and Toxics, 401 M St., SW., Washington, DC 20460, or their Regional PCB Coordinator, if they are uncertain about whether an activity is prohibited under TSCA and impacts their ability to engage in certain PCB activities such as qualifying for an EPA grant.

f. *Contaminated porous surfaces*. In response to comments, EPA has added a use authorization for contaminated porous surfaces contaminated by spills of liquid PCBs, such as concrete, wood, and coated metal surfaces. The authorization requires self-implementing controls to reduce exposure to the spilled PCBs and to restrict further migration of the PCBs from or within the porous material (see § 761.30(p)). Without this use authorization, these materials would have to be removed and disposed of. EPA agrees with comments that the removal of porous materials contaminated by spills of liquid PCBs is economically burdensome and unnecessary where release of and exposure to the PCBs can be controlled. EPA believes that the use conditions specified in § 761.30(p) will effectively prevent exposure to any residual PCBs in the contaminated porous material and therefore continued use of this material will not present an unreasonable risk. If a spill occurred on concrete and the source seeped through the concrete and into the underlying soil, the responsibility for addressing contamination to the underlying soil remains, even though the concrete could possibly meet the specified conditions.

g. *Rectifiers*. EPA is aware that a certain number of oil-filled and solid-state rectifiers (devices that convert alternating current to direct current) contain PCBs. Therefore, EPA proposed to authorize the continued use, at § 761.30(r), of PCBs at any concentration in rectifiers, and PCBs at less than 50 ppm to be used in servicing rectifiers for the remainder of their useful life.

EPA solicited comments and data on the following: (1) The number of rectifiers currently in use, (2) the extent of PCB contamination in rectifiers, (3) the size of such units and whether EPA should adopt a *de minimis* PCB volume at or above which rectifiers would be regulated under TSCA (e.g., in the same manners as capacitors with less than 1.36 kgs (3 pounds) of fluid are considered small and generally not regulated under TSCA for disposal), (4) the number of oil-filled versus solid state rectifiers, and (5) any information supporting a use authorization for rectifiers.

EPA is finalizing § 761.30(r) as proposed. Commenters indicated that rectifiers were typically found with less than 50 ppm PCBs. Therefore, due to their generally low concentration, EPA concludes that continued use of rectifiers for the remainder of their useful lives will not pose an unreasonable risk. Rectifiers are therefore authorized for continued use as long as they are serviced only with less than 50 ppm PCBs.

h. *Scientific instruments*. EPA proposed, at § 761.30(k), to authorize the use of up to 100 milliliters of PCBs at any concentration in scientific instruments, provided the PCBs were in use in the instrument at the time the final rule became effective. In today's final rule, EPA is dropping the ''in use'' provision based on comments that not all instruments are continually in use. In addition, a commenter was confused as to whether other currently authorized existing uses of PCBs in electrical equipment or scientific instruments not specifically mentioned in the authorization would now be prohibited. To clarify, this authorization does not prohibit other authorized uses of PCBs, such as in electrical transformers and capacitors, in instruments used for scientific study.

Commenters stated that experiments could require up to 150 milliliters of PCBs. Commenters also stated that the possibility of releases from scientific instruments is minimized because of OSHA's Laboratory Standards at 29 CFR § 1910.1450. Based on these comments, EPA concludes that the use of PCBs in scientific instruments at greater than 100 milliliters will not pose an unreasonable risk, the final rule does not retain the 100 milliliter limit.

Finally, EPA combined the proposed authorization at § 761.30(s) and three existing use authorizations, § 761.30(k),

Microscopy mounting medium; § 761.30(n), Microscopy immersion oil; and § 761.30(o), Optical liquids, into a single authorization at § 761.30(k) entitled ''Use in scientific instruments.'' Each of the four uses is included in the new combined authorization.

i. *Air compressor systems.* EPA proposed a use authorization and decontamination standards for air compressor systems as part of the use authorization for natural gas pipeline systems at § 761.30(i). In today's final rule, however, EPA has added a separate definition for ''air compressor systems'' at § 761.3 and authorized the use of PCBs in concentrations of ≥50 ppm in air compressor systems under specific conditions in § 761.30(s) to allow a reasonable time frame for removal and reduction of PCBs. The Agency made this change because the use of air compressors is not unique to the natural gas pipeline industry. Additionally, the decontamination requirements for air compressor systems are now found in the decontamination section in § 761.79.

As with natural gas pipeline systems, EPA believes that allowing continued use of the air compressor system while the PCBs are being removed does not pose an unreasonable risk, so long as the PCBs are contained in the system, are regularly removed in the condensate, and, when removed, are stored and disposed of in accordance with these regulations.

j. *Other gas and liquid transmission systems.* Commenters agreed with EPA's proposal to authorize use of PCBs in natural gas pipeline systems, but suggested that EPA expand the authorization to include other types of transmission systems. EPA has less comprehensive data regarding these other transmission systems, but the information indicates that these systems would be smaller in size than most natural gas pipeline systems. For this reason, and because of the wide variety of these systems, such an authorization is generally best made on a case-by-case basis. Therefore, under § 761.30(t) in today's rule, EPA is authorizing the use of PCBs at concentrations ≥50 ppm in other gas and liquid transmission systems which are owned or operated by a seller or distributor only with the written approval of the Director, National Program Chemicals Division. Owners or operators of these systems must take steps to identify and reduce PCBs to <50 ppm in demonstrated sources of PCBs within the pipeline system. This use authorization provides a mechanism to address rare cases of PCB-Contaminated gas or liquid systems which may not be authorized elsewhere to ensure that these systems are identified and cleaned to below 50 ppm PCBs. The rule also authorizes the continued use of PCBs in pipeline systems at <50 ppm. In addition, the rule authorizes the continued use of PCBs at concentrations ≥50 ppm in pipeline systems not owned or operated by a seller or distributor; owners or operators of these systems have no obligations under § 761.30(t).

k. *Use/reuse of decontaminated materials.* EPA clarifies in § 761.30(u) of today's rule that equipment, structures, or liquid or non-liquid materials that were contaminated with PCBs ≥50 ppm may be used or reused once decontamination standards and applicable use conditions set forth in § 761.30(u) are met. However, these materials may not be used or reused in direct contact with food, feed, or drinking water unless otherwise allowed in part 761. This restriction is designed to limit cross-contamination, thus reducing risk from PCB ingestion (see § 761.30(u)(2)). Water may, however, be used or reused without restriction if it is below the decontamination standard of 0.5 micrograms per liter in § 761.79(b)(1). Water containing PCBs at concentrations <200 µg/L (approximately 200 ppb) may be used or reused in industrial processes where there is no release from the process (e.g., as a non-contact cooling water).

Some commenters asked when equipment, structures, and other liquid or non-liquid materials used intermittently in PCB decontamination, cleanup, or servicing activities must be decontaminated. These items include, but are not limited to: distillation columns; wastewater treatment units; metal pans used to collect PCB liquids; and tools and other equipment used in cleanup activities. While in use, equipment such as that used in a wastewater treatment system (e.g., piping, filter-cake presses, and precipitators) is operating as a PCB waste management unit conducting decontamination activities as described in § 761.79 and as such does not need a TSCA PCB disposal approval. Any wastes removed from the equipment, such as filter-cakes or distillation bottoms, are subject to the PCB regulations based on the PCB concentration at removal.

Inactive equipment contaminated with PCBs as a result of its use during cleanup, decontamination, or servicing, but which will be reused for the same activities, may be eligible for the provisions for storage of PCB Articles designated for reuse in § 761.35 (see Unit IV.C. of this preamble). If the equipment will no longer be used, then it is subject to the subpart D storage and disposal requirements. If the equipment is inactive for less than 30 days, the temporary storage for disposal provisions for PCB Items under existing § 761.65(c)(1) could be utilized; after 30 days, the 1–year storage for disposal requirements in § 761.65(b) apply. If the equipment is decontaminated according to §§ 761.79 and 761.20(c)(5), it is exempt from further TSCA regulation.

C. Storage of PCB Articles Designated for Reuse

EPA proposed at § 761.67 to limit storage for reuse of PCB Articles in areas not designed, constructed, and operated in compliance with § 761.65(b) for a maximum of 3 years from the later of the date a PCB Article was taken out of service or the effective date of today's final rule. PCB Articles would have to be labeled when they were taken out of service and placed into storage for reuse. In addition, the storage for reuse of any PCB Article would have to comply with all marking and recordkeeping requirements. Information required on the labels for PCB Articles being stored for reuse would include the date the equipment was placed into storage for reuse or the effective date of the final rule, if the other date is not known; a projected location for the equipment's future use; and the date the equipment was scheduled for repair or servicing, if appropriate.

Commenters indicated that 3 years was not a sufficient time period for storing articles for reuse. Some commenters indicated that storage should be unlimited because of the 1– to 2–year lead time required for manufacturers to supply new equipment. Also, for electrical utilities or natural gas pipelines, commenters pointed to the urgency to maintain service by having replacements for emergencies at hand. Therefore, the Agency is extending the storage for reuse provision from 3 years to 5 years.

Commenters also disagreed with the storage for reuse labeling requirement, or indicated that the labeling requirement was burdensome and unnecessary because information EPA proposed to require on the label was already maintained in the annual document log. Based on comments received, EPA is not finalizing the proposed labeling requirement. PCB Articles are already required to be labeled indicating when they were placed in storage for disposal (§ 761.65(c)(8)). Therefore, requiring PCB Articles being stored for reuse also to be labeled could be confusing.

EPA is retaining at § 761.35 the other proposed recordkeeping requirements for PCB Articles being stored for reuse since much of this information is normally maintained in the facility's annual document log. The Agency believes that owners or operators with PCB Articles being kept for reuse already maintain records indicating when articles are removed for servicing or repair because of scheduling and budgeting purposes.

Commenters also indicated that the proposed requirement that owners or operators indicate the future use location of a PCB Article being stored for reuse was burdensome and unnecessary. The Agency disagrees. The knowledge on where an article was proposed for reuse distinguishes the article from one being stored for resale or disposal. The latter types of storage are prohibited unless appropriate regulatory controls are followed. Therefore, EPA is requiring that the projected location of the article to be included in the facility's annual document log.

Electrical utilities and natural gas pipeline or transmission companies commented that storing PCB Articles in an area which is designed, constructed, and operated in compliance with § 761.65(b) could cause delays in repairing equipment and restoring service to customers, without significantly reducing risk to health and the environment. EPA understands that emergency situations may require that certain PCB Articles be stored in close proximity to their potential use locations and in this final rule allows such articles to be stored for reuse in an area which was not designed, constructed, and operated in compliance with § 761.65(b) for no more than 5 years. PCB Articles may be stored for reuse indefinitely in an area designed, constructed, and operated in compliance with § 761.65(b), or outside such an area provided that the owner or operator has received written approval from the EPA Regional Administrator for the Region in which the article is stored.

D. Marking

EPA proposed several changes to the § 761.40 marking requirements, including changes to the marking of transport vehicles, storage units, Large Low Voltage Capacitors in use, and equipment in use containing PCB Transformers and PCB Large Capacitors. EPA also proposed an associated clarification to the PCB concentration assumptions for capacitors (see Unit IV.A.1.c. of this preamble).

1. *Transport vehicles*. Existing § 761.40(b) and (e) require the marking of transport vehicles carrying one or more PCB Transformers or 45 kg of liquid PCBs at concentrations of 50 ppm or greater. Existing § 761.40(b) and (e) essentially express the same requirements regarding marking transport vehicles loaded with liquid PCBs at 50 ppm or greater. EPA proposed to eliminate this duplication by combining references to the marking requirement for transport vehicles at § 761.40(b) and (e) under proposed paragraph (d), thus leaving the requirements for the remaining PCB Items under paragraph (e). EPA also proposed to extend the marking requirement to transport vehicles carrying 45 kg of PCBs (≥50 ppm) in any phase to make the marking requirements for transport vehicles carrying non-liquid PCBs consistent with those carrying liquid PCBs.

Commenters expressed general support for EPA's overall objective of clarification and elimination of duplication. However, most commenters opposed marking transport vehicles carrying non-liquid PCBs as unnecessary and problematic. For instance, utilities would have to mark service trucks because they occasionally transport one or more drums of waste from a cleanup site. Some commenters requested that EPA rescind the TSCA vehicle marking requirement altogether and defer to DOT placarding standards for vehicle marking. Several commenters noted that as drafted, the proposed rule would unintentionally be retroactively effective.

In today's final rule, EPA is combining references to the marking requirement for transport vehicles carrying liquid PCBs at existing § 761.40(b) and (e) under paragraph (b) (rather than paragraph (d) as proposed) and leaving the requirements for the remaining PCB Items under paragraph (e). This amendment does not result in any substantive change to the existing provisions at § 761.40.

The Agency is not finalizing the proposal to mark transport vehicles containing non-liquid PCBs. This change would impose more burdens on the regulated community than EPA envisioned, and is likely to complicate, rather than simplify, compliance. EPA agrees that it is not desirable to require utility service fleets to carry PCB labels on a routine basis when they will only occasionally transport small amounts of non-liquid PCBs. Regarding the comments recommending that EPA eliminate all the existing requirements at § 761.40 to mark transport vehicles, EPA believes that such a change would be outside the scope of this rulemaking, because EPA proposed to retain and strengthen these requirements.

Also, a commenter expressed concern that forklifts used to move PCB containers would require marking as transport vehicles. EPA clarifies that forklifts used on site (e.g., not used on public roads) are not considered transport vehicles and are not required to be marked as such under § 761.40(b).

Several commenters believe the 45 kg threshold for marking transport vehicles is based on the mass of the actual PCB molecules in the liquid. This has never been the case. Marking is triggered by 45 kg total weight of the material containing 50 ppm or more of PCBs, irrespective of the weight of the PCB molecules in that material, and has been since promulgation of the Disposal and Marking rule (43 FR 7150, February 17, 1978). For instance, a single drum containing 45 kg of mineral oil dielectric fluid at 50 ppm PCBs triggers the marking provisions. The total material weight also applies to the 45 kg trigger for recordkeeping provisions at existing § 761.180(a). This issue is clarified by new language at § 761.1(b)(6).

2. *Storage units*. Existing § 761.40(h) requires M_L marks on PCB Items and transport vehicles to be placed so that they can be easily read. EPA proposed modifying § 761.40(h) to require marks on storage units. No significant comment was received on the proposal and it is finalized as proposed.

3. *Large Low Voltage Capacitors*. In the NPRM, EPA noted that PCB Large Low Voltage (LLV) Capacitors often are not identified and disposed of properly at the time of removal, because they are not required to bear the M_L mark while in use. Accordingly, EPA proposed to require the marking of those PCB LLV Capacitors still in use, within 180 days of the effective date of the final rule. Allowances identical to those at existing § 761.40(c)(2) for PCB Large High Voltage (LHV) Capacitors were made for PCB LLV Capacitors in inaccessible locations.

EPA received several comments on the proposal. Some commenters felt the rule was reasonable and sensible, others that it was burdensome and that PCB LLV Capacitors in use posed little risk. Commenters expressed concern about the number of capacitors that would require marking under this rule, but provided no data or analysis to support contentions on the proposal's burden or the risk associated with unmarked PCB LLV Capacitors in use. One commenter noted that access to PCB LLV Capacitors in some equipment would be difficult. More than one commenter requested

that EPA allow records of unmarked PCB LLV Capacitors to be maintained off-site.

EPA believes that it is important to revise the marking provisions to include PCB LLV Capacitors in use. PCB LLV Capacitors in use were exempted from marking with the M_L in the original Disposal and Marking rule (43 FR 7150), to reduce the burden associated with the large numbers then in use. Instead, PCB LLV Capacitors were to be marked upon removal from use, and new non-PCB LLV Capacitors were required to be labeled ''No PCBs'' to distinguish them from unmarked PCB LLV Capacitors in use. The Agency's regional staff have reported observing over the last several years that PCB LLV Capacitors, being unmarked, are often mistaken by uninformed personnel as non-PCB, and disposed of improperly (rather than being identified as PCB, marked with an M_L, and disposed of as PCB waste). This problem will only increase, as aging PCB LLV Capacitors approach the end of their service life and are removed in increasing numbers. Industry familiarity with the 1978 M_L marking exception for PCB LLV Capacitors is likely to decline in the future, increasing the number of PCB LLV Capacitors misidentified for disposal. To complicate identification, the requirement that new LLV Capacitors be labeled ''No PCBs'' expires on July 1, 1998 (see existing § 761.40(g)). Also, although LLV Capacitors are less likely than LHV Capacitors to fail and leak in service, the risk of PCB exposure posed by PCB LLV Capacitors will increase as larger numbers of aging units fail in service. Accordingly, EPA believes the marking of all PCB LLV Capacitors is now necessary. The burden of this regulation will also be significantly less than it would be if it had been imposed in 1978, in that the number of PCB LLV Capacitors affected has greatly diminished through attrition and phase-out efforts.

Therefore, in today's rule, EPA is finalizing § 761.40(k)(1) to require marking of PCB LLV Capacitors in use. PCB LLV Capacitors in use in inaccessible locations inside equipment are exempt, provided that the equipment is marked. Such capacitors must continue to be marked individually at the time of removal from service. In regard to protected locations (e.g., power poles, structures or fences) with unmarked LLV Capacitors, EPA is not allowing the maintenance of records at a central location. Repair or spill response personnel may not have timely access to records maintained off-site at a central facility. Also, the on-site record requirement is consistent with the existing requirement for PCB LHV Capacitors at § 761.40(c)(2)(ii). EPA wants to emphasize that records are only required at a protected location if the owner chooses to leave individual capacitors there unmarked.

4. *PCB equipment in use*. Because of identification and disposal concerns, EPA is requiring that all equipment containing PCB Transformers or PCB Large Capacitors (High or Low Voltage), including equipment in use, be marked with the M_L mark (see § 761.40(k)(2)). Existing § 761.40(a)(4) only required equipment containing PCB Transformers or PCB LHV Capacitors to be marked at the time of manufacture, distribution, or removal from service. Today's rule expands this provision to cover all equipment with PCB LLV Capacitors, and equipment with PCB Transformers and PCB LHV Capacitors not already marked (i.e., in-service equipment not manufactured or distributed in commerce after the effective date of § 761.40(a)(4)). These marking provisions do not apply to equipment containing PCB-Contaminated Electrical Equipment.

E. Disposal

1. *Applicability*. In the final rule, EPA has created a new § 761.50, titled Applicability of Storage and Disposal Provisions. The purpose of § 761.50 is to guide the public to the subpart D provisions that apply to specific kinds of wastes and specific activities. There are four items of note about § 761.50. First, it contains general prohibitions and conditions applicable to all of subpart D. For example, EPA's policy that spills or other uncontrolled discharges of PCBs at concentrations of 50 or greater ppm constitute disposal, formerly at § 761.60(d)(1), is now at § 761.50(a)(4).

Second, § 761.50 clarifies that § 761.60 applies to PCB liquids and PCB Items, and not to other PCB waste, such as PCB remediation waste or PCB bulk product waste. Those wastes are now regulated by new §§ 761.61 and 761.62, respectively.

Third, EPA specifies the storage and disposal options for PCB/radioactive waste at § 761.50(b)(7). Any person storing PCB/radioactive waste ≥50 ppm PCBs must do so based on the PCB concentration of the waste, except as provided in §§ 761.65(a)(1), 761.65(b)(1)(ii), and 761.65(c)(6)(i) of this part. Any person disposing of PCB/radioactive waste at ≥50 ppm PCBs must do so taking into account both the PCB concentration and the radioactive properties of the waste. If, taking into account only the properties of the PCBs in the waste (and not the radioactive properties of the waste), the waste meets the requirements for disposal in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill (e.g., PCB bulk product waste under § 761.62(b)(1)), then the person may dispose of the PCB/radioactive waste, without regard to the PCB component of the waste, on the basis of its radioactive properties in accordance with all applicable requirements for the radioactive component of the waste.

Fourth, § 761.50 clarifies the TSCA rules governing the regulatory status and cleanup of PCB spills and disposal sites in light of the ruling on the prefatory note exclusion to § 761.60 by EPA's Chief Judicial Officer in *Re: Standard Scrap Metal Company*, TSCA-V-C-288, Appeal No. 87-4, August 2, 1990 (Standard Scrap). See 59 FR 62792, December 6, 1994, for a discussion of that decision.

EPA proposed to delete the prefatory note, and substitute language on the disposal of PCB waste generated before 1978 as introductory text to § 761.60. In the final rule, this language appears at § 761.50(b)(3). That section provides that sites where PCBs have been placed in a land disposal facility (such as a dump, landfill, waste pile, or land treatment unit), spilled, or otherwise released to the environment prior to April 18, 1978, are presumed not to present an unreasonable risk of injury to health or the environment from exposure to PCBs at the site, and do not necessarily require further disposal action. The final rule allows the EPA Regional Administrator, on a case-by-case basis, to make a finding that spills, leaks, or other uncontrolled discharges, such as leaching, from a pre-1978 disposal site constitute ongoing disposal that presents an unreasonable risk of exposure to PCBs. The EPA Regional Administrator may make this finding regardless of whether the site is a spill, dump, land treatment unit, waste pile, stream, river, pond, lake, any sediment (or dredge material from a stream, river, pond, or lake), ground water, surface water, landfill, or any other type of disposal site. Once the EPA Regional Administrator makes such a finding, the owner or operator must dispose of the wastes until the unreasonable risk no longer exists. EPA believes that pre-1978 PCB disposal units or areas of contamination should not be allowed to remain ''in-service'' and thus unaddressed, as the existing prefatory note currently allows, if they pose an unreasonable risk due to exposure to PCBs.

Commenters argued that TSCA's applicability is clearly prospective and

that the proposed change inappropriately extends the reach of the TSCA regulations to spills and disposals which occurred prior to the effective date of the regulations. EPA's response is that section 6(e) provided EPA with a broad mandate to protect health and the environment from unreasonable risk of injury from PCBs. Just as EPA has banned or restricted the manufacture, processing, distribution in commerce, and use of PCBs where they pose an unreasonable risk of injury regardless of when that activity started or that piece of equipment was first put into service, EPA is now addressing PCBs disposed of in a manner which, due to spills, leaks, or other uncontrolled discharges from the site, constitutes ongoing improper disposal that now poses an unreasonable risk of injury.

With regard to sites containing PCB remediation wastes generated on or after April 18, 1978, owners or operators of those sites now have two choices: they may clean up the wastes in accordance with new § 761.61, or, if applicable, they may cleanup the wastes in accordance with EPA's Spill Cleanup Policy, part 761, subpart G.

Owners or generators of PCB remediation waste may unilaterally (for example, to obtain insurance, to sell property or to reduce civil liability) dispose of PCB remediation waste in accordance with self-selected portions of § 761.61, the Spill Cleanup Policy, or any other procedures, but are not afforded any relief from any regulatory liability from TSCA, based on that voluntary action alone.

2. *Landfilling of liquid PCBs*. In today's final rule EPA is removing the provisions formerly at § 761.60(a)(2)(ii) allowing the disposal of PCB-Contaminated mineral oil dielectric fluid, which has been stabilized on-site prior to disposal in accordance with § 761.75(b)(8), at a chemical waste landfill. However, the land disposal of PCB-Contaminated liquids from incidental sources associated with non-liquid PCB waste is allowed, if information is provided to or obtained by the owner or operator of the chemical waste landfill that shows that the waste does not exceed 500 ppm PCBs, is not an ignitable waste, and disposal does not violate RCRA land disposal regulations (see § 761.60(a)(3)). This provision applies to PCB-Contaminated liquids, which are in the form of precipitation, condensation, leachate or load separation and are associated with PCB Articles or non-liquid PCB wastes being disposed of in a chemical waste landfill. This provision does not apply to bulk liquid wastes, which must be disposed of in an incinerator or high efficiency boiler under § 761.60(a)(1) or (a)(2), or to liquid PCB remediation waste, such as stormwater runoff from PCB bulk product waste. Disposal of liquid PCB remediation waste is regulated at § 761.61(a)(5)(iv), (b), or (c).

The provisions allowing landfilling of liquids at less than 500 ppm were established May 31, 1979, when there was a limited number of incinerators permitted to burn PCB waste and disposal capacity was a concern. EPA believes the amount of low concentration PCB liquids anticipated to be designated for disposal and in storage for disposal can easily be accommodated by the existing and anticipated future PCB disposal technologies other than landfilling (See discussion of disposal capacity in the preamble to the Import for Disposal Rule (61 FR 11098, March 18, 1986).) EPA expects the existing PCB disposal and storage for disposal regulations and the amendments finalized today to accommodate the additional liquid PCBs requiring incineration or alternative disposal treatment. In addition, today's rule makes EPA policy on landfilling liquid PCBs more consistent with the prohibition on landfilling of liquid hazardous waste containing PCBs at concentrations of 50 ppm or greater under the RCRA land disposal restrictions at 40 CFR 268.32(a)(2) and 268.42(a)(1).

In the NPRM, EPA proposed to eliminate the landfilling of all PCB-Contaminated liquids, without exception. Approximately 10 comments were received on this issue. Several commenters were concerned about the implications of the ban on ''incidental'' or ''environmental'' liquids associated with non-liquid wastes, which usually are of an aqueous nature. Examples cited included precipitation, condensation, leachate, and load separation. To address this problem, § 761.60(a)(3) allows the disposal of such incidental liquids.

3. *Disposal in scrap metal recovery ovens and smelters*. Under the existing PCB disposal regulations (see existing § 761.60(b)(5) and (b)(6)), disposal of drained PCB-Contaminated Electrical Equipment and other drained PCB Articles is not regulated. At the time of the NPRM, a significant number of facilities were disposing of drained PCB-Contaminated articles (including PCB-Contaminated Electrical Equipment such as transformers) in scrap metal recovery ovens. These furnaces are also commonly referred to as sweat furnaces, bakeout ovens, and wire furnaces. However, some drained PCB-Contaminated articles have been prepared for metal smelting under uncontrolled combustion conditions such as open burning. Open burning can result in significant amounts of products of incomplete combustion such as PCBs, polychlorinated dibenzo-p-dioxins, and polychlorinated dibenzofurans (Ref. 14). Therefore, EPA has prohibited open burning (see § 761.50(a)(1)) and in § 761.72 has established scrap metal recovery ovens operating conditions that control emissions and result in no unreasonable risk of injury to health or the environment.

EPA has responded affirmatively to commenters who have provided acceptable alternatives to EPA's proposal, which required direct disposal of the drained PCB-Contaminated articles in a metal smelter. The commenters' alternative includes primary and secondary combustion chambers. In the primary combustion chamber, the articles are slowly warmed to a temperature below the melting point of aluminum and kept at that temperature for a number of hours, much longer than the time waste is in the primary chamber of a PCB incinerator. Any PCBs present in the drained PCB-Contaminated articles will vaporize or be destroyed at these temperatures. The primary combustion chamber operates under a slightly negative pressure (or draft) so that combustion gases do not leak out but are passed into the secondary chamber. The secondary combustion chamber operates at the same combustion conditions as a PCB incinerator. In the secondary chamber any remaining PCBs and any incomplete combustion products formed in the primary chamber are destroyed. Both EPA's proposed method and the method proposed by the commenters are included in the final rule.

Commenters did, however, express confusion over EPA's use of the term ''industrial furnace,'' as the proposal's adoption of the RCRA definition of that term at 40 CFR 260.10. In response to these comments, EPA has deleted this definition in the final rule, and has changed the terms in § 761.72. That section now refers at § 761.72(a) to ''scrap metal recovery ovens'' and at § 761.72(b) to ''smelters.'' Operating parameters for each type of device are specified. Any device that meets the operating parameters is authorized for disposal of PCB wastes specified in § 761.72 in accordance with those parameters.

EPA finds there is no unreasonable risk of injury to health or the environment from PCB, polychlorinated dibenzo-p-dioxin, and polychlorinated dibenzofuran emissions from incineration of small amounts of PCBs

in accordance with the requirements of § 761.72. Very small amounts of PCBs remain on drained surfaces of PCB-Contaminated equipment. This is the result of the original concentration of less than 500 ppm PCBs and the thinness of the dielectric fluid. The amount of PCBs present in the primary chamber of an industrial furnace is much smaller than would routinely be present in a PCB incinerator over the same time period. The amount of PCBs present in the primary chamber is even smaller than would be fed into most combustion facilities burning waste oil at less than 50 ppm PCBs under § 761.20(e), and the amount of PCBs in a secondary chamber is smaller still. EPA has further provided for the control of emissions by requiring scrap metal recovery ovens and smelters to have a final permit under RCRA or be operating under a valid State air emissions permit which includes a standard for PCBs (see § 761.72(c)).

In addition to intact drained PCB-Contaminated Electrical Equipment and other intact drained PCB-Contaminated articles (such as hydraulic equipment), scrap metal recovery ovens and smelters may be used to dispose of metal surfaces which are included in PCB remediation wastes and PCB bulk product waste. Metal in PCB remediation waste includes scrap metal found in an industrial sludge lagoon or rinsed drums formerly used to contain cleanup solvents. Metal in PCB bulk product waste includes pieces from disassembled, drained PCB-Contaminated transformers or metal surfaces coated with non-liquid PCBs such as painted pieces of fuel tanks. Non-metal PCB remediation wastes such as liquids, soils, sludges, and dredged sediments) and non-metal PCB bulk product waste (such as shredder fluff and air handling system gaskets) are not approved for disposal in scrap metal recovery ovens and smelters. However, waste oils containing PCBs at concentrations less than 50 ppm may be burned in scrap metal recovery ovens and smelters which qualify under specified conditions (see § 761.20(e)).

4. *PCB articles*—a. *PCB-Contaminated Electrical Equipment*. Drained PCB-Contaminated Electrical Equipment is not regulated for disposal under the existing PCB regulations at § 761.60(b)(4). In promulgating this provision, it was EPA's intent that disposal of this equipment in an approved incinerator or chemical waste landfill is not required. The equipment or its components would still have to be disposed of in a way that ended its useful life, such as salvaging through smelting when certain conditions are met (Ref. 15). EPA solicited comments in the NPRM on whether it should amend the regulations for the disposal of drained PCB-Contaminated Electrical Equipment to ensure that the equipment is properly disposed of and is not illegally reused. Possible remedies such as mandating decontamination and stricter controls to ensure that units were completely drained were not well received by commenters. In particular, most commenters stated that anecdotal information that drained PCB-Contaminated Electrical Equipment carcasses were used for barbecue grills reflected isolated instances of non-compliance.

EPA proposed to modify § 761.60(b)(4) to allow disposal of drained PCB-Contaminated Electrical Equipment only in facilities permitted, licensed, or registered by a State to manage municipal solid waste (excluding thermal treatment units), in an industrial furnace, or in a TSCA-approved disposal facility. EPA also proposed to amend § 761.60(b)(4) to require that equipment be drained for a period of not less than 48 hours, so that as much liquid as possible was removed from the equipment to further reduce PCB content prior to disposal.

Most commenters stated that defining a drain time added new burdens without providing additional protection to health or the environment. Instead, commenters felt that EPA should focus on the methods used to remove oil from transformers, especially large transformers where the actual draining procedure could be hazardous to personnel and the equipment. Specifically, commenters suggested that EPA consider pumping, vacuuming, and other methods as acceptable means for removing oil from transformers. In support, commenters provided test data indicating that 95 to 99% of the oil was removed from the transformer in the first hour and any residual oil removed during a 48-hour period would be extremely small. Because a small amount of residual oil still remained after draining, some commenters suggested excluding the use of State licensed municipal or industrial waste landfills as disposal options for this equipment. They felt this would be a reasonable exclusion because many State-permitted solid waste landfills do not accept this equipment.

EPA is not finalizing the requirement that transformers be drained for 48 hours. In addition, rather that requiring ''draining'' of PCB liquids, amended § 761.60(b)(4) allows PCB liquids to be ''removed'' (e.g., pumped or vacuumed). EPA realizes that liquid can be trapped in the inner workings and as an additional measure, EPA suggests a second removal action to ensure that as much liquid as possible is removed from the unit. EPA emphasizes that any residual liquid that remains is regulated and the receiving facility is responsible for its management. EPA is not excluding the use of State licensed municipal or industrial waste landfills as disposal options, because to do so would be counter to EPA's goal of providing flexibility, and would reduce the number of options available in areas where these landfills will accept this equipment.

b. *Small capacitors*. Under current § 761.60(b)(2)(ii), PCB small capacitors may be disposed of as municipal solid waste. In the NPRM, EPA sought data indicating whether there was support for statements by TSCA section 21 petitioners (Ref. 16) that the disposal practices at a municipal solid waste landfill, such as compaction, would cause PCB small capacitors to leak and cause a risk to health and the environment through ground water contamination. The Agency did not receive data substantiating these statements. Therefore, EPA will not change the disposal requirements for intact and non-leaking PCB small capacitors. Except for capacitors owned by manufacturers of capacitors or manufacturers of equipment containing PCB small capacitors, any quantity of intact, non-leaking PCB small capacitors may be disposed of in a municipal solid waste landfill. However, the Agency continues to recommend that generators of large numbers of intact and non-leaking PCB small capacitors dispose of them as PCB waste.

c. *Fluorescent light ballasts containing PCBs*. In the preamble to the NPRM, the Agency requested comment on information submitted in a TSCA section 21 petition (Ref. 16) that some fluorescent light ballasts manufactured prior to 1978 have PCBs at concentrations of 50 ppm or greater in their potting material. Potting material is insulating material which fills the space between the functioning parts of the ballast and its outer metal covering (shell). This information was supported by test data showing that the asphalt potting material used in fluorescent light ballasts has been found to contain PCBs (Refs. 17 and 18). Comments on the proposed rule confirmed that PCBs have been found in the potting material of some fluorescent light ballasts. These ballasts, therefore, are subject to a different disposal requirement than a fluorescent light ballast containing PCBs only in a PCB small capacitor. Where a fluorescent light ballast contains PCBs at 50 ppm or greater, other than in an

intact and non-leaking PCB small capacitor, the PCB small capacitor is no longer the controlling factor for disposal. Fluorescent light ballasts containing PCBs in their potting material must be disposed of in a TSCA-approved disposal facility, as bulk product waste under § 761.62, as household waste under § 761.63 (where applicable), or in accordance with the decontamination provisions of § 761.79 (see § 761.60(b)(6)(iii)).

Several commenters stated that the only way to determine whether fluorescent light ballasts contained PCBs at concentrations of 50 ppm or greater in their potting material would be to open, and essentially destroy, the ballast to analyze the potting material. While this may be true, the Agency is not requiring the testing of potting material for those units in use. Owners or operators will not be required to remove fluorescent light ballasts prior to the end of their useful life. However, if owners or operators of buildings are thinking of changing the fluorescent light ballasts, for example, for relamping the building for energy conservation, and would like to know the applicable disposal requirements, the Agency has two suggestions. First, assume that the potting material in the fluorescent light ballasts contains PCBs at 50 ppm or greater and dispose of them as PCB waste. Second, conduct a survey of the manufacturer and type of ballasts in use in the building and develop a random sampling plan for each manufacturer and type of ballast found and analyze the samples for PCBs. If no PCBs are found and the PCB small capacitors are intact and non-leaking, then the ballasts could be disposed of in a municipal solid waste landfill or recycled, through decontamination at § 761.79, for metals recovery. While there is no regulatory requirement to test the potting material for PCBs prior to disposal, TSCA requires owners or operators with PCBs to dispose of them properly. Not all fluorescent light ballasts contain PCBs. All ballasts manufactured between July 1978 and July 1998 are required to bear a ''No PCB'' label indicating that they do not contain PCBs. According to data submitted in the TSCA section 21 petition, ballasts manufactured prior to July 1978 have a better than 50% chance of containing PCBs at 50 ppm or greater in their potting material. Finally, State and/or local governments may have additional, more stringent, disposal requirements for PCB small capacitors or fluorescent light ballasts containing PCBs and some municipal solid waste landfills may not accept PCBs no matter what their form.

EPA has been aware for many years that fluorescent light ballasts can contain PCB small capacitors. Under existing rules, intact and non-leaking PCB small capacitors may be disposed of as municipal solid waste (unless the disposer is a manufacturer of PCB capacitors or PCB equipment) (see § 761.60(b)(2)(ii)). The TSCA section 21 petition alleged that disposal practices at municipal solid waste landfills can cause PCB small capacitors to rupture, creating a risk of ground water contamination. EPA asked for comment on this issue, and, in the event that additional disposal controls were needed, proposed to limit to 25 per year the number of fluorescent light ballasts containing PCB small capacitors that could be disposed of as municipal solid waste. EPA received no data confirming that the risk described in the TSCA section 21 petition existed. EPA therefore is not finalizing this limitation. However, disposers of fluorescent light ballasts that contain a PCB small capacitor should be aware that they could be subject to CERCLA liability if the municipal solid waste landfill becomes a Superfund site.

d. *Natural gas pipeline systems.* For reasons that are not well-understood, some natural gas pipeline systems have become contaminated with PCBs at regulated levels (i.e., ≥50 ppm PCB). Contaminated systems have been operated under compliance agreements and § 761.60(e) alternate disposal approvals (Ref. 9). Today's rule prescribes the conditions under which natural gas pipeline systems containing PCBs are authorized for use and reuse (see Unit IV.B.3.d. of this preamble and § 761.30(i) of the regulatory text), and requirements under which natural gas pipeline systems can be abandoned in place or otherwise disposed of without posing an unreasonable risk (see § 761.60(b)(5)).

Those who hold alternate PCB disposal permits or approvals issued under § 761.60(e) may continue to use those approvals within the confines of their specific conditions to dispose of natural gas pipeline and appurtenances. A company may, however, request in writing that EPA revoke its alternate disposal approval to allow the company to comply with today's regulatory requirements in lieu of the conditions specified in its disposal approval. EPA continues to reserve its right to modify the conditions of the alternate disposal approval when, for example, applicable regulatory requirements for disposal, decontamination, or reuse are changed. Accordingly, EPA does not intend to grant renewals for existing alternate disposal approvals in cases where the final PCB regulations adequately address protection of human health and the environment. These approvals have been issued based on a no unreasonable risk finding. However, some specific conditions in approvals are different from similar general conditions in the rulemaking. These specific conditions are based on monitoring data collected during disposal and other pipeline maintenance operations conducted under the approval. This data may not be applicable to the general population of natural gas pipeline systems.

Today's rule generally requires that all free-flowing liquids be removed from natural gas pipe abandoned in place or removed for disposal.

Most of the abandonment and disposal provisions for natural gas pipeline systems apply where the systems contain PCBs at any concentration ≥50 ppm. There is one provision for abandonment and one provision for removal with subsequent action that apply to PCB-Contaminated systems (i.e., ≥50 and <500 ppm PCBs). Any person disposing of a natural gas pipeline system under either of these provisions (paragraphs (b)(5)(i)(B) or (b)(5)(ii)(A)(*1*)) must characterize it for PCB contamination by analyzing organic liquids collected at existing condensate collection points in the natural gas pipeline system. The level of PCB contamination found at a collection point is assumed to extend to the next collection point downstream, i.e., the next existing condensate collection point unless pipeline maintenance or other activity results in a closer sampling location. If no organic liquids are present, drain free-flowing liquids and collect standard wipe samples according to subpart M. Collect condensate within 72 hours of the final transmission of natural gas through the part of the system to be abandoned and wipe samples after the last transmission of gas through the pipe or during removal from the location it was used to transport natural gas. PCB concentration of the organic phase of multi-phasic liquids must be determined in accordance with § 761.1(b)(4).

Pipeline liquids containing ≥50 ppm PCBs removed from the system must be disposed of as PCB remediation waste in accordance with § 761.61(a)(5)(iv), based on the PCB concentration present at the time liquid is removed from the pipeline. This does not mean that non-pipeline liquids or non-liquids may be added to the pipeline liquids either prior to or during removal to result in dilution of the concentration of the liquids. Liquids containing <50 ppm PCBs may be burned for energy recovery in accordance with the provisions

pertaining to used oil at § 761.20(e). Commenters questioned the need to separate organic and aqueous phases of condensate for disposal. It is not complicated or expensive to separate the organic phase of condensate from the aqueous phase. Separation is not needed if all of the multi-phasic liquid is disposed of as determined by a concentration of ≥50 ppm in the organic phase.

i. *Abandonment.* The final rule specifies how natural gas pipeline systems containing ≥50 ppm PCBs may be abandoned in place when no longer in use. Requirements differ depending on the PCB concentration in the system and the diameter of the pipe. The few changes made from the NPRM are to clarify language and expand the options available.

ii. *Removal with subsequent action.* The final rule also specifies the requirements for natural gas pipeline systems containing ≥50 ppm PCBs that are removed for disposal. Depending on the PCB concentration in the system and the diameter of the pipe, natural gas pipe may be disposed of in a municipal solid waste landfill, a TSCA-approved incinerator or chemical waste landfill, as PCB bulk product waste, or may be decontaminated.

EPA received comments that the interior of natural gas pipe is covered with a thin, porous coating to inhibit corrosion and thus could not be decontaminated under § 761.79. That section provides methods for decontamination of non-porous, but not porous, surfaces. EPA has amended the definition of non-porous surface at § 761.3 to clarify that this coated natural gas pipe is considered a non-porous surface (see § 761.60(b)(5)(ii)).

Commenters asked whether dry pipe could be smelted in a steel melting furnace, and whether such smelting would be regulated as use, reuse or disposal. As provided in § 761.79(b)(3)(ii), non-porous surfaces, such as natural gas pipe, contaminated at less than 100 µg/100 cm^2, may be smelted in an industrial furnace operating in accordance with § 761.72(b). Metal smelting of the residual surface PCBs is PCB disposal even though the smelted metal may be used or reused.

iii. *Sampling (subpart M).* EPA clarifies that the regulatory status of natural gas pipe is based on the PCB concentration in free-flowing condensate liquids in the pipe. If no free-flowing liquids exist in the pipe at the time of sampling, surface sampling is required.

EPA made several changes to the sampling protocol in response to comments. First, although the EPA Regional Administrator may approve of smaller sampling surface areas on a case-by-case basis, EPA believes that 100 cm^2 is available for sampling in most natural gas pipeline situations. Second, EPA revised the sample site location procedure to account for the potential loss of surface residues of PCBs from the thermal cutting of pipe. Third, with respect to the sampling location in a pipe segment that has been removed for disposal, only one sample from one end of a pipe segment is now required rather than a sample at each end of the pipe segment. EPA does not expect concentration differences at the downstream end of a pipe segment and the upstream end of the adjacent downstream pipe segment to be significantly different. Fourth, EPA has provided two options for selecting the sampling site among a contiguous set of pipe segments less than 7 miles long.

For sampling pipe to be abandoned in place, EPA is requiring sampling at the ends of the section to be abandoned and is designating the sampling unit to be between the pressure side of a compressor station and the suction side of the next compressor station downstream of the gas flow. EPA has also revised and clarified language on extrapolating the PCB disposal regulatory status of an unsampled pipe segment that is part of a population that has been sampled for removal, disposal, or abandonment. In addition, EPA clarified the regulatory status of pipe with respect to surface concentrations measured in the characterization samples.

EPA derived the sampling protocol (part 761, subpart M) from its oversight of natural gas pipe removal by parties to the 1981 compliance agreement with EPA. The sampling procedure accounts for the distribution of condensate through the pipeline system over time by the flow of natural gas and for pipeline system management practices.

e. *Dermal protection.* EPA proposed, at §§ 761.60(b)(6)(iii) and 761.79(a)(5), to require that anyone coming in contact with surfaces contaminated with PCBs at levels of 10 to <100 µg PCB/100 cm^2 must be protected from dermal exposure to those surfaces (59 FR 62860). EPA removed the concentration range because it intended to prevent dermal contact, not require measurements. Most disposal operations managing this waste would require dermal protection for handling sharp-edged metal material whether there were residual PCBs on the surfaces or not. The final rule at §§ 761.60(b)(6)(iv) and 761.79(e)(2) requires workers to wear or use protective clothing or equipment to protect against dermal contact or inhalation of PCBs or materials containing PCBs.

5. *Alternate disposal.* Section 761.60(e) allows persons who are required to incinerate PCBs and PCB Items and who can demonstrate that an alternate destruction method that can achieve a level of performance equivalent to § 761.70 incinerators exists, may submit a written request to the EPA for an exemption from the incineration requirements of § 761.60 or § 761.70. EPA did not intend that the submission of this application be optional, as could be construed by the word ''may'' in § 761.60(e). EPA, therefore, proposed to amend § 761.60(e) to clarify that written approval to use an alternate method of destroying PCBs or PCB Items must be obtained from EPA prior to using the method to destroy PCB waste. EPA received no negative comments on this proposed wording change and it is finalized as proposed.

6. *Analytical procedures.* In the NPRM, EPA proposed to require that chemical analysis of PCBs be conducted using gas chromatography. The proposal did not require the use of a specific gas chromatographic procedure since the selection of an analytical method would vary according to the material being tested (see 59 FR 62861). EPA also solicited comments on whether ASTM Method D-4059, ''Standard Method for Analysis of Polychlorinated Biphenyls in Insulating Liquids by Gas Chromatography'' should be listed at § 761.60(g)(1)(iii) and (g)(2)(iii) as an acceptable analytical method (see 59 FR 62826).

Two commenters suggested EPA identify specific sample preparation and gas chromatographic analytical techniques for specific uses and materials. Although EPA recognizes variability can exist when different testing methods and procedures are used to analyze PCBs, EPA has determined that the statutory requirement to consider the costs and benefits associated with establishing regulatory requirements argues for increased flexibility at the expense of precision. As a result, § 761.60(g)(1)(iii) and (g)(2)(iii) offer the maximum flexibility for individuals to use gas chromatographic procedures that are available through both EPA published methods and ASTM testing methods. However, in the final rule, EPA is clarifying that the methods other than those specified in the regulations must produce results that obtain a level of performance equal to or better than the specified methods. If analytical differences arise, the Agency will use

those methods outlined in SW-846, Test Methods for Evaluating Solid Waste, to verify analytical determinations.

EPA received one comment that the applicability of ASTM D-4059 was very limited and restrictive. Although ASTM D-4059 may be limited, some individuals may deal with only a narrow assortment of dielectric fluids. Thus, EPA has included ASTM D-4059 as an example of an acceptable method in § 761.60(g).

7. *Research and development for PCB disposal.* EPA has found that properly conducted research and development for PCB disposal presents no unreasonable risk. When approving these activities under current § 761.60(e), EPA generally takes into account such factors as the quantity of PCB waste in the study; whether the capacity for approved PCB disposal exceeds demand; whether there may be some specialized wastes for which there is no currently approved disposal method; and whether there may be some locations where there is a sufficient quantity of waste that existing approved disposal technologies might be inadequate or where the economics of the existing approved technologies prohibit necessary cleanup. EPA also takes into account the inability of a number of research for disposal approvals to achieve performance objectives. For these studies, EPA still requires a written approval, because larger amounts of waste potentially pose more obstacles to treatment and disposal and greater potential for risk from incomplete or unsuccessful disposal.

Today's rule establishes a self-implementing approval for disposal research and development studies using smaller quantities of materials. For these approvals, the maximum annual amount that may be treated during R&D for disposal activities is 500 gallons of liquid PCB waste or 70 cubic feet of non-liquid PCB waste. These amounts should be sufficient to perform most research at a pilot disposal unit scale. The PCB material may not exceed 10,000 ppm. Each R&D for PCB disposal activity under this section may last no more than 1 year.

One commenter saw the requirement to provide 30–day advance notification to EPA, State, and local authorities prior to the start of a R&D for disposal activity as an unnecessary burden which would encumber scientific research and not provide any benefits. EPA strongly supports community right to know. EPA knows of few research projects which are so essential or time-sensitive that the 30–day notice would cause a severe hardship. However, EPA will not require the 30-day advance notification of disposal, if EPA, State, and local authorities waive the requirement in writing.

Some commenters had difficulty understanding the distinction EPA was making between PCB R&D activities for use and for disposal. TSCA itself creates the distinction. One objective of TSCA and the PCB regulations is to direct PCBs out of use and into disposal so that they can no longer present a risk of injury to health or the environment. EPA may authorize the use of PCBs that pose no unreasonable risk of injury to health or the environment, but when the PCBs are no longer in use, they must be disposed of. For example, PCBs in storage for disposal may not be reused. Today's rule authorizes chemical analysis and scientific experimentation using PCBs in a separate category under § 761.30(j).

Commenters noted that some chemical analysis of PCBs under § 761.30(j) would result in the destruction (i.e., disposal) of PCBs, and that all PCBs in R&D, including R&D for disposal, could be viewed as in use until the research and development was completed. EPA believes that the use of PCBs in the R&D activities under § 761.30(j) poses inherently different risks from the R&D for disposal activities under § 761.60(j). For example, the amounts of PCBs used in scientific research are small and strictly accounted for, while amounts used in disposal research can be much larger and their ultimate fate depends on the success of the disposal technology. In addition, PCBs used in research under § 761.30(j) are used in a controlled environment by trained laboratory staff, while PCBs used in § 761.60(j) may be in open environments. Therefore, EPA has finalized these provisions essentially as proposed.

Other commenters objected to the 1–year limit on self-implementing R&D for disposal. EPA recognizes that some R&D for PCB disposal activities may last more than 1–year. The rule allows the EPA Regional Administrator to grant extensions to the time limit, and this process should not result in delays if timely requests for extension, including a report on the progress of the R&D for disposal activities, are provided to EPA. In the past, when conditions of the approvals have been met, EPA has extended in a timely manner bioremediation and other kinds of ''treatability'' R&D for disposal approvals for more than 3 years after an original 1–year approval.

Based on comments requesting a clarification, the introductory sentences from § 761.60(j) of the proposal were moved to § 761.3 to create a definition of ''research and development for PCB disposal.''

8. *PCB remediation waste.* The proposed rule provided for three PCB remediation waste disposal options: (1) Self-implementing disposal similar to the PCB Spill Cleanup Policy, which is an enforcement policy codified at 40 CFR part 761, subpart G (see § 761.61(a)); (2) existing approved disposal technologies (see § 761.61(b)); and (3) risk-based disposal (see § 761.61(c)). EPA has retained each of these three options. General comments about the options are discussed first; more specific comments are discussed under the heading for each option.

Commenters sought clarification on: (1) The regulatory status of PCB remediation waste generated prior to April 18, 1978; (2) use or disposal of sewage sludge; (3) management of liquid PCB remediation waste; (4) management of radioactive PCB remediation waste; and (5) the applicability of the PCB Spill Cleanup Policy (part 761, subpart G). PCB remediation waste generated prior to April 18, 1978, is discussed in Unit IV.E.1. of this preamble, which explains new § 761.50, Applicability of Storage and Disposal Provisions. EPA consolidated the liquid PCB remediation wastes disposal options in § 761.61(a)(5)(iv).

Commenters were concerned that PCB remediation waste stored at the cleanup site for more than 30 days prior to disposal would have to be stored in accordance with § 761.65(b). EPA has added § 761.65(c)(9) to allow on-site storage of bulk PCB remediation waste in a way which prevents uncaptured releases in case of a spill and controls migrations from precipitation and volatilization. Waste transported off-site must be packaged according to the Hazardous Materials Regulations at 49 CFR parts 171 through 180 and stored for disposal in facilities approved under § 761.65(b).

EPA received comments on the applicability of 40 CFR part 761, subpart G, the PCB Spill Cleanup Policy. The only change EPA made to subpart G was to decrease the minimum reportable quantity from 10 pounds to 1 pound of PCBs. EPA continues to emphasize that subpart G is not a regulation but an enforcement policy that applies to releases from authorized uses. EPA intends that new § 761.61 will address more spill scenarios than subpart G does, such as (1) those which occurred prior to May 4, 1987, and (2) those which occurred after May 4, 1987, where notification was not given and/or where cleanup was not begun in accordance with the PCB Spill Cleanup

Policy. Many commenters wanted to extrapolate subpart G to other cleanup waste scenarios instead of using proposed § 761.61. Today's final rule does not expand the scope of subpart G, but EPA factored many of the assumptions used in subpart G, such as the time allowed for PCBs to migrate from a spill, into § 761.61.

The NPRM stated that the self-implementing option of § 761.61 would not apply at sites being cleaned up under CERCLA, RCRA, or any EPA enforcement action. A number of commenters suggested that this provision was too broad because it would preclude the self-implementing option even at portions of such facilities that were not being addressed by other authorities. One commenter stated that the reference to other enforcement actions by EPA was too vague.

EPA did not intend to prevent or discourage persons from conducting self-implemented cleanups where another part of the same facility is being addressed under an authority such as CERCLA or RCRA. But EPA also clarifies that a facility cannot unilaterally decide to do a self-implementing cleanup under § 761.61, and then contend that their decision precluded any further or different cleanup under other authorities. As modified, today's rule does not prevent a person from conducting a self-implementing cleanup at any part of its property, even if another part of the facility is also being addressed under some other authority. For example, a large site having zones A, B, and C could have an on-going RCRA corrective action cleanup at zone A, a CERCLA section 106 order at zone B, and still potentially be eligible for a self-implementing PCB remediation at zone C. Section 761.61(a)(1)(ii) simply clarifies that such action by the facility does not bind other cleanup programs, such as CERCLA or RCRA, which remain free to determine which parts of the facility they will address and how to do so, using their usual cleanup criteria. Since sites contaminated with PCBs often contain other contaminants such as metals and organic solvents, each remedial action needs to consider and address all constituents of concern. If a person is considering doing a self-implementing cleanup at a portion of the facility likely to undergo cleanup under some other Federal or state program, the person would be well-advised to coordinate with that program before proceeding, to avoid having to do further work after its self-implementing cleanup was completed. With respect to PCB remediation waste cleanup, EPA acknowledges the usefulness of the documents entitled: *Guidance on Remedial Actions at Superfund Sites with PCB Contamination*, EPA/540/G-90/007, August 1990; *Technology Alternatives for the Remediation of PCB-Contaminated Soil and Sediment*, EPA Engineering Issue, EPA/540/S-93/506, October 1993; and *Best Management Practices (BMPs) for Soil Treatment Technologies: Suggested Operational Guidelines to Prevent Cross-media Transfer of Contaminants during Clean-up Activities*, EPA 530-R-97-007, May 1997. These documents are available from the RCRA Hotline at 1-800-424-9346.

Some commenters also stated that EPA should clarify how this rule would operate as an ''applicable or relevant and appropriate requirement'' (ARAR) under CERCLA. Cleanup decisions at CERCLA sites have relied on the 1987 TSCA PCB Spill Cleanup Policy. It must be noted that because the Spill Cleanup Policy is not a binding regulation, it is not an ARAR for Superfund response actions. However, as policy reflecting substantial scientific and technical evaluation, it has been considered as important guidance in developing cleanup levels at Superfund sites. EPA anticipates that today's rule will be a potential ARAR at CERCLA sites where PCBs are present. EPA would expect that CERCLA cleanups would typically comply with the substantive requirements of one of the three options, provided by § 761.61, upon completion of the cleanups. This decision would not be made by the facility, but in the remedy selection process.

a. *Self-implementing option*. EPA reorganized proposed § 761.61(a), and the reorganized structure is reflected here.

EPA did not intend self-implementing PCB remediation waste disposal to apply to large PCB remediation sites unless very stringent sampling requirements are used. EPA intended it to address moderate sized sites where only PCBs were present (or the properties of PCBs drove cleanup decisions) and where a general no unreasonable risk remedy would be acceptable. Generic risk assumptions and sampling approaches for small areas of contamination cannot be universally applied to very large sites. Nor can sampling schemes for continuously generated, current waste streams from well-characterized industrial processes serve as a scientifically sound starting point for large areas where the homogeneity of the waste is unknown. Sampling must be much more comprehensive for heterogeneous waste (or waste of unknown homogeneity) where little is known about contamination sources, the periodicity and exact location of waste generation, and any PCB migration from the waste since original deposition. Much greater knowledge from pre-cleanup characterization of waste can reduce verification sampling. Through a risk-based approval at § 761.61(c), the EPA Regional Administrator can more actively evaluate measurements taken concurrently with cleanup (as is done at Superfund National Priority List (NPL) sites) as an alternative to a more stringent self-implementing verification sampling approach required in § 761.61(a). Without the same level of oversight as in NPL sites, self-implementing verification sampling should be comprehensive. To limit transaction time for site cleanup and constraints on cleanup, EPA placed the site sampling emphasis in § 761.61(a)(5) at the post-cleanup verification period, rather than under the limited pre-cleanup site characterization in § 761.61(a)(2).

i. *Applicability*. The applicability section of the NPRM provided that the self-implementing remediation waste option was not applicable to areas having human or animal populations that might have a higher sensitivity to the toxic effects of PCBs. This provision has been deleted in response to comments it could apply to almost all sites. New language has been added at § 761.61(a)(4)(vi) to enable the EPA Regional Administrator, based on the notification required in § 761.61(a)(3), to require cleanup of the site or a portion of the site to more stringent cleanup levels based on proximity to areas such as residential dwellings, hospitals, schools, nursing homes, playgrounds, parks, day care centers, endangered species habitats, estuaries, wetlands, national parks, national wildlife refuges, commercial fisheries, and sports fisheries.

ii. *Site characterization*. Today's rule requires any person conducting self-implementing cleanup of PCB remediation waste to characterize the site adequately to be able to provide the information necessary for the Regional Administrator to review the cleanup plan. The proposal required detailed small scale information, such as numbers of characterization sample results (proposed Appendix II). Today's rule is more flexible, providing subpart N as a reference point for the assessment of sampling data, but allowing other sampling methods that are as effective at characterizing contamination at the site.

EPA also clarified that non-liquid sample results shall be reported on a dry weight basis, as µg/g of sample. Liquid sample results must be reported on a

wet weight basis as µg/g of sample. Surface sampling results shall be reported as µg/100 cm^2 (see § 761.274 of the regulatory text). Regardless of the size of the surface area, divide 100 cm^2 by the surface area and multiply this quotient by the total number of micrograms of PCBs on the surface to obtain the equivalent measurement of micrograms per 100 cm^2.

iii. *Notification and certification*. Commenters sought to eliminate the notification requirement, based on inconvenience and not wanting to identify the site, rather than risk/exposure concerns. EPA is continuing its policy of providing State and local jurisdictions advanced notice of PCB disposal. Section 761.61(a)(3) was redesignated and revised to designate who in the State and local agencies would receive the notification.

EPA clarifies that it did not intend the 30–day notification requirement to prohibit emergency cleanup (see § 761.61, introductory text, of the regulatory text). Emergency cleanup may occur without notification, but does not satisfy the requirements of § 761.61. Emergency cleanup is appropriate where there is imminent danger to health and the environment without containment and/or treatment. Emergency cleanup is not appropriate to prevent additional cleanup costs or other business expenses resulting from containment or from waiting 30 days for the notification process to be completed. Emergency response personnel should communicate directly with EPA regional personnel on proposed remedial actions. EPA has retained language allowing less than 30 days notification if the EPA Regional Administrator, and State and local officials who are required to receive the notification, waive the 30–day requirement in writing (see § 761.61(a)(3)(iii) of the regulatory text).

iv. *Cleanup levels*. EPA did not receive comments which justified changes in the proposed cleanup levels. However, the final rule retains the proposed provision at § 761.61(c) allowing the EPA Regional Administrator to approve risk-based cleanup levels, on a case-by-case basis, different than those required in § 761.61(a). The final rule organizes § 761.61(a)(4) by the PCB remediation waste medium: bulk PCB remediation waste, non-porous surfaces, porous surfaces, and liquids.

The proposed definitions at § 761.3 for ''high exposure area'' and ''low exposure area,'' have been changed in two ways: (1) To reflect that EPA is addressing the occupancy of the area by individuals not wearing dermal and respiratory protection as a surrogate for reasonable worst-case exposure; and (2) to reflect that EPA evaluates the exposure risk in the area based on the combination of the final concentration of PCBs in the area and the amount of time of exposure. The term ''high exposure area'' is now ''high occupancy area'' and ''low exposure area'' is now ''low occupancy area.'' Many outdoor areas will be low occupancy areas; others, such as school playgrounds and residential yards, might be high occupancy areas. Commenters offered several terms in place of the proposed ''high exposure area'' and ''low exposure area.'' Only one actually focused on the risk-based foundation of the self-implementing cleanup: the exposure of an individual. This comment suggested that occupancy was a reasonable worst-case surrogate for exposure and offered an extensive description of occupancy scenarios. EPA used a simpler variation of the comment as the final definition.

The final rule is structured so that the risk to occupants not wearing dermal and respiratory protection of high occupancy areas and low occupancy areas is generally the same. For the same chemical (PCBs) the risk is directly proportional to exposure. The rule allows different concentrations of PCBs to remain in high occupancy areas and low occupancy areas based on different occupancy times (see § 761.61(a)(4) of the regulatory text). For example, the non-porous surface cleanup level for high occupancy areas is 10 µg PCB/100 cm^2, and for low occupancy areas is 100 µg PCB/100 cm^2, an order of magnitude difference. Therefore, to have the same risk of exposure, the maximum occupancy time must be 1/10 as long in a high occupancy area as in a low occupancy area. For bulk remediation materials, EPA allows cleanup levels of 1 ppm in high occupancy areas and 25 ppm in low occupancy areas. EPA believes that the measures taken to prevent exposure in low occupancy areas, such as capping, marking and fencing, provide sufficient additional protection to normalize the higher cleanup levels.

EPA's evaluation of risk assumed unprotected exposure 24 hours a day, 7 days a week (168 hours per week) for the high occupancy scenario. Because the surface cleanup concentrations are 10 times as high in the low occupancy area as in the high occupancy area, to have the same exposure in both areas, the low occupancy unprotected exposure would have to be 1/10 of the high occupancy exposure period, or less than 16.8 hours per week. For bulk materials, the low occupancy exposure would be 1/25 of 168 hours, or less than 6.7 hours per week. The number of hours in the definitions of ''high occupancy area'' and ''low occupancy area'' in § 761.3 reflect these weekly averages times a 50–week exposure per year assuming a 2–week annual vacation from the occupancy area, that is 50 weeks x 16.8 hours/week = 840 hours and 50 weeks x 6.7 hours/week = 335 hours.

EPA has limited the self-implementing option to these two scenarios based on the risk-based concepts implemented as part of the Spill Cleanup Policy in 40 CFR part 761, subpart G (Refs. 19 and 20). EPA's experience has been that most cleanup scenarios have been effectively dealt with by the two-tiered approach in the Spill Cleanup Policy. In the few instances where the two-tiered approach has not readily addressed a particular cleanup scenario, the EPA Regional Administrator has exercised flexibility to allow less stringent or alternative requirements. (See 40 CFR 761.120(c)). Similarly, under § 761.61(c), the EPA Regional Administrator has the flexibility to grant a risk-based approval for cleanup of PCB remediation waste to levels different from those specified under the defintions of ''high occupancy area'' and ''low occupancy area.''

Revised § 761.61(a)(4) also requires the owner of an area cleaned up to the levels of a low occupancy area to clean the area to the levels of a high occupancy area where there is a change in the use of the area such that exposure to PCBs could reasonably be expected to increase.

v. *Site cleanup*. EPA is clarifying in § 761.61(a)(5) that PCB disposal technologies approved under §§ 761.60 and 761.70 are acceptable for on-site self-implementing PCB remediation waste disposal within the confines of the operating conditions of the respective approvals. For example, technologies approved under § 761.60 or § 761.70 for disposal of PCB liquids may not be used to dispose of soil. Technologies approved under § 761.60 or § 761.70 to dispose of PCBs in soil at concentrations less than 500 ppm may not be used to dispose of soil containing greater than 500 ppm PCBs.

The only forms of on-site disposal technology which do not require an approval under § 761.60 or § 761.70 and which are approved for self-implementing disposal are soil washing and decontamination in accordance with § 761.79. Soil washing is extraction of PCBs from soil using a solvent, recovering the solvent from the soil, separating the PCBs from the recovered solvent for disposal, and then disposal

or reuse of the solvent in accordance with § 761.79(d) and (g).

Based on comments received on the potential emissions of products of incomplete combustion from *in-situ* vitrification and EPA's experience in approving this disposal technology, this technology may not be used for on-site disposal without an approval from EPA under § 761.60(e) or § 761.61(c).

EPA assumed that the primary application of self-implementing cleanup would be safe and effective on-site treatment and land disposal (e.g., PCB concentration reduction, with the PCBs destroyed on-site, followed by on-site land disposal). EPA did not intend to prohibit or discourage off-site disposal, and is retaining the off-site disposal regulatory options which have been in place since April 18, 1978 (see § 761.61(b) of the regulatory text). EPA recognizes that some materials will be sent off-site because of the economics of on-site treatment of small amounts of unusual or high concentration waste. Today's rule expands the options for off-site disposal; for example, PCB remediation waste containing less than 50 ppm PCBs may be sent off-site for disposal in State-approved land disposal facilities for the management of municipal solid waste landfills permitted by EPA under section 3004 of RCRA, or by a State authorized under section 3006 of RCRA; or disposal facilities approved under 40 CFR part 761.

EPA received comments requesting the option to dispose of PCB/radioactive waste in a waste management unit licensed under the Atomic Energy Act. However, the Agency has concerns that disposal practices at those facilities, while appropriate for radioactive waste, may result in an unreasonable risk to human health and the environment from PCBs ≥50 ppm disposed of at such sites. Therefore, § 761.50(b)(7) provides that any person disposing of PCB/radioactive waste must do so taking into account both its PCB concentration and its radioactive properties. If, taking into account only the properties of the PCBs in the waste (and not the radioactive properties of the waste), the waste meets the requirements for disposal in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill (e.g., PCB bulk product waste under § 761.62(b)(1)), then the person may dispose of the PCB/radioactive waste, without regard to the PCB component of the waste, on the basis of its radioactive properties in accordance with all applicable requirements for the radioactive component of the waste.

Commenters suggested that sampling and analysis could pose unnecessary costs if the waste were to be disposed of, assuming that it was regulated, especially since the proposal could be read as always requiring analysis. EPA added an option at § 761.50(a)(5) that non-liquid PCBs can be assumed to be ≥500 ppm and disposed of accordingly, rather than analyzed.

EPA also eliminated the proposed requirement to notify disposal facilities receiving PCB remediation waste which will be stored in an area subject to a PCB commercial storage approval and/or disposed of in an area subject to a PCB disposal approval. Pre-disposal notification is still required for all other storage and disposal facilities (see § 761.61(a)(5)(i)(B)(*3*)(*iv*) of the regulatory text). In addition, the subpart K notification and manifesting requirements do not apply to off-site disposal of PCB remediation waste at <50 ppm.

In response to comments, EPA clarified the disposal options for liquid PCB remediation waste, and provided for the disposal of mixed liquid/non-liquid PCB remediation waste. The overall objective of PCB remediation waste disposal is to minimize potential risks of PCB dispersion into the environment from disposal. One way to do so is to remove liquids from mixed liquid/non-liquid waste. Ways to minimize such risks from transportation of waste are on-site PCB remediation waste disposal, or using packaging in compliance with DOT Hazardous Materials Regulations (HMR) at 49 CFR parts 171 through 180. PCBs not subject to the HMR (i.e., PCB wastes at less than 20 ppm or less than 1 pound of PCBs regardless of concentration) must be packaged in accordance with 49 CFR 173.203 (for liquids) or 49 CFR 173.213 (for non-liquids). Therefore, EPA is requiring on-site, phase separation of mixed liquid/non-liquid PCB remediation waste unless protective packaging for liquids is used for off-site shipment.

vi. *Cleanup verification*. The final rule clarifies that the scope of subpart O (proposed Appendix II) includes verifying that bulk PCB remediation waste or porous surfaces at a site have been properly cleaned up in accordance with § 761.61(a). EPA added options, including compositing, to the cleanup verification sampling in subpart O. Cleanup verification sampling for non-porous surfaces is addressed in subpart P. These subparts may not be used to make conclusions or extrapolations about PCB concentrations outside of the area which has been cleaned up and verified based on the results of that sampling. EPA also added a third dimension to the verification procedure to ascertain if the cleanup captured vertical waste migration. Subpart O applies only to bulk PCB remediation waste and porous surfaces left at the original cleanup location. Non-liquid, non-metal PCB remediation waste to be shipped off-site must be sampled in accordance with subpart R.

EPA did not propose to allow compositing on the grounds that compositing can dilute hot spots, but commenters pointed out that hot spots should have been eliminated in the contamination removal process. EPA agrees, and therefore the final rule provides for the compositing of samples. For example, EPA has changed the minimum number of samples from three, to one composite of three. For liquids, no compositing is necessary because they mix naturally and are easily homogenized by stirring.

Subpart O provides two sampling options for large sites. The first option is designed to address sites having a single point source, many point sources, or an unknown number of sources, of contamination. The second option only addresses sites having a known single point source of contamination. Both options use a square grid structure and grid interval, which has been enlarged to correspond to the largest interval provided in the PCB Spill Cleanup Policy. Both options specify compositing of adjacent samples of the same size, provide the maximum number of samples which can be composited, and require that composited samples be mixed thoroughly and subsampled before chemical analysis.

EPA revised the requirement to reclean an entire site based on a single sample's failure to meet cleanup levels. As revised, when a composite fails to meet the cleanup requirements, the area that must be recleaned and reanalyzed is an area larger by a grid interval than the area represented by the failing composite.

Subpart P provides sample site selection procedures for non-porous surfaces, as well as procedures for analyzing the samples and interpreting the results of the sampling. Subpart P applies to all non-porous surfaces destined for disposal, regardless of whether the disposal will take place on-site or off-site.

EPA also provided in subpart Q a test for qualifying an alternate extraction and chemical analysis procedure for determining PCB concentrations in PCB remediation waste in initially characterizing the cleanup site and for post cleanup verification.

vii. *Cap requirements*. In the NPRM, EPA used the term ''non-porous'' to describe concrete used as a cap over non-liquid PCB remediation waste left on-site. At § 761.61(a)(7), EPA has replaced descriptions of cap materials with performance criteria, which essentially paraphrase cap requirements from § 264.310(a) of the RCRA regulations. EPA recommends that the owner of a cleanup site containing a cap visually inspect the cap monthly in perpetuity for breaches such as leaks, cracks, breaks, and faults. EPA increased the amount of time allowed to repair a break in a cap to allow additional time to technically and physically begin repairs in remote areas.

viii. *Deed restrictions for caps, fences, and low occupancy areas*. Commenters worried about potential risks from a site which was cleaned to low occupancy area standards being converted to a high occupancy area use. In response, at § 761.61(a)(8), EPA added deed restriction requirements from the RCRA landfill closure regulations, which includes requirements for converting the land use which addresses situations such as the change from a low occupancy area to a high occupancy area.

ix. *Recordkeeping*. EPA finalized § 761.61(a)(9) as proposed.

b. *Performance-based option*. The NPRM included high-temperature incinerators, high efficiency boilers, chemical waste landfills, and alternate destruction technologies approved by EPA as performance-based disposal options for PCB remediation waste. These options have been retained in the final rule.

The final rule at § 761.61(b)(3) also allows material containing <50 ppm PCBs that has been dredged or excavated from waters of the United States to be managed and disposed of in accordance with a permit that has been issued under section 404 of the Clean Water Act or under section 103 of the Marine Protection, Research, and Sanctuaries Act (or the equivalent of such a permit as provided for in regulations of the U.S. Army Corps of Engineers (Corps) at 33 CFR part 320 *et seq*.). These options are available only for dredged material containing PCBs <50 ppm. Dredged material contaminated with PCBs at ≥50 ppm must be managed under one of the other disposal options of § 761.61.

Research has shown that sediments can be the depository for chemicals and other pollutants, including PCBs, discharged into surface waters from both point and non-point sources. Contaminants in sediments can harm aquatic environments and pose a threat to human health. Studies have shown that PCB contamination may occur in all types of water bodies (Ref. 21, Chapter 2.). Dredged material containing PCBs, such as sediments, settled sediment fines, and aqueous decantate from sediment, is included in the definition of ''PCB remediation waste'' and is regulated for disposal under TSCA at the concentration at which it is found.

The Corps bears important national responsibilities regarding dredged material, as a regulatory agency and in constructing and maintaining the Federal navigation system. The Corps dredges approximately 250 million cubic yards of sediment from navigable waterways each year to maintain navigation. The Corps regulates the excavation and placement of another approximately 75 million cubic yards of dredged material by Federal navigation project beneficiaries. Dredged material from those navigation projects is placed in many sites, including ocean waters, estuaries, beaches, rivers, and uplands, including sites associated with beach nourishment and wetlands construction. In addition, the Corps and its associated local sponsors are responsible for a large number of flood control channels, which must be periodically dredged to maintain their capacity to hold and convey flood waters.

Since 1971, EPA and the Corps have worked jointly to develop comprehensive testing and management protocols used to determine suitable alternatives for management and disposal of dredged material. Regulatory programs established under the Marine Protection, Research, and Sanctuaries Act and the Clean Water Act require analysis of alternatives to protect the environment while ensuring economic and engineering feasibility. The testing and management protocols for dredged material developed by the Corps and EPA are used to assess and manage sediments representing the full spectrum of contamination potential. Existing Corps/EPA regulatory authorities and their scientific protocols were developed specifically for dredged material regulation and management.

EPA believes that management and disposal of dredged materials containing <50 ppm PCBs in accordance with the Corps/EPA protocols as provided for at § 761.61(b)(3) will not present an unreasonable risk to health or the environment.

Section 761.61(b)(3) provides a disposal option specific to dredged material containing <50 ppm PCBs. As noted above, dredged material falls within the definition of PCB remediation waste, and as such the other disposal options of § 761.61(a), (b), and (c) are available for management and disposal of dredged material containing PCBs at any concentration, as long as the applicable requirements are met.

c. *Risk-based option*. Section 761.61(c) allows the EPA Regional Administrator to approve case-by-case, risk-based cleanup, storage, or disposal of PCB remediation waste as an alternative to § 761.61(a) or (b). Commenters asked EPA to codify a public comment and/or participation process. EPA intends to use the public comment process in use in each respective EPA Regional PCB program office.

d. *Disposal of PCB sewage sludge*. Land application of sewage sludge containing <50 ppm PCBs is ''use'' under TSCA section 6(e), and is authorized under § 761.20(a)(4). Use of sewage sludge containing ≥50 ppm PCBs is prohibited (see Unit IV.B.1.b. of this preamble). Disposal of sewage sludge containing less than 50 ppm PCBs, including application as a landfill cover, is unregulated under TSCA. Sewage sludge containing ≥50 ppm PCBs, defined as ''PCB sewage sludge,'' must be disposed of pursuant to § 761.61. In addition, regulations at 40 CFR part 503 or part 257 may apply to use and disposal of sewage sludge containing <50 ppm PCBs, including sewage sludge that is PCB remediation waste. As mentioned in the exceptions for the use of sewage sludge at § 761.20(a)(4), PCBs in sewage sludge regulated for disposal under TSCA may not be diluted for purposes of avoiding the PCB disposal regulations.

9. *PCB bulk product waste (non-remediation waste)*. In the NPRM, EPA identified certain PCBs and PCB Items coming out of service for disposal as PCB Non-Remediation Waste (see § 761.3 and § 761.62). In today's rule, EPA calls this material PCB bulk product waste, to characterize more accurately its source and nature. The final rule clarifies at § 761.62 that the wastes addressed are ≥50 ppm PCBs when taken out of service and there are four disposal options for PCB bulk product waste (performance-based disposal, disposal in solid waste landfills, risk-based disposal and disposal as daily landfill cover or roadbed). The final rule at § 761.65(c)(10) addresses temporary on-site storage of this waste. Under § 761.62(c), EPA may issue alternate storage approvals for PCB bulk product waste on a case-by-case basis.

a. *Performance-based disposal*. In response to comments seeking consistency with PCB remediation waste disposal, EPA added RCRA

Subtitle C landfills as a disposal option for PCB bulk product waste because they are designed and operated in the same manner as TSCA chemical waste landfills (see § 761.62(a)(3) of the regulatory text). EPA also added alternate disposal pursuant to § 761.60(e), decontamination pursuant to § 761.79, thermal decontamination pursuant to § 761.79(c)(6), and a coordinated approval pursuant to § 761.77 (see §§ 761.62(a)(4), (a)(5), (a)(6), and (a)(7) respectively of the regulatory text).

b. *Disposal in solid waste landfills (leachability-based option).* In the NPRM, EPA presumed that some PCB bulk product wastes met the leachability based-standard of <50 parts per billion (ppb) PCBs (see proposed § 761.62(b)). Other PCB bulk product wastes could be tested using the Toxicity Characteristic Leaching Procedure, Method 1311 in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication SW-846 (the TCLP test) to determine the leachability of PCBs in the waste.

In today's final rule, EPA has not retained the TCLP as the definitive test because commenters indicated that it was not accurate and EPA prefers to set performance standards without prescribing test methods. Instead, EPA has provided two different landfill disposal options for PCB bulk product waste. PCB bulk product waste containing PCBs which are tightly bound within the matrix of PCB bulk product wastes and bulk product waste which leaches <10 µg/L measured using a procedure used to simulate leachate generation may be disposed of in municipal or non-municipal non-hazardous waste landfills (§ 761.62(b)(1)). PCB bulk product waste containing PCBs which are not bound in a solid matrix may be disposed of in landfills which segregate the wastes from organic liquids which could mobilize the PCBs and which collect leachate generated from the landfill cell and monitor it for PCBs (see § 761.62(b)(2) of the regulatory text). Disposal of these materials in accordance with the conditions specified in § 761.62(b) would not result in release of toxicologically significant concentrations of PCBs to the the ambient environment, including ground water. Therefore, EPA has determined that such disposal does not present an unreasonable risk of injury to health or the environment (Refs. 22 and 23).

While EPA is still requiring leach testing for certain materials disposed of in a municipal or non-municipal non-hazardous waste landfill (see § 761.62(b)(1)(iii)), EPA has reduced the level of PCBs in the aqueous leachate from 50 to 10 µg/L (approximately 10 ppb). This change is based on comments that the solubility of two major Aroclor components, 1254 and 1260, is generally less than 50 ppb. Thus false negatives concerning the presence of leachable PCBs (PCBs not bound up in the matrix of the waste) would result if EPA retained 50 ppb as the regulatory level.

It is not always necessary to determine the PCB concentration or leaching characteristics of PCB bulk product waste. For example, under § 761.62(b)(1)(i) certain PCB bulk product waste may be disposed of in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill regardless of its PCB concentration. Under § 761.62(b)(4), the disposer would have to notify the disposal facility that the waste may contain PCBs ≥50 ppm, but could do so based on application of a general knowledge of the waste stream (or similar material) to report the PCB concentration. If the disposer could not base the § 761.62(b)(4) notice on general knowledge of the PCB concentration of the waste, and needed to sample the waste, however, the disposer would have to use subpart R or another sampling method approved under § 761.62(c). It would also be necessary to use subpart R or § 761.62(c) for purposes of disposal of PCB bulk product waste in accordance with § 761.62(a)(4) in a facility having an upper limit on PCB concentration which can be disposed using the approval.

Generators of PCB bulk product waste must provide prior notification to PCB waste management facilities not having commercial PCB storage or disposal approvals. The notice must state that the PCB bulk product waste may include components containing PCBs at ≥50 ppm. There are three options for determining the concentration of the waste: analysis of a representative sample of the waste in the shipment selected in accordance with subpart R; application of a general knowledge of the waste stream (or similar material) based on prior testing by the disposer or others; or the presumption that the unsampled, unanalyzed waste contains ≥500 ppm PCBs (see § 761.50(a)(5)). For PCB bulk product waste disposed of under § 761.62(b)(1), the notice must state that the waste is known or presumed to leach <10 µg/L PCBs. For PCB bulk product waste disposed of under § 761.62(b)(2), the notice must state that the waste is known or presumed to leach ≥10 µg/L PCBs.

In addition, § 761.62(b)(4) requires different notification procedures for waste disposed of under § 761.62(b)(1) than for waste disposed of under § 761.62(b)(2). For waste disposed of under § 761.62(b)(1), notice is required only in advance of the first shipment from the same disposal waste stream. For example, a new notice would be required where a shredding operation changed its feedstock from automobiles to plastic-insulated electrical cables or to white goods (i.e., household appliances or industrial appliances, such as refrigerators, ranges, washers, and water heaters). A disposer of demolition waste would have to submit a new notice for demolition waste from a new demolition project. For example, where a disposer was delivering waste from a demolition project in more than one load, a notice would not be required for each load from that project. Where the disposer began delivery of waste from a different demolition project, a new notice would be required. For waste disposed of under § 761.62(b)(2), notice is required in advance of the first shipment from the same disposal waste stream and with each subsequent shipment.

Also, part 761, subpart K does not apply to PCB bulk product waste disposed of under § 761.62(b).

Under current rules at § 761.60(b)(2)(ii), intact and non-leaking PCB small capacitors may be disposed of as municipal solid waste. Automobile and appliance shredder fluff may be disposed of in a municipal or non-municipal non-hazardous waste landfill as PCB bulk product waste only if it does not contain shredded PCB small capacitors. If a capacitor is shredded, the PCBs are no longer enclosed within the capacitor and must be disposed of under § 761.62(a) or (c).

c. *Risk-based option.* Section 761.62(c) sets out the procedure EPA will use for issuing risk-based storage or disposal approvals for PCB bulk product waste. EPA will evaluate each application for a risk-based approval and its supporting information to determine whether the proposed storage or disposal methods or locations would pose an unreasonable risk of injury to health or the environment. To allow flexibility, the final rule does not specify the criteria EPA must use in this evaluation. However, examples of such criteria could be: (1) The nature and quantity of the wastes; (2) the proposed alternate design and operation; (3) the hydrogeologic setting of the unit, including attenuative capacity and thickness of the liners and soils present between the pile and ground water or surface water; and (4) any other factors

which would influence the quality and mobility of the leachate produced and its potential to migrate to ground or surface water.

d. *Disposal as daily landfill cover or roadbed*. EPA received comments on using automobile shredder waste as a daily landfill cover or under asphalt as part of a road bed. EPA considers these activities as disposal rather than use, and under § 761.62(d) will allow shredder waste to be disposed of in a landfill as the final daily cover, if it remains in the landfill and is not released or dispersed by wind or other action or may be disposed of under asphalt as part of a road bed. Because these disposal options have been restricted to materials that do not leach and because other potential routes of exposure have been controlled, EPA has concluded that the risk from these disposal options is the practical equivalent of disposal in a landfill as required in § 761.62(b)(1), and therefore that this risk is not unreasonable. Both of these potential disposal approaches can also be addressed in a risk-based disposal application under § 761.62(c).

e. *Sampling (subpart O)*. EPA redesignated Appendix III as subpart O, and reorganized it to have three levels of random sampling: collecting a representative 19-liter (5 gallon) bucket of waste from the population, selecting one quarter of this 19 liters for particle size reduction, and selecting a subsample of the reduced particle size fraction for chemical analysis. Use the procedures specified in subpart R to sample non-liquid, non-metal PCB bulk product waste or non-liquid, non-metal PCB remediation waste to be disposed of off-site when it is necessary to analyze the waste to determine PCB concentration or leaching characteristics for storage or disposal. Subpart R includes procedures for sampling waste which is continuously generated and previously generated waste. However, § 761.50(a)(5) allows non-liquid PCBs to be land disposed without regard to otherwise-applicable sampling requirements by presuming that the PCBs disposed of are ≥500 ppm (or ≥100 µg/100 cm^2 if no free-flowing liquids are present).

Some commenters provided specific sampling plans to address the objectives in the proposed rulemaking. EPA incorporated some aspects of these plans into subpart O. However, these plans relied on judgement sampling, which has an inherent bias. To avoid the bias, EPA has substituted sample selection procedures which use random numbers.

10. *PCB household wastes*. EPA raised the issue in the ANPR and NPRM, of whether it should create an exclusion from the disposal requirements for PCB household waste. Although some commenters questioned whether such an exclusion was needed, most supported the idea, and suggested that EPA develop a TSCA exclusion that is identical to the RCRA household waste exclusion at 40 CFR part 261.4(b). EPA agrees that the provision at § 761.63 should be modified to more closely parallel the RCRA exclusion.

In the NPRM, EPA defined PCB household waste as:

> PCB waste that is composed of unwanted or discarded household items that contain PCBs, come from private residences and are commonly found in private households, including individually owned or rented units of a multi-unit construction. Wastes created during renovation and demolition projects are not PCB household wastes except for paint on surfaces. Renovation or demolition projects include, but are not limited to, the conversion of industrial property to residential units or the remodeling of hotels, motels, or multiple rental units.

Several commenters suggested that EPA should expand the definition to include wastes from commercial office buildings, automobiles, and other vehicles found in private households regardless of the source, and renovation wastes from private homeowners. In addition, they encouraged EPA to eliminate distinctions it created between transient and permanent settings. Many commenters did not accept the distinctions that EPA had drawn between the TSCA and RCRA exclusions as valid.

EPA has modified the definition for PCB household waste to read as follows:

> PCB waste that is generated by residents on the premises of a temporary or permanent residence for individuals (including individually owned or rented units of a multi-unit construction), and that is composed primarily of materials found in wastes generated by consumers in their homes. PCB household waste includes unwanted or discarded non-commercial vehicles (prior to shredding), household items, and appliances or appliance parts and wastes generated on the premises of a residence for individuals as a result of routine household maintenance by or on behalf of the resident. Bulk or commingled liquid PCB wastes at concentrations of 50 ppm or greater, demolition and renovation wastes, and industrial or heavy duty equipment with PCBs are not PCB household wastes.

Two criteria applicable to the RCRA household waste exemption must also be satisfied for the TSCA PCB household waste exclusion: (1) The waste must be generated by individuals on the premises of a temporary or permanent residence for individuals, and (2) the waste must be composed primarily of materials found in the wastes generated by consumers in their homes (49 FR 44978, November 13, 1984). As a result, waste from sources such as commercial office buildings are not subject to the exclusion. EPA did not include a comprehensive listing of the structures that could serve as temporary or permanent residences in the TSCA definition. Nonetheless, residences covered by the RCRA exclusion at § 261.4(b)(1) (e.g., single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas) are included under the TSCA PCB household waste exclusion.

EPA has determined that the PCB household waste exclusion will not result in an unreasonable risk of injury to health or the environment. Due to their age, many of the PCB-containing items that would be found in consumer households have been disposed of by now. As a result, few household items are likely to contain PCB capacitors (e.g., certain refrigerators and household freezers, room and central air conditioners, heat pumps, furnace blowers, fluorescent lighting ballasts and microwave ovens), and the disposal of those which remain in service will occur in a random, geographically dispersed manner. Further, non-liquid PCBs found in household items will most likely be bound in a solid matrix. EPA has taken precautions not to include in the PCB household waste definition regulated PCB liquids (i.e., ≥50 ppm PCB), demolition or renovation waste, and industrial or heavy duty PCB equipment. Only those municipal collection programs and treatment and storage facilities that can satisfy the PCB household waste exclusion criteria will be able to operate under that exclusion. The ultimate disposal of PCB household wastes is regulated; that is, these wastes cannot be abandoned, for instance, on an empty lot. EPA believes that PCB household waste managed in accordance with these requirements will not result in environmental releases of PCBs.

Homeowners will commonly utilize their local hazardous waste collection programs to dispose of unused paint, some of which may contain PCBs. Typically the homeowners bring in liquids in 1 or 5 gallon buckets which are consolidated into drums at the collection point and forwarded to a waste handling facility where they are tested before mixing with other similar wastes. Bulk liquids with a concentration of less than 50 ppm may then enter the waste oil/solvent

recycling stream and be used for fuel blending purposes. Rather than allow the waste management facility to treat bulk liquids containing 50 ppm PCBs or greater as unregulated wastes, EPA is requiring that these liquid PCB wastes be handled as regulated PCB waste (i.e., ≥50 ppm); therefore, regulated levels of bulk liquid PCB wastes are explicitly excluded from the household waste definition. EPA believes that regulated bulk or commingled liquid PCBs should be managed in high efficiency boilers or incinerators, as appropriate.

Further, EPA is not adopting the recommendation to include renovation and demolition wastes within the exclusion, since these wastes are not generated by consumers in their homes. However, wastes generated as the result of routine household maintenance (as opposed to renovation, construction or demolition activities) regardless of whether the activity is conducted by the homeowner or a contractor, would be considered PCB household wastes. Routine household maintenance would include, for example, stripping and repainting residential walls, and small home maintenance or repair projects such as removing/replacing PCB-containing articles from residential units. This approach is in alignment with existing policies for the RCRA household waste exemption. EPA has indicated that it does not consider wastes from debris produced during building construction, renovation, or demolition in houses, or other residences to be similar to those generaged by a consumer in the home during the course of daily living (49 FR 4478, November 13, 1984). (Refs. 24 and 25). Therefore, the risk considerations are not the same as for materials falling within the definition of PCB household wastes. The disposal of these materials is regulated under § 761.62.

Commenters from the scrapping industry wanted EPA to broaden the scope of the proposed PCB household waste exclusion to allow the processing of items traditionally received by that industry. Instead, elsewhere in this rule (see § 761.79(b)), EPA recognizes certain activities traditionally conducted by the scrapping industry (e.g., chopping, stripping insulation, and scrapping) as forms of decontamination and states that those activities do not require a TSCA disposal approval. Waste generated as a result of those processes generally is regulated as PCB bulk product wastes and must be disposed of in accordance with § 761.62.

Another commenter stated that PCB capacitors in residential furnaces should be managed as PCB household waste at the time of disposal. EPA agrees. Other appliances that may contain PCB small capacitors include, but are not limited to, refrigerators and household freezers, room and central air conditioners, heat pumps, furnace blowers, fluorescent lighting ballasts and microwave ovens. These items, although they contain PCBs, may be handled as PCB household waste under the TSCA exclusion and disposed of through a municipal hazardous waste collection program.

EPA also received a request to clarify its intent regarding entities that accumulate capacitors for disposal at TSCA facilities, for instance, utilities that collect capacitors from households. As indicated in the preamble discussion regarding the disposal of PCB small capacitors, the Agency is not changing the disposal requirements for intact and non-leaking PCB small capacitors; e.g., individuals other than manufacturers of PCB capacitors and/or PCB Equipment may dispose of small capacitors as municipal solid waste. (Leaking PCB small capacitors are regulated waste and are required to be disposed of by a method approved under TSCA.) EPA applauds the activities of those entities who collect and accumulate household capacitors for disposal in TSCA-approved facilities and encourages those entities to continue their collection and disposal efforts.

11. *Wastes from R&D activities, including chemical analysis of PCBs.* EPA proposed disposal requirements for waste generated during the process of chemical analysis. In response to comments, EPA clarifies that § 761.64 addresses laboratory wastes from R&D activities authorized in § 761.30(j) as well as the chemical analysis required in part 761, including §§ 761.30, 761.60, 761.61, 761.62, and 761.79. EPA believes that these two types of activities present similarly minimal risk because of the quantities and concentrations of the waste and the controlled environments in which the activities take place.

Commenters sought to increase the maximum waste quantities approved for disposal in a State-approved solid waste landfill, because larger laboratories generate more waste than the maximum allowance and because the small amounts of waste at issue would be difficult to track on an annual basis. The intent of the minimum quantity was to provide some regulatory relief for individuals who generate small quantities of PCB waste, and provide incentives to minimize PCB laboratory waste generation. Based on these comments, EPA has determined that the cost of recordkeeping to demonstrate compliance with the annual maximum amounts is not justified in terms of the potential increment of additional waste above those amounts that would be disposed of each year. Therefore, EPA has deleted the annual limit of 54 cubic feet in volume or 1,000 kg in weight from the final rule. EPA still encourages all disposers to practice waste minimization.

12. *Restructuring disposal technology requirements.* While many commenters supported the proposed disposal technology requirements, they stated that the proposed rule structure was confusing. Therefore, in addition to adding the proposed disposal technolgies, EPA reorganized subpart D to make the varius provisions easier to locate. For example, EPA moved the technical and performance requirements for high efficiency boilers, formerly in § 761.60(a)(2) and (a)(3), to new § 761.71; and moved the requirements for industrial furnaces, proposed at § 761.60(a)(4), to new § 761.72. Incinerator and chemical waste landfill technical requirements remain in §§ 761.70 and § 761.75.

F. Storage for Disposal

1. *One-year time limit and extensions.* EPA proposed to allow extension of the 1-year time limit for storage and disposal where the persons storing the waste had been unsuccessful in their continuing attempts to dispose of or secure disposal for their waste. EPA also proposed to allow extension of the 1-year time limit as a condition of a PCB disposal approval, based on such factors as lack of disposal capacity, the absence of a treatment technology, or insufficient time to complete the treatment or destruction process.

In today's rule, criteria for extending the 1-year time limit for storage and disposal are being finalized as proposed with two changes. First, PCB/radioactive waste removed from service for disposal is excluded from the 1-year storage for disposal requirement provided that continuing attempts to dispose of the waste are documented and the waste is managed in accordance with all applicable Federal, State, and local laws and regulations. PCB/radioactive waste that is exempt from the 1-year storage for disposal time limit pursuant to § 761.65(a)(1) is also exempt from the exception reporting requirements of paragraphs (c), (d), and (e) of § 761.215 (the provisions pertaining to the One-year Exception Report).

In addition, many commenters objected to initiating disposal decisions 30 days after waste had been placed in storage for disposal, as proposed in § 761.65(a)(2)(iv). EPA did not intend

that generators make disposal decisions within 30 days from the date their waste was first placed into storage for disposal. In the past, the Agency has allowed generators 9 months (270 days) in which to get their wastes to disposers and 90 days for disposers to dispose of the PCB waste as outlined in Office of Enforcement and Compliance Assurance TSCA Compliance Program Policy 6-PCB-6. In this final rule, as a condition of obtaining a 1-year extension, the Agency is requiring generators to demonstrate continuing attempts to obtain disposal for PCB wastes 270 days after first placing their waste into storage for disposal.

2. *Facility requirements*—a. *Temporary storage of PCB liquid at 500 ppm or greater.* Current § 761.65(c)(1)(iv) allows temporary storage, in an area that does not meet the requirements of § 761.65(b), of PCB Containers filled with liquid containing between 50 and 500 ppm PCBs for up to 30 days from the date the liquids were removed from use. EPA proposed to amend that section to allow temporary storage of PCB containers filled with liquid containing PCBs at concentrations of 500 ppm or greater.

Several commenters asked that EPA extend the temporary storage period from 30 to 90 days. The Agency originally proposed to allow temporary storage of liquids greater than or equal to 500 ppm PCBs because of generators consolidating PCBs prior to shipment to a disposal facility. Since these consolidating activities were believed to be of a short duration, EPA did not propose changes to the 30–day time limit. EPA continues to believe that a 30–day time limit is appropriate and therefore did not change it.

EPA is finalizing the 30-day temporary storage provision for liquid PCBs at 50 ppm or greater, provided a Spill Prevention Countermeasure and Control (SPCC) (40 CFR part 112) plan is in place and the liquid waste is in stationary bulk storage tanks (including rolling stock such as tanker trucks as specified by the Department of Transportation (DOT)) or packaging authorized in the Hazardous Materials Regulations (49 CFR parts 171 through 180) (see § 761.65(c)(1)).

b. *Storage of large PCB capacitors and PCB-Contaminated equipment on pallets next to a qualified storage area.* EPA proposed to delete the provision allowing pallet storage at § 761.65(c)(2). EPA reasoned that the phaseout date (October 1, 1988, § 761.30(1)) for most uses of PCB Large High Voltage Capacitors had passed, and additional storage space for this equipment was no longer needed. EPA also reasoned that this provision was no longer needed for PCB-Contaminated Electrical Equipment because it is typically drained prior to disposal and the drained hull or carcass is not subject to § 761.65.

Commenters unanimously disagreed, indicating that pallet storage is still widely used. Many proactive companies in the electrical utility industry and elsewhere have either reclassified their PCB Transformers to less than 500 ppm PCB or have disposed of these units, leaving the vast majority of their existing inventory of transformers in the 50 to 499 ppm PCB range or lower. When these units are taken out of service for disposal they are stored on pallets prior to draining. In addition, many large capacitors removed from restricted access areas are stored on pallets prior to disposal. Commenters also pointed out that eliminating this provision would create undue hardship by forcing them to either expand their existing storage areas or to ship this waste to another location. Therefore, EPA is not deleting the pallet storage provisions from § 761.65(c)(2).

c. *Alternate storage of PCBs.* EPA proposed to modify § 761.65(b)(2) to allow the storage of PCBs and PCB Items designated for disposal in waste management units permitted by EPA under section 3004 of RCRA or by a State authorized under section 3006 of RCRA to regulate the management of hazardous waste in containers. The proposed rule would also have allowed the storage in units otherwise regulated by a State under a TSCA look-alike law or approved as part of a PCB disposal approval. EPA reasoned that the RCRA requirements for permitted container storage units would provide an equal level of protection as the TSCA requirements, and preclude an unreasonable risk of injury from PCBs. Both require recordkeeping, waste tracking, secondary containment, monitoring for leaks, inspections, and financial assurance and closure requirements. The proposal did not extend to units operating in interim status under RCRA. The proposal would also have allowed PCBs, especially large volume wastes otherwise required to be stored in compliance with this section, to be stored under the terms and conditions specified in a PCB disposal approval.

Commenters generally favored the proposal, but some wanted EPA to adopt other RCRA provisions, such as storage in facilities with interim status and the 90-day accumulation period allowed for generators under 40 CFR 262.34. EPA's criteria for allowing PCBs to be stored other than in a facility approved under § 761.65(d) are that the permit must cover the management of PCBs and have a financial assurance mechanism. EPA is not allowing the storage of PCB waste in RCRA facilities operating under interim status because the interim status permit only applies to hazardous wastes and not to PCBs. Therefore, there would be no financial assurance to cover corrective action pursuant to 40 CFR 264.101.

EPA is also adding three other scenarios where PCB waste could be stored without a formal approval under § 761.65(d) or meeting the design criteria of § 761.65(b). The first two scenarios are facilities that are granted risk-based storage approvals under § 761.61(c) (PCB remediation waste) or § 761.62(c) (PCB bulk product waste). In both cases, the application for the storage approval must include information, based on technical, environmental, and other considerations, that the proposed storage method will not pose an unreasonable risk to human health or the environment. The third scenario is where a facility has a TSCA PCB Coordinated Approval, which includes provisions for storage, issued pursuant to § 761.77.

Any PCB waste spilled while stored at a RCRA facility must be cleaned up in accordance with the PCB Spill Cleanup Policy (40 CFR part 761, subpart G).

d. *Revision to storage unit criteria.* EPA amended § 761.65(b)(1)(iv) for consistency with the new definition of ''porous surface'' at § 761.3 which includes concrete and cement. The existing rule, which refers to Portland cement and concrete as ''impervious,'' would have been inconsistent with the definition of ''porous surface.'' These references are not being deleted, however, because this would cause all existing storage units that have used Portland cement or concrete to be out of compliance. Section 761.65(b)(1)(iv), as amended, requires a storage facility to have ''floors and curbing constructed of Portland cement, concrete, or a continuous, smooth, non-porous surface as defined at § 761.3 of this part, which prevents or minimizes penetration of PCBs.'' EPA recommends, however, that nonporous surfaces be used for curbing and flooring for storage units since cleanup of non-porous surfaces is easier and less costly. EPA also recommends that porous surfaces be rendered non-porous by coating them with an epoxy sealant.

3. *DOT containers for storage of PCB waste.* EPA is adopting DOT container requirements for PCB storage, transportation, and disposal (see §§ 761.60(b)(2)(vi) and 761.65(c)(6)), by eliminating citations to specific

container type and cross-referencing the new performance-based DOT Hazardous Material Regulations (HMR) container requirements (see 49 CFR parts 171 through 180).

While this change will simplify regulatory compliance, individuals must keep in mind that EPA regulates storage of PCB waste in non-transportation situations, and additional marking requirements at § 761.40 are still in effect. In addition, because of the anti-dilution provision at § 761.1(b)(5), EPA may regulate PCB waste at a much lower concentration than DOT. Therefore, EPA may require some PCB waste not subject to the DOT regulations (i.e., less than 20 ppm or <1 pound of PCBs regardless of concentration) to be packaged in accordance with the DOT HMR (e.g., 49 CFR 173.203 (for liquids) or 173.213 (for non-liquids)), that is, in DOT authorized containers.

PCBs are listed in Packing Group II of the Hazardous Materials table at 49 CFR 172.101. However, under the HMR, PCBs that are transported by highway or rail need only be packaged pursuant to Packing Group III. PCB/radioactive waste, PCB/mixed waste, and PCB/hazardous waste not packaged in accordance with the HMR are not allowed to be transported. Additionally, the HMR as amended on December 21, 1990 (55 FR 52402) prohibits the construction of DOT specification packaging previously designated for PCB waste storage (i.e., DOT Specification 5, 5B, 6D, 17C, 17E, and 17H containers) effective October 1, 1994. Further, transportation of PCBs in these outdated DOT specification containers is not authorized beyond September 30, 1996, unless they were filled prior to, and not emptied and refilled after, October 1, 1996 (see 49 CFR 171.14(a)(2)).

Several commenters argued that EPA should continue to allow the use of these old DOT specification containers for storing PCBs in situations not subject to DOT regulations. Some companies have invested in inventories of these old specification containers that would be expensive to replace. The Department of Energy noted that it has large quantities of non-fissionable PCB/radioactive waste in storage that would have to be repackaged. EPA relied for many years on the stringent standards in the old DOT specifications, and believes the continued use of containers meeting these specifications for non-DOT applications will not pose an unreasonable risk to health or the environment. Therefore, EPA is allowing such use to continue at § 761.65(c)(6)(ii).

EPA received comments that it should continue to list at § 761.65(c) all containers authorized by DOT. EPA believes such an approach would defeat EPA's objectives of providing flexibility to industry and minimizing the resource burden associated with updating the PCB regulations each time DOT modifies its requirements. Most commenters supported EPA's proposal to cross-reference DOT regulations instead.

The final rule also amends § 761.60(b)(2)(vi) to conform to the new DOT container requirements. A commenter misunderstood the effect of the change to this section and expressed concern that EPA is making a new allowance for PCB Capacitor disposal at § 761.60(b)(2)(vi). This is not the case. Section § 761.60(b)(2)(vi) is an existing provision which is being modified only with respect to container specifications. Readers of today's final rule should keep in mind that the PCB Capacitors described in § 761.60(b)(2)(vi) of the regulatory text may not be disposed of in a chemical waste landfill unless the Assistant Administrator for Prevention, Pesticides and Toxic Substances first authorizes their disposal pursuant to existing § 761.60(b)(2)(v).

4. *PCB/radioactive waste*. The proposed rule defined ''PCB/fissionable radioactive waste or PCB/radioactive waste'' as ''PCBs regulated for disposal under subpart D of part 761 that also contain fissionable radioactive material or radioactive material subject to regulation under the Atomic Energy Act of 1954 as amended.'' At the suggestion of comments, EPA is clarifying the definition by deleting the reference to ''PCB/fissionable radioactive waste,'' maintaining the term ''PCB/radioactive waste,'' and including PCBs regulated for disposal that also contain source, special nuclear, or byproduct material that is subject to the Atomic Energy Act of 1954 as amended, or naturally occurring or accelerator produced radioactive material.

The Agency also proposed to allow PCB/radioactive waste to be stored for longer than 1 year if the storer requested and received an extension. Several commenters indicated that since there is inadequate disposal capacity for PCB/radioactive waste, EPA should not require generators of such waste to undertake the process of requesting and obtaining 1 year extensions. The Agency agrees and, in addition, has exempted PCB/radioactive waste from the 1 year storage for disposal and exception reporting requirements (see § 761.65(a)).

EPA proposed to allow PCB/radioactive waste to be stored in containers other than those meeting the DOT performance standards and to not require a minimum 6-inch high curbing for PCB/radioactive waste. EPA received no comments on these proposals and they are finalized as proposed (see § 761.65(c)(6)(i) and § 761.65(b)(1)(ii)).

5. *Changes in ownership or operational control.* See Unit IV.M.6. of this preamble.

6. *Dating and inspection of PCB Article Containers*. PCB Articles and PCB Containers must be checked periodically for leaks (see § 761.65(c)(5)), and dated when they are placed into storage (see § 761.65(c)(8)). PCB Article Containers, however, were not included in § 761.65(c)(5) and (c)(8), creating a loophole that allows a storage unit owner to omit dating and inspecting these containers and to circumvent the 1-year storage and disposal time limit. EPA proposed in the NPRM to correct this oversight by replacing the phrase ''PCB Articles and PCB Containers'' with ''PCB Items'' wherever it occurs in § 761.65(c)(5) and (c)(8). The definition of ''PCB Item'' at § 761.3 includes PCB Article, PCB Article Container, PCB Container, PCB Equipment and anything else that contains PCBs. No significant comments were received on this proposal, and EPA is finalizing the modification as proposed.

G. TSCA PCB Coordinated Approvals

In both the ANPR, and the NPRM, EPA solicited comments regarding a provision which would allow it to recognize certain other Federal or State waste management documents governing the storage, cleanup, treatment and disposal of PCB wastes. The reasons for developing such a provision were to eliminate duplicative approval processes (i.e., modifying the requirement to issue a TSCA PCB approval), to foster communications and coordination among Federal and State environmental officials, and to ensure a more efficient use of limited resources. Permits or approvals from other state or Federal programs often are required for the storage or disposal of the PCB waste. For example, placement of dredged material in upland environments is a disposal option at many navigation projects, for environmental and economic reasons. The U.S. Army Corps of Engineers evaluates placement of dredged material in upland facilities, including evaluation of the potential contaminant pathways from the dredged material placement operation. These placement operations are subject to the permit requirements of section 10 of the Rivers and Harbors Act of 1899, taking into account EPA's Clean Water Act section 404(b)(1) Guidelines and the

National Environmental Policy Act (Ref. 26).

Where the dredged material also contained regulated PCBs, its management and disposal would be subject to TSCA. Management and disposal of dredged material containing <50 ppm PCBs, based on a permit or authorization issued by the U.S. Army Corps of Engineers under section 404 of the Clean Water Act or section 103 of the Marine Protection, Research, and Sanctuaries Act, is an authorized disposal option under § 761.61(b)(3). Except in accordance with the self-implementing provisions of § 761.61(a), management and disposal of dredged material with a higher PCB concentration, or material disposed of in an upland facility with no return flow to waters of the United States, would be subject to TSCA approval requirements. The disposer could avoid the requirement to get a separate TSCA approval if a coordinated approval were granted based on a permit issued under the Clean Water Act, Marine Protection, Research and Sanctuaries Act, Rivers and Harbors Act, or other applicable authority.

Under existing requirements, a TSCA PCB approval is required generally for the commercial storage and disposal of PCB wastes at 50 ppm or greater. There are, however, limited scenarios where a TSCA PCB approval is not applicable, such as the on-site cleanup and disposal of PCBs under the CERCLA Superfund program.

Some commenters supported the coordinated approval provision, because ''better coordination with existing State authorities should be encouraged'' and ''greater flexibility will be provided to generators for the disposal of PCBs,'' but they also identified concerns. Of those in favor, most preferred the self-implementing approach over the interactive procedures, believing that a detailed TSCA review of permitted RCRA or State PCB program activities is not necessary. EPA has retained the interactive approach to ensure that a review under the TSCA authority is accomplished prior to, rather than after, the initiation of the proposed PCB disposal activity. A prior review was not included in the self-implementing approach, which would have allowed individuals to commence their PCB disposal activities immediately after completing three steps: obtaining an EPA identification number (or confirming an existing number), notifying the EPA Regional Administrator of their preference to use another waste management document, and receiving written confirmation from the EPA Regional Administrator that the notice had been received. Although a detailed review may not be necessary, the Agency believes the success of the coordinated approval process lies in appropriate coordination and consultation with the other waste management authority to ensure few opportunities exist for the mismanagement of PCB wastes. Therefore, EPA chose the interactive approach because the Agency believes that the costs of the additional administrative requirements are outweighed by the increased level of environmental protection possible under this approach.

One commenter cautioned EPA about losing its ability to exercise national oversight over the PCB program if hybrid State permits replace TSCA permitting requirements. A slightly different point of view was expressed by one commenter who suggested that Federal oversight should be kept to a minimum if States choose to address PCB wastes using State authorities. Other commenters opposed the proposal as unnecessary and resulting in: (1) Differential treatment of facilities currently holding TSCA approvals (i.e., not all facilities would be held to the same standards); (2) confusion regarding TSCA and RCRA labeling and storage requirements placing generators, storers, and disposers in ''double jeopardy''; and (3) State programs which may be more stringent or overly protective.

EPA recognizes that the coordinated approval may not be a perfect solution to the problem of duplicative permitting requirements. To take advantage of the coordinated approval, a facility could rely on a valid waste management permit/approval issued under a Federal law that is administered in whole or in part by the Administrator. Although the standards under these different authorities may vary, they do serve to eliminate or reduce the risks to health or the environment from exposure to PCBs. The process is voluntary; individuals are not required to obtain a TSCA PCB Coordinated Approval. The coordinated approval provision may also be appropriate for PCB waste management documents which have been issued pursuant to regulations that have been promulgated by a State for the disposal of PCBs. Implementation of the coordinated approval process using the interactive approach will ensure the other waste management permit/approval is consistent with the basic principles of the TSCA PCB disposal program.

In regard to the point that States may be more stringent or overly protective, commenters suggested that EPA should preempt State and local standards for PCBs. As stated in the NPRM preamble, TSCA does not allow the Administrator to preempt State disposal rules which describe the manner or method of disposal of a chemical substance or mixture, or in this instance, the disposal of PCBs (59 FR 62832).

Although several commenters recognized that the option to regulate the disposal of PCBs at the State level currently exists under either a TSCA look-alike program or an expanded RCRA hazardous waste program, no unanimity existed on which approach was preferred. Some commenters felt the TSCA PCB Coordinated Approval was the equivalent of a Federal mandate. Commenters were not in favor of State PCB programs because of the potential inconsistency in standards and regulatory requirements which could complicate compliance, create confusion, result in higher costs and excessive burden to the regulated community and unnecessarily impede interstate commerce.

Section 761.77 is not a Federal mandate. EPA is not requiring any State to develop a TSCA look-alike program or to expand its RCRA hazardous waste program to include PCBs. However, any State may pursue either option, provided, for TSCA look-alike programs, that the requirements are at least as stringent in the protection of health and the environment as the applicable TSCA requirements, and under expanded hazardous waste programs or any State program that has been approved by EPA, the risks of injury to health or the environment from PCBs are eliminated or reduced by actions taken under those authorities. The TSCA PCB Program is not delegable, and EPA is not delegating responsibility for implementing TSCA section 6(e) to the States. The TSCA PCB Coordinated Approval provides a mechanism for Federal and State environmental officials to better coordinate PCB activities, maximize diminishing resources, incorporate flexibility and reduce oversight of States which demonstrate the ability to monitor PCB activities.

EPA has retained the coordinated approval provision, but has modified it in light of comments. One commenter suggested EPA include a definition for TSCA PCB Coordinated Approval. EPA agrees and has added the definition in § 761.3.

A number of comments questioned the applicability of a TSCA PCB Coordinated Approval at CERCLA remediation sites. Proposed § 761.77(g), which addressed on-site remediation activities conducted under CERCLA, has been deleted. EPA did not intend to suggest that a TSCA approval would be

required for CERCLA on-site remediation and disposal activities.

EPA also clarifies that revocation of a TSCA PCB Coordinated Approval will be based solely on those PCB activities covered by the non-TSCA approval that serve as the technical or legal basis for the coordinated approval, i.e., are related to the management of PCBs. For example, a determination to issue a notice of deficiency or to revoke the TSCA PCB Coordinated Approval may be based on, but is not necessarily limited to: (1) Non-compliance with § 761.77(b) and (c); (2) operation of the approved PCB waste management process in a manner which may result in an unreasonable risk of injury to health or the environment; (3) failure to comply with, expiration of, or revocation of the non-TSCA approval or of the program under which the non-TSCA approval was issued; and (4) for CERCLA off-site actions, lack of completion of requirements conducted pursuant to CERCLA decision and enforcement documents issued by EPA that apply to off-site PCB waste management activities, or failure of the owner, operator or responsible party to comply with conditions of the decision and enforcement documents that apply to PCB waste management activities. EPA also clarifies that before it revokes a TSCA PCB Coordinated Approval, it will, as a matter of policy, consult with the authority that issued the underlying non-TSCA approval. EPA is not required, however, to seek or obtain the agreement or concurrence of the issuing authority prior to revoking a TSCA PCB Coordinated Approval.

Finally, permits issued by regulations found in title 40 of the CFR, such as those authorized under RCRA at § 270.60, may be covered under the coordinated approval provision.

H. Decontamination

In today's rule, EPA is finalizing the decontamination regulations as proposed in § 761.79 with modifications resulting from public comments and EPA's scientific studies. The Agency clarifies that: (1) Decontamination standards and procedures can be used for disposal and decontaminated materials can be distributed in commerce, used or reused; (2) specified decontamination activities no longer need a PCB disposal approval; (3) materials meeting the applicable decontamination standards or procedures are unregulated for disposal under subpart D of part 761; and (4) most wastes and residues from decontamination activities can be managed based on their existing PCB concentration. EPA clarifies that when contaminated PCB materials are sent off-site for decontamination, they must be manifested to a commercial PCB storer or disposer.

In the NPRM (59 FR 62800), EPA proposed for non-porous surfaces the decontamination standard in EPA's Spill Clean-up Policy (i.e., less than or equal to 10 micrograms PCB per 100 centimeters squared), and two non-aggressive decontamination procedures using kerosene as an alternative to decontamination followed by confirmatory sampling. The Agency also proposed to waive TSCA disposal approval requirements for a number of specified decontamination activities while requiring measures to be taken to prevent releases of PCBs to the environment and to protect workers against dermal contact or inhalation. The Agency solicited comment on including distillation as a decontamination activity. After using an EPA specified decontamination procedure, the decontaminated surface would not be regulated for disposal and could be reused except in association with food, feed, or drinking water in accordance with proposed § 761.20(c)(5). The Agency also clarified that disposal of materials used in decontamination, such as abrasives, solvents, and equipment is regulated. EPA further proposed that certain solvents could be disposed of in industrial boilers. Finally, the Agency proposed a decontamination level for water consistent with EPA's drinking water standard to ensure that the reuse of decontaminated water is safe.

The final decontamination regulations at § 761.79 establish measurement-based decontamination standards for removing PCBs from water, organic liquids, non-porous surfaces, concrete, and non-porous surfaces in contact with non-liquid PCBs (including non-porous surfaces covered with a porous surface, such as paint or coating on metal). EPA is finalizing the self-implementing decontamination procedures for non-porous surfaces in contact with mineral oil dielectric fluid (MODEF) and providing a mechanism for allowing other performance-based procedures and solvents to be used in decontamination of materials contaminated with MODEF or other PCB liquids. The final rule clarifies that thermal processes as specified in § 761.72 may be used to decontaminate metal surfaces. Additionally, EPA moved the decontamination of air compressor systems, formerly in § 761.60(b)(5), to the performance-based provisions of § 761.79.

EPA has maintained the general provisions from the proposal requiring persons conducting decontamination activities to protect against direct releases of PCBs to the environment and to protect workers from dermal contact or inhalation of PCBs or materials containing PCBs. Although many commenters felt that these requirements were duplicative of OSHA standards, EPA believes that they are necessary. First, OSHA standards do not apply to all settings where decontamination activities may occur. Second, because EPA is no longer requiring PCB disposal approvals for specified decontamination activities, these general safety standards will ensure there is no unreasonable risk of injury to health or the environment from decontamination activities.

The decontamination procedures in § 761.79 do not apply to all wastes. For example, they do not apply to intact electrical equipment such as transformers, voltage regulators, capacitors, and rectifiers. The surface areas in this kind of equipment are very large and may have numerous laminations with a high contact, low volume space limiting the solvent contact necessary for complete decontamination. In addition, electrical equipment may contain porous components such as wood. Since most porous materials cannot be adequately decontaminated, the decontamination procedures generally do not apply to porous surfaces (except for non-porous surfaces covered with a porous surface, such as paint or coating on metal, which can be decontaminated by removing the paint or coating, leaving only a non-porous surface meeting the standards in § 761.79(b)(3)). Finally, today's decontamination procedures are not appropriate for or applicable to wastes such as soil, debris, and sediments.

Commenters suggested a number of specific decontamination methods. Some also wanted a mechanism for EPA to approve additional methods in the future. EPA has added the distillation of PCBs from contaminated solvents, oil/water separation, and scarification of surfaces to the decontamination procedures under § 761.79 which do not need a PCB disposal approval. The Agency agrees with comments that potential air release concerns associated with distillation will be adequately addressed by the Clean Air Act and RCRA. The decontamination methods no longer requiring a PCB disposal approval now are: chopping (including wire chopping), distilling, filtering, oil/water separation, spraying, soaking, wiping, stripping of insulation, scraping, scarification, the use of abrasives or solvents to remove or separate PCBs from contaminated non-porous surfaces or liquids, or thermal

processes in accordance with § 761.72. Some specific methods mentioned in the comments, such as physical abrasion, surfactant cleaning, and hydroblasting fit these general decontamination categories. EPA did not include some methods suggested by commenters because the efficacy of the suggested method was not demonstrated, or because EPA did not believe there was a way to easily contain a release of PCBs to the environment. The decontamination procedures listed in § 761.79 will not pose an unreasonable risk because the procedures that create the potential for release of PCBs would do so in airborne dust, which can be controlled through standard industrial practices. Section 761.79(e) also requires persons conducting decontamination activities to protect against release of PCBs to the environment and requires workers to wear equipment to protect against dermal or inhalation contact from PCBs. Persons wishing to conduct decontamination methods not covered by § 761.79 must obtain a PCB disposal approval.

EPA is allowing contaminated water to be decontaminated to different concentration levels specified in § 761.79(b)(1) depending on its subsequent use, reuse, or disposal. EPA has finalized the proposed decontamination standard for water of ≤0.5 micrograms PCBs per liter. Under § 761.30(u)(3), water meeting this decontamination standard may be reused without restriction. Many commenters requested a higher standard where water would not be used for drinking water, food or feed, such as when the water would be subject to the Clean Water Act standards for direct or indirect discharges or used as non-contact cooling water in an industrial setting. EPA has responded to these comments by including in § 761.30(u)(4) a provision allowing water containing less than 200 micrograms per liter (approximately 200 ppb), the maximum water solubility of common Aroclor formulations of PCBs, to be used in industrial processes where there is no release from the process (e.g., as a non-contact cooling water). In addition, EPA has specified in §§ 761.50(a)(3) and 761.79(b)(1)(ii) that water containing PCBs may be discharged to a treatment works (as defined in regulations at 40 CFR 503.9(aa) implementing the Clean Water Act) or to navigable waters if the PCB concentration is less than 3 µg/L (approximately 3 ppb), or in accordance with a PCB discharge limit included in a permit issued under section 307(b) or 402 of the Clean Water Act. The processes for regulating discharges under the Clean Water Act are adequate to protect against an unreasonable risk from exposure to PCBs. Where PCBs are not specifically subject to a discharge limit, the final rule incorporates the 3 µg/L level historically used to regulate discharges of PCBs, both in specific PCB disposal approvals under part 761 and in regulations governing industrial processes that recycle PCB-Contaminated raw materials.

The final rule establishes a decontamination standard for organic liquids and non-aqueous inorganic liquids containing PCBs of less than 2 milligrams per kilogram (i.e., <2 ppm PCBs). EPA revised the proposed organic liquids standard from less than 2 milligrams per liter to less than 2 milligrams per kilogram by weight to be more consistent with PCB concentration measurements required in § 761.1(b)(2).

The final rule includes decontamination standards for non-porous surfaces (See § 761.79(b)(3)). The decontamination standard for non-porous surfaces in contact with liquid PCBs at concentrations ≥500 ppm for unrestricted use is ≤10 µg/100 cm^2 and for smelting in an industrial furnace operating in accordance with § 761.72(b) is <100 µg PCB/100 cm^2. Surface PCB concentrations are measured using a standard wipe test as defined at § 761.123. In response to comments, EPA added two decontamination standards for non-porous surfaces in contact with non-liquid PCBs, such as painted or coated metal, after removal of the coating. These surfaces may be decontaminated for unrestricted use in accordance with National Association of Corrosion Engineers (NACE) Visual Standard No. 2, Near-White Blast Cleaned Surface Finish, and decontaminated for smelting in an industrial furnace (operating in accordance with § 761.72(b)) using NACE Visual Standard No. 3, Commercial Blast Cleaned Surface Finish, and verified by visual inspection of all cleaned areas (Refs. 27 and 28).

Under § 761.79(c)(2), the Agency is allowing movable equipment and tools to be decontaminated by swabbing, a double rinse/wash as specified in § 761.123, or another applicable decontamination standard or procedure in § 761.79.

Several commenters sought other provisions available through EPA's Spill Clean-up Policy for cleaning up recent PCB spills, particularly for concrete and other porous surfaces. EPA has added a decontamination standard of ≤10 µg/100 cm^2 for concrete that has been contaminated within 72 hours. EPA has not established decontamination levels for other porous materials such as wood, or for older spills on concrete, because of the likelihood that the materials have absorbed PCBs which cannot be adequately removed. These materials may be used, subject to the use authorization at new § 761.30(p), or disposed of in accordance with 40 CFR part 761, subpart D.

EPA has also finalized the self-implementing decontamination procedures for non-porous surfaces contaminated with MODEF with some modifications (see § 761.79(c)) (Ref. 29). Many commenters wanted to use additional decontamination solvents. EPA has included other organic solvents having similar properties to kerosene in performance-based decontamination options. EPA conducted scientific studies to evaluate decontamination of impervious surfaces with aqueous-based solvents (Ref. 30).

Based on EPA's limited performance-based validation testing, EPA is providing a self-implementing procedure under § 761.79(d)(4) to qualify additional decontamination fluids for decontaminating non-porous surfaces contaminated with MODEF or other PCB liquids (see subpart T). EPA tested several solvents for use in accordance with performance-based decontamination under § 761.79(c)(3) and (c)(4). EPA did not intend its testing to be limiting, but did not test all potential solvents under all potential conditions. EPA only used MODEF as a surface spiking solution for convenience and because it was expected to be one of the most common sources of PCB contamination on surfaces. Testing results indicated that other solvents and other conditions could be acceptable for decontaminating surfaces that are contaminated with PCBs.

The final rule also includes a self-implementing procedure for decontamination of metal surfaces using thermal processes in accordance with § 761.72, depending on the PCB concentration (see § 761.79(c)(6)). Some surfaces decontaminated using these procedures may then be unregulated for disposal or use.

EPA is not finalizing all of the performance-based decontamination procedures for air compressor systems (proposed at § 761.30(i)(3)(i)). Commenters generally stated that the self-implementing procedures for cleaning air receivers and other pressurized large volume tanks by rotation were impracticable, and these provisions are not included in the final rule. Several types of spray equipment for cleaning large volume tanks are on the market, but the potential operating conditions are too varied to allow EPA

to establish uniform, self-implementing protocols. Spraying is, however, an authorized decontamination method under § 761.79(b), as long as the decontamination levels specified in that section are met and confirmed by sampling. In addition, the final rule includes a provision at § 761.79(h) allowing the EPA Regional Administrator to approve decontamination or sampling methods not specifically described elsewhere in § 761.79 based on a finding of no unreasonable risk.

The final rule does include self-implementing decontamination procedures for piping and air lines of air compressor systems. Commenters raised concerns about the use of kerosene and other prescribed conditions for this equipment. In response, EPA is allowing the use of additional organic and aqueous solvents based on data submitted by commenters, and based on EPA's experience with the regulated community's use of these solvents in accordance with PCB disposal approvals issued under § 761.60(e). For decontamination using other solvents or conditions, follow the appropriate provisions of § 761.79(d)(4) and subpart T or seek a PCB disposal approval.

EPA clarifies that self-implementing, performance-based decontamination conducted under § 761.79(c) does not require confirmatory surface measurements (see § 761.79(f)). However, anyone claiming that a surface is decontaminated must be able to substantiate that claim in writing. Subpart N provides sampling procedures for water and organic liquids. Subpart P provides sample site selection procedures for non-porous surfaces and concrete decontaminated from recent spills, as well as procedures for analyzing the samples and interpreting the results of the sampling. When sampling is required for the measurement-based provisions in § 761.79(b), written records must be maintained for 3 years from the date of decontamination. Copies of records may be maintained at the decontamination site or elsewhere as long as they are available to EPA in a timely manner, if requested.

EPA also clarifies that solvents contaminated during use in decontamination are to be managed and used at their existing concentration (see § 761.79(g)). Unless specifically addressed elsewhere, disposal options do not depend on the original concentration of PCBs in the material which is decontaminated. EPA is requiring chlorinated solvents used for decontamination to be disposed of as PCB waste regardless of their concentration in order to discourage their use and to minimize adverse consequences from uncontrolled air releases. However, EPA is allowing chlorinated solvents, other contaminated solvents, liquids, or non-liquids resulting from decontamination activities to be decontaminated to the extent permitted under § 761.79. Hydrocarbon solvents containing <50 ppm PCBs may also be burned and marketed in accordance with the used oil provisions of § 761.20(e). Because used oils are composed primarily of hydrocarbons, burning of hydrocarbon solvents will pose a similar, not unreasonable, risk to burning of used oils. One commenter asked whether hydrocarbon solvents which are also radioactive could be burned for energy recovery under the used oil provisions of § 761.20(e) if the combustion facility was approved or licensed for burning radioactive waste. Today's regulations do not preclude this activity.

Finally, wastes resulting from decontamination activities are subject to applicable manifesting, storage, and disposal requirements for PCB wastes. Facilities conducting decontamination activities must also comply with recordkeeping, reporting, and notification requirements of subparts J and K.

I. Exemptions for Manufacturing, Importing, Processing, Distributing in Commerce, and Exporting PCBs

1. *Class exemption for manufacture, import, processing, distribution in commerce, and export of PCBs for R&D.* EPA proposed the establishment of a class exemption at § 761.80(i) to allow processing and distribution in commerce for R&D of PCBs and PCB analytical reference samples derived from PCB waste material. EPA proposed this class exemption to minimize negative impacts from the relatively time-consuming statutory and regulatory process for individual companies seeking an exemption from the prohibition on processing and distributing in commerce of PCBs.

Overall, commenters agreed with the establishment of a new class exemption to facilitate the use of PCBs in R&D. However, they suggested that EPA and the scientific community would be better served if the class exemption also included the manufacture of PCBs for R&D. EPA agrees and has added manufacture of PCBs to § 761.80(i). EPA has also modified the text of proposed § 761.80(i) to specify that import and export of these materials are also covered by the exemption. All individuals who wish to be included in the class exemption will be required to submit a notification in the form of a petition to the Agency. EPA will treat a renewal request submitted by any one class member 6 months prior to the expiration of the 1-year exemption as a renewal request for the entire class (see the procedures at 40 CFR part 750, subpart C and § 750.31(e)).

EPA is limiting the manufacturing, import, processing, distribution in commerce, and export of PCBs to no more than 500 grams of PCBs annually, packaged in 5 milliliter hermetically sealed containers. EPA is also limiting the processing, distribution in commerce, and export of analytical reference samples derived from PCB waste material to 500 grams of PCBs annually. Individuals wishing to temporarily exceed these limitations must notify the Director, National Program Chemical Division, in writing, of the sites and quantities involved, and provide a justification for an increase. Any increase granted will be in writing and will not extend beyond the time remaining in the exemption year. Persons needing an increase on other than a temporary basis are required to obtain an individual exemption which addresses their specific needs. Until EPA has completed rulemaking on a request for an individual exemption, individuals may continue their PCB activities, but are limited to the constraints of the existing class exemption.

The establishment of the class exemption at § 761.80(i) does not affect any manufacturer, processor, distributor or exporter previously granted an exemption under existing § 761.80(c), (f), (g), or (h). Those individuals will not be required to modify or discontinue the activity for which their exemption was granted at this time. In addition, EPA will consider individuals who have obtained exemptions under § 761.80(c), (f), and (h) to manufacture, process, distribute in commerce, or export PCBs for R&D in quantities of 500 grams or less, to be grandfathered into the class exemption at § 761.80(i) without the submission of a petition at this time. However, if those individuals increase the quantity of PCBs (beyond 500 grams), change the manner of manufacture, processing, or distribution in commerce of the PCBs, or any other aspect of the existing exemption, they must submit a new petition.

EPA is also allowing processors and distributors of PCBs in small quantities for R&D currently authorized by § 761.80(g) to continue their activity unchanged unless they wish to exceed the 100 gram limit. At that time, they can follow the notification procedures of § 761.80(g)(2), or submit a petition

within the § 761.80(i) timeframe, which would allow them to increase their limit to 500 grams.

Today's rule also allows research and development for PCB disposal under certain conditions (see § 761.60(j)). Processing and distribution in commerce of PCBs associated with R&D for disposal are regulated under existing provisions at § 761.20(c). Persons engaging in processing and distribution in commerce of PCBs for this disposal activity need not request an exemption under § 761.80.

2. *Class exemption for manufacturing PCBs for research and development of disposal technologies*. EPA proposed at § 761.80(e) to establish a class exemption allowing R&D facilities to manufacture (including import) PCBs solely for the manufacturer's own research to develop PCB disposal technologies. This provision has been included in the final rule. For purposes of § 761.80(e), use ''solely in the manufacturer's or importer's own research'' means use by the manufacturer or importer or one of its wholly-owned subsidiaries conducting disposal-related R&D. However, distribution of the PCBs that are manufactured under this exemption to other entities for their R&D activities is prohibited. All PCBs and materials containing PCBs, regardless of concentration, remaining from the disposal-related studies, are required to be disposed of or decontaminated pursuant to the original PCB concentration.

EPA is limiting PCB manufacturing, including import, activities under this exemption to 500 grams (approximately 1 pound (lb)) of PCBs per year. Commenters suggested EPA increase the quantity from 1 lb to 10 lbs to better serve the scientific community in conducting R&D for disposal-related activities. EPA considers 500 grams an ample R&D quantity for a year because PCBs are generally used in extremely small quantities (i.e., micrograms) during these activities. Individuals wishing to exceed this amount on a temporary basis must request and receive approval, in writing, from the Director, National Program Chemicals Division. To ensure that PCB manufacture under § 761.80(e) is being conducted for R&D into PCB disposal, EPA is requiring that the EPA Regional Administrator be notified in writing 30 days prior to the start of R&D activities requiring the manufacture of PCBs. This conforms with the § 761.60(j)(1)(ii) notification requirement.

A person wishing to be included in the class exemption at § 761.80(e) must submit an exemption petition to EPA 60 days prior to engaging in activities under the exemption. Renewals of or modifications to the exemption are required annually pursuant to the interim procedures for manufacturing exemptions at § 750.11 or processing and distribution in commerce exemption at § 750.31. To reduce the paperwork burden of the renewal process for the class, EPA will deem a properly filed renewal request for the exemption by any member of each class as a renewal request for the entire class.

3. *Other exemption issues*. EPA proposed modifications to § 761.80(g) which it is not adopting in today's final rule. One modification correlated with a proposed change in the ''small quantities for research and development'' definition at § 761.3; however, the proposed modification is moot because EPA is not finalizing the proposed definitional change. In addition, EPA intended to expand the existing class exemption at § 761.80(g) to include distribution in commerce for export. However, such distribution in commerce may be conducted under § 761.80(i) as finalized, and additional modification of § 761.80(g) is therefore no longer necessary. Similarly, proposed changes to § 761.80(o) regarding exemption renewals under § 761.80(g) have been rendered moot by changes from the proposal. EPA also is not finalizing proposed modifications to § 761.80(n) regarding renewals of the new class exemption at § 761.80(e); these provisions are in the text of § 761.80(e).

Many of the newly created provisions for exemptions to process and distribute PCBs in commerce direct readers to the petition filing procedures at 40 CFR 750.31. EPA discovered a drafting error in § 750.31(c), ''Content of petition,'' from a previous amendment. Therefore, EPA is promulgating a technical correction to delete references at § 750.31(c)(9) to paragraphs which no longer exist (i.e., ''(d)(1) through (8)'' and ''(d)(1), (3) and (5)''). These references should have been redesignated as paragraphs ''(c)(1) through (8)'' and ''(c)(1), (3) and (5)'' when § 750.31 was amended on April 11, 1994.

To grant an exemption under section 6(e)(3)(B) of TSCA, EPA must find that there is no unreasonable risk of injury to health or the environment from the exempted activity and that good faith efforts have been conducted to find a substitute for PCBs.

EPA finds that the manufacture, import, processing, distribution in commerce, and export of PCBs in accordance with § 761.80(e) and (i) will not result in an unreasonable risk of injury to health or the environment. The risk of environmental release of PCBs or risks of exposure to PCBs is negligible due to OSHA workplace safety regulations, the highly-trained nature of laboratory workers and scientists, the limitation on the volume of production, DOT transportation regulations, and the current marking regulations that require containers to be labeled as containing PCBs (also see the discussion in the NPRM). Finally, all wastes from PCB processing, including diluted PCB materials and any PCB residues or other contaminated media, are subject to the 1-year storage and disposal time limits at § 761.65 and § 761.60 and the manifesting requirements at § 761.207 *et seq*.

The good faith efforts finding does not apply because other chemicals cannot be substituted in toxicological, environmental, or analytical testing for PCBs.

J. Transboundary Movements

1. *The import for disposal rule and the Sierra Club decision*. In the NPRM, EPA proposed to control the export and import of PCBs for disposal under § 761.20. Subsequently, the PCB import regulations were separated from the larger rulemaking package and finalized on March 18, 1996 (61 FR 11096) (FRL–5354–8), at § 761.93 under a new subpart F - Transboundary Shipments of PCBs for Disposal. On July 7, 1997, the U.S. Court of Appeals for the Ninth Circuit overturned the Import for Disposal Rule, on the ground that EPA could not rely, as it did, on section 6(e)(1) of TSCA to authorize imports of PCBs for disposal. *Sierra Club* v. *EPA*, 118 F.3d 1324 (9th Cir. 1997). On July 18, 1997, EPA by letter informed those people who had submitted an import notification to EPA, pursuant to § 761.93, that EPA was closing the border to imports of PCBs. Accordingly, EPA would not allow the import of any shipment of PCBs under § 761.93 that left the exporting country after 12:01 a.m. local time, July 20, 1997. EPA can now only allow imports of PCBs by issuing exemptions to importers via the petition process under section 6(e)(3)(B) of TSCA. Today's rule implements the Sierra Club decision by amending § 761.97(a)(1) with minor clarifications.

2. *Proposed export provisions*. In the Import for Disposal rule, EPA redesignated the provisions formerly codified at § 761.20(c) allowing exports for disposal of PCBs and PCB Items at concentrations <50 ppm into a new § 761.97(a)(1). EPA believes that export of PCBs and PCB Items at concentrations <50 ppm was not affected by the *Sierra Club* decision, and

is retaining § 761.97(a)(1) with minor clarifications.

EPA stated in the NPRM that exports of PCBs and PCB Items for disposal in concentrations ≥50 ppm should be allowed on a case-by-case basis unless EPA had reason to believe that the PCBs would not be properly managed (59 FR 62817). EPA proposed that exports of PCBs or PCB Items in concentrations ≥50 ppm would be allowed at EPA's initiative or in response to a petition, provided there was an international agreement between the United States and the receiving country concerning PCB exports. Petitions needed to include a variety of information regarding the PCB waste and its proposed management; a certification by the government of the receiving country that it had received accurate and complete information about the waste, consented to receive it, and had adequate disposal facilities to assure proper management; and identification by the exporter of wastes containing liquid PCBs or PCB-containing electrical equipment. EPA proposed to exclude two types of PCB shipments from being considered exports or imports. The first type involved transit shipments where PCBs (including residues from spill clean-up in transit) are transported from the United States through another country and back to the United States (e.g., from Alaska through Canada to the continental United States). The second type of shipment involved PCBs procured domestically by the United States government, shipped to another country for United States government use and returned to the United States for disposal while remaining under United States government control.

3. *Decision to defer final rulemaking on exports and other transboundary shipments.* EPA has decided not to finalize today the provisions in the NPRM on exports for disposal or the return to the United States of Federal government PCB waste. EPA intends to address those issues as well as imports for disposal under the section 6(e)(3)(B) petition process in a future rule.

EPA is, however, finalizing the proposed provisions on transit shipments at a new § 761.99 for other transboundary movements. The Agency is also clarifying that PCB waste shipments that are merely transiting the U.S. (e.g., from Mexico to Canada) are not exports or imports.

The future rule on exports for disposal will not affect EPA's policy on PCB exports for use. Under the 1980 Closed Border Policy, PCB exports for disposal were banned. Exports for use or reuse were not affected, but remained subject to the limitations for processing and distribution in commerce under TSCA section 6(e)(3) and 40 CFR § 761.20, and the export notification requirements of TSCA section 12(b) and 40 CFR part 707, subpart D.

K. Change in Reportable Quantity — Spill Cleanup Policy

The Agency proposed to amend § 761.125(a)(1) by revising the phrase ''under the National Contingency Plan all spills involving 10 pounds or more'' to read ''under the National Contingency Plan all spills involving 1 pound or more.'' Most commenters supported the proposal and EPA has finalized it without change.

L. Records and Monitoring

1. *Transfer of totally enclosed PCBs.* Under existing § 761.20(c)(1), totally enclosed PCB Items, such as Transformers, and Large High and Low Voltage Capacitors ≥50 ppm (as defined in § 761.3) sold before July 1, 1979, for purposes other than resale, may be distributed in commerce (e.g., sold). EPA proposed that records be maintained on transactions for these PCB Items. Some commenters supported this proposal while others believed it was not necessary because facilities maintained such information in their sales records.

The Agency is amending § 761.180(a)(2)(ix) to require owners or operators transferring totally enclosed PCB Items that were sold before July 1, 1979, for purposes other than resale to record in their annual document log the name, address, and telephone number of the person to whom it was transferred; and the serial number of the item or, if a serial number is not available, its internal identification number. Since commenters indicated that they were already keeping such records, adding the information to the annual document log should not present much of an additional burden.

2. *Recordkeeping requirements for storage unit operators.* In today's final rule, EPA is adding recordkeeping requirements for storage unit operators (see § 761.180(a)(1)(iii) and (b)(1)(iii). This addition requires the operator to maintain a record of cleanups and inspections for leaks that must be performed under § 761.65(c)(5). These records are part of the facility's annual records, and must be maintained, and made available for inspection, with those records for the same time period. In the past, EPA inspectors had no way to verify that unit operators were complying with § 761.65(c)(5).

A few commenters felt that the proposed requirement would duplicate records they maintain under the Spill Cleanup Policy (§ 761.125). EPA is not prescribing a format for spill cleanup records under today's new provisions at § 761.180. Records of cleanup maintained by storage unit operators in compliance with the Spill Cleanup Policy will also satisfy the new recordkeeping requirement, provided they are kept with the annual records. Today's rule does not require a storage unit operator to develop and maintain two separate set of records for the same spill.

In the NPRM, EPA also proposed to require that storage unit operators keep a current written inventory or log of their unit (see proposed § 761.180(a)(1)(iv) and (b)(1)(iv)), to assist EPA inspectors in their on-site inspections. EPA believed that the proposal would not additionally burden unit owners or operators, since they must maintain an inventory to properly manage their facility, to ensure compliance with the 1-year storage and disposal time-limit, and to collect data for the annual log.

EPA received numerous comments on this requirement; most criticized it as being more burdensome than EPA understood and maintained that its benefits did not outweigh its costs. Commenters noted that many companies keep computerized inventories at central locations, and producing a paper copy and maintaining it at the storage unit would impose a significant new compliance cost. Commenters stated that keeping an inventory on-site was problematic with storage units at remote or dirty/dangerous locations (e.g., storage units for radioactive waste). Many commenters felt that the burden of constantly updating such an inventory was unjustified, since it would only be used on the day an inspection was conducted.

EPA has not finalized its proposal. While access to an inventory would help EPA conduct on-site inspections of storage unit facilities, EPA recognizes that the burden on storage unit operators associated with maintaining a continually-updated inventory on-site exceeds the benefit to the inspectors.

M. Amendments to the Notification and Manifesting Rule

The NPRM addressed a number of issues that were not contemplated when the PCB Notification and Manifesting (N&M) rule was published on December 21, 1989 (54 FR 52716, 40 CFR part 761, subpart K). Some of these issues were raised by litigants who sought review of the rule, and by other waste handling associations. (See, for example, Refs. 31 and 32.) Some items which EPA is

finalizing in today's rule have been previously promulgated under RCRA regulations and seem appropriate for inclusion in the PCB N&M rule. Others are simply clarifications and are accompanied by changes to 40 CFR part 761.

1. *Definition of commercial storer: Small quantity exemption for solids, and ''related' companies.* On June 27, 1990 (55 FR 26204), EPA amended the N&M rule to, among other things, clarify the definition of ''commercial storer of PCB waste'' at § 761.3. In 1990, EPA added the word ''liquid'' to the phrase ''exceeds 500 gallons of PCBs'' so that the phrase reads ''exceeds 500 liquid gallons of PCBs.'' This excluded facilities that were storing at any one time less than 500 gallons of liquid PCB waste from the requirement to seek approval as a commercial storer of that waste.

In a petition filed with the District of Columbia Circuit Court of Appeals on September 25, 1990, the petitioner claimed that EPA acted arbitrarily when it narrowed the small volume exemption in this manner so that storers of less than 500 gallons of non-liquid waste would not qualify for the exemption. EPA agreed that certain classes of businesses (e.g., companies performing PCB waste treatability studies and laboratories affiliated with PCB handling companies) on occasion may possess relatively small quantities of solid PCB waste generated by others. EPA also agreed to initiate a regulatory amendment to establish a small quantity exemption for solids to complement the exemption for liquids. EPA told the petitioner that until the rule was amended, it would take no enforcement action against a facility storing small quantities of PCB solids without a commercial storage approval if certain conditions were met (Ref. 32).

In the NPRM, EPA added a small volume exemption for storage of no more than 70 cubic feet of non-liquid PCBs to the definition of ''commercial storer of PCB waste.'' EPA solicited comments on this proposal, and in particular, whether 70 cubic feet was an appropriate cutoff.

EPA also clarified how the change of ownership or release of title of PCB waste relates to a person becoming a commercial storer of PCB waste. The following example illustrates the clarification. If a facility that generates and stores its own waste (e.g., transformers) is sold (or the title otherwise changes ownership), the new owner (or holder of the title) does not become a commercial storer of PCB waste. The waste, along with the facility, is now owned by the purchaser, which is storing its own waste and is therefore not a commercial storer.

Commenters agreed that EPA should add a non-liquid quantity below which one could store waste generated by others without needing a commercial storer approval. However, some commenters asked EPA to clarify whether one could store less than 500 liquid gallons *and* less than 70 cubic feet and qualify for the exemption. This was not EPA's intent. One is excluded from the requirement to seek a commercial storer approval if the total volume of stored waste generated by others is less than 500 gallons of material; liquid or non-liquid. Accordingly, to set a uniform standard, EPA has set the regulatory cutoff at a total combined volume of 500 gallons of liquid or non-liquid PCB-Contaminated material. For computation of non-liquid PCB volume, 500 gallons (U.S.) equals approximately 1.89 cubic meters.

The majority of other comments requested that EPA clarify what related companies are not considered to be storing others waste. Therefore, EPA has included examples of related companies in the definition of commercial storage (see § 761.3). One example listed in § 761.3 is a company having a joint ownership interest in a facility from which PCB waste is generated (such as a jointly owned electric power generating station) where the PCB waste is stored by one of the co-owners of the facility. The participants have an undivided ownership interest in the entire plant (although percentage of ownership may differ) and one of them is designated and responsible for operating the facility. This operating entity is the one storing the waste. The waste is jointly owned and the financial assurances provided by the ownership and operating agreements, together with the responsible nature of the operating utility, exempt such facilities from the need to seek commercial storage approval.

Other utilities commented that they should not be considered commercial storers of PCB waste when they manage waste generated by their customers, and that requiring them to seek commercial storer approval impedes them from engaging in this activity. EPA disagrees. It assumes that the utility is not the transformer owner, for example, and would be storing waste generated by others in this scenario. Utilities wishing to assist customers with their waste management could store less than 500 gallons of liquid or non-liquid waste at any time or act as a transfer facility, storing the waste less than 10 consecutive days, and not have to seek commercial storer approval.

2. *Clarification of exception reporting.* EPA proposed to amend § 761.215(b), (c), and (d), which discuss when a generator, commercial storer, or disposer must submit One-year Exception Reports to the EPA Regional Administrator. Currently, a disposer is required to submit a One-year Exception Report if: (i) The PCB waste is received on a date more than 9 months after it was removed from service for disposal as indicated on the manifest, and (ii) the disposer could not dispose of the PCB waste within 1 year from the date of removal from service for disposal.

A generator is required to submit the One-Year Exception Report when the generator has not received a copy of the manifest with the hand-written signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the original transporter. Also, a generator or commercial storer who manifests PCBs or PCB Items to a disposer of PCB waste must submit the Exception Report when: (i) The waste was transferred to the disposer within 9 months after removal from service for disposal as indicated on the manifest, and (ii) the generator or commercial storer has not received within 13 months after the date of removal for disposal a Certificate of Disposal (CD) or it receives the CD, which indicates that the waste was disposed more than 1 year after it was removed from service for disposal.

The regulations do not, however, indicate when the disposer, commercial storer, or generator has to submit the One-year Exception Report to the EPA Regional Administrator. EPA proposed to amend § 761.215(b), (c), and (d) to require that the disposer, commercial storer, or generator submit the report to the EPA Regional Administrator no later than 30 days from the discovery of the passage of the regulatory deadlines.

Commenters generally disfavored exception reporting, but did not oppose EPA's proposal if EPA maintains the requirement to submit exception reports. However, most felt that 45 or 60 days was a more appropriate timeframe. EPA is not changing its requirement to submit exception reports under § 761.215 due to their usefulness as an enforcement tool, but is adding a 45-day submission timeframe to § 761.215(b), (c), and (d) for submission of the report to the EPA Regional Administrator.

3. *Timing for submission of the certificate of disposal.* Section 761.218(b) requires the owner or operator of a disposal facility to send a Certificate of Disposal (CD) to the generator indicated on the manifest that accompanied the shipment of PCB waste to the disposal facility, within 30

days after disposal of the PCB waste identified on the manifest was completed. Section 761.215(d)(2) indicates that a generator or commercial storer should submit a One-year Exception Report to the EPA Regional Administrator when the CD is not received from the disposer within 13 months from the date of removal from service for disposal (DORFSFD).

EPA clarifies that there may be different DORFSFD dates for different individual items on any given manifest. This means that some items listed on the manifest will need to be disposed of earlier than others to meet the 1-year time-limit for storage and disposal. Therefore, there will also be different CDs associated with those different disposal dates (unless the entire shipment listed on the manifest is disposed of before the 1-year anniversary of the item with the earliest DORFSFD). EPA proposed that the generator may either submit more than one manifest per shipment based on whether there are different DORFSFDs for the items in the shipment or attach a continuation sheet to reflect the different DORFSFDs. EPA wants to make clear that it is not appropriate to base disposal on the manifest item with the latest DORFSFD, or to send the CD based on that item.

Commenters generally opposed the concept of preparing multiple manifests or CD's. EPA agrees that multiple manifests or CDS may be overly burdensome and is not specifically requiring either one in this final rule. EPA is adding, however, language to § 761.218(b) indicating that a CD must be sent to the generator within 30 days of the date that disposal of each item of PCB waste identified on the manifest was completed. Generators and disposers may work out the details on how best to meet this requirement.

4. *Applicability of manifesting requirements*. EPA proposed to amend § 761.207(j), which describes what wastes are subject to the manifesting requirements based on PCB concentration and whether dilution has occurred. The section now states that if the waste contains less than 50 ppm PCBs, but comes from a source that contained greater than or equal to 50 ppm PCBs, it is subject to the manifesting and disposal requirements. Cited as an example is PCB spill cleanup material containing less than 50 ppm when the spill involved material containing greater than or equal to 50 ppm.

Proposed § 761.207(j) specified that there would be no manifest requirement for material currently below 50 ppm that derives from pre-April 18, 1978 spills of any concentration, or pre-July 2, 1979 spills less than 500 ppm. This is because (i) the material ''as found'' is below the regulatory threshold that would subject it to the disposal requirements of 40 CFR part 761, subpart D, and (ii) the original spilled material was below or not subject to those disposal requirements at the time of the original spill.

In addition, the manifest requirement does not apply to material derived from spills that have been decontaminated in accordance with EPA's spill cleanup policies (40 CFR part 761, subpart G). In other words, material containing PCBs that has been decontaminated to a level below 50 ppm would not be treated as if it contained greater than or equal to 50 ppm PCBs for disposal purposes, and could be disposed of in a municipal landfill or by other non-PCB disposal methods. This position is consistent with EPA's regulations that permit material contaminated as the result of a PCB spill to be distributed in commerce if it is decontaminated in accordance with the applicable spill cleanup policies (see 40 CFR 761.20(c)(5)).

EPA received no negative comments on the proposed amendment to § 761.207(j), and is finalizing it as proposed. Commenters did ask how to tell whether a pre-78 spill was originally <50 ppm PCBs when the original source of the spill is not known and test results at the spill site all show levels <50 ppm PCBs. Since prior to 1978 there were no PCB regulations addressing anti-dilution, any pre-78 spill that is found and tested to be less than 50 ppm may be treated at the concentration found, without determining whether the spilled material originally contained PCBs at greater than or equal to 50 ppm PCBs.

5. *Renotification: changes in facility operations*. Sections 761.202 and 761.205 discuss who must obtain an EPA ID number and how to do so using EPA Form 7710-53. EPA clarifies that when a facility has previously notified the Agency of its PCB waste handling activities using EPA Form 7710-53 and those activities change (e.g., the owner or operator of the facility notified EPA as a commercial storer and now wants to engage in the transport of PCB waste, or notified as a transporter and a commercial storer but no longer wishes to engage in the activity of transporting PCB waste, or the facility has changed its physical location), the notifier must resubmit EPA Form 7710-53 to reflect those changes. It will help EPA process the form if the form or cover letter indicates that it is a resubmission based on changes in facility operations and not a new submission.

EPA proposed to add this resubmission requirement for EPA Form 7710-53 to new § 761.205(f). EPA proposed that the resubmission be submitted to EPA no later than 5 working days after the change was made.

Some commenters opposed having to renotify if the facility location changed, others thought renotification was appropriate only when the facility ceased its waste handling activities, and still others thought it was inappropriate to notify when the facility ceased its PCB waste handling activities. For EPA to effectively track the number and type of PCB waste handlers, it must know whether a facility has ceased operation or moved. EPA is finalizing this amendment as proposed with one minor change; the time to renotify is 30 days, rather than 5 days as proposed.

In addition, high efficiency boilers and scrap metal recovery ovens/smelters that burn regulated PCBs must now notify EPA using Form 7710-53 pursuant to 761.205 (see Unit IV.E.3. of this preamble for further discussion).

6. *Transfer of ownership of commercial storage facilities*. EPA proposed to add paragraph (j) to § 761.65 on the procedures and timing for transferring ownership of a commercial storage facility. The timing and procedures would apply to facilities with either interim or final approval.

Existing commercial storage facilities had until August 2, 1990, to submit a completed application to EPA and receive interim status to operate until the application was formally approved or denied. Existing § 761.65(d)(3) describes the information that must be in the application, such as a closure plan, closure cost estimate, and financial assurance for closure. The N&M rule did not, however, discuss procedures and criteria for transferring ownership of a facility (as is the case under the RCRA regulations at 40 CFR 270.72(a)(4)). In the NPRM, EPA solicited comments on recognizing the transfer of interim status or final approval for commercial storage facilities if all the following conditions were met:

(i) The transferee demonstrated it had established, by the date of transfer, financial assurance for closure pursuant to § 761.65(g) using a mechanism effective as of the date of final approval. This would assure that there would be no lapse in financial assurance for the transferred facility.

(ii) The transferee submitted a new and complete application for final storage approval.

(iii) Any significant deficiencies (e.g., technical operations, closure plans, cost

estimates) that EPA had identified in the application of the transferor, were resolved in the new application by either the transferor or by the transferee.

The new application would also have to include all the elements listed in 40 CFR 761.65(d)(3). Before the transfer of interim status or final approval could occur, EPA would have to review the new application and deem it ''complete,'' i.e., all the required elements were included in the application. The application would also have to correct any significant deficiencies previously identified. EPA would reserve the right to deny the transfer of the interim approval status or final approval if upon review of the new application, EPA determined that the transferee was not qualified or was unable or unwilling to achieve and maintain its operations in compliance with TSCA and the PCB rules. In addition, a determination by the EPA Regional Administrator that the transfer of interim status or final approval could occur would not be determinative of the final decision that would be made regarding the commercial storage application. EPA would also reserve the right to deny any subsequent transfer request respecting a particular facility if EPA believed that the transfer was undertaken to avoid the requirement of seeking a final commercial storage approval.

The requirements described above would have to be met before EPA would recognize the transfer of interim status. For example, Company ''X'' is interested in acquiring ownership of Company ''Y,'' which has interim status to operate as a commercial storer of PCB waste. If EPA does not recognize the transfer of interim status before Company ''X'' takes legal title to the facility from Company ''Y,'' Company ''X'' may be in violation of the commercial storage regulations because it did not have interim status to operate at the time it took legal title.

To facilitate ownership transfer, EPA also solicited comments on whether a ''new'' application is necessary. If, for example, the transferee accepted the contents of the old application, the only parts that would have to be amended (excluding any deficiencies that have yet to be corrected) would be the financial assurance for closure, a new list of principals and key employees, and the compliance history of any business with which those individuals had been affiliated in the preceding 5 years. This submission of an ''amended'' application would save the transferee and the EPA time and money.

Commenters agreed that it should not be necessary to submit an entirely new application. Therefore, in today's final rule the transferee may submit a complete amended application including the parts mentioned above. Most commenters disagreed with the Agency's position that any deficiencies identified in the original application would have to be resolved before EPA would recognize the transfer. They felt they should be able to obtain the previous owner's status without having to resolve any discrepancies or be allowed to establish a compliance schedule to resolve the deficiencies in a timely manner.

EPA does not think it is a sound practice to allow the transfer of ownership of a commercial storage facility with interim status to a new owner when there are deficiencies in the existing application. If the deficiencies identified in the existing application are resolved in the amended application (i.e., the transferee will be submitting a new compliance history for new principals and key employees or a new closure plan), then EPA will consider the discrepancy in the original application to be resolved and allow the transfer. The Agency may still find discrepancies in the amended portion of the transferee's application and these would have to be resolved before the facility was granted final commercial storage approval.

Many commenters wanted an established timeframe by which EPA must notify the transferee of approval or denial of the transfer request. In today's final rule, EPA will provide a written decision on whether it will recognize the transfer of ownership of the facility within 90 days of receipt of the complete application.

7. *Modifications to storage facilities.* Section 761.65(e)(4) discusses when a commercial storage facility must submit a request to EPA for a modification to its storage approval to amend its closure plan. In the NPRM, EPA proposed a similar requirement for revising the financial assurance for closure when there are modifications to the commercial storage facility, for example, where the facility is enlarged and the maximum inventory of waste increases sufficiently to warrant an increase to the financial assurance mechanism. EPA proposed to add § 761.65(g)(9) to require that when a modification to the storage facility warrants establishing a new financial assurance mechanism or amending the existing one, the owner or operator must have done so no later than 30 days after the EPA Regional Administrator (or Director, National Program Chemicals Division) is notified that the modification is complete, but before the use of the modified portion of the facility. In addition, EPA proposed that the EPA Regional Administrator (or Director, National Program Chemicals Division) would have to be notified in writing no later than 7 days after the modification to the facility is complete.

Commenters requested that EPA clarify what percentage increase in storage capacity would trigger the need for a new or amended financial assurance mechanism. If the modification results in any increase in the maximum storage capacity indicated in the permit, an amendment to the financial assurance mechanism is required to address the added waste inventory.

In today's final rule, EPA amended proposed § 761.65 by replacing the phrase ''Regional Administrator (or Director, National Program Chemicals Division)'' with ''Director of the Federal or State issuing authority'' to reflect the possibility that the permit may have been issued under another authority but recognized under a TSCA PCB Coordinated Approval (see § 761.77).

EPA also changed the timeframe in which the permitting authority must be notified of the completion of the facility modification from 7 to 30 days.

8. *Clarification of which disposers must submit annual reports.* Section 761.180(b)(3) requires that each owner or operator of a PCB disposal or commercial storage facility submit an annual report, summarizing the records and annual document log maintained under § 761.180(b)(1) and (b)(2), to the EPA Regional Administrator of the EPA Region in which the facility is located by July 15 of each year. Sections 761.180(b)(1) and (b)(2) require that information obtained from manifests that are generated or received by the facility be recorded. If a disposal facility disposed of only its own waste and, therefore, never received or generated a manifest, it still has to prepare an annual document log under § 761.180(b)(2)(iii). Examples of such facilities include high efficiency boilers at § 761.71; and facilities conducting decontamination under § 761.79.

EPA clarifies that ''disposers of PCB waste,'' as defined at § 761.3, who dispose of their own waste must submit an annual report. Therefore, EPA proposed to amend § 761.180(b)(3) to state that a disposer's obligation to submit an annual report is based on the act of disposing of PCB waste material and not whether the facility received or generated manifests. EPA received no negative comments on the proposal and is finalizing it as proposed.

9. *Financial assurance mechanism: corporate guarantee.* EPA proposed to

reference 40 CFR 264.143(f)(10) of the RCRA financial assurance regulations (57 FR 42832, September 16, 1992) to add an additional financial assurance mechanism for PCB commercial storage facility closure. This mechanism allows the corporate guarantor to be the direct or higher-tier parent corporation of the owner or operator; a firm whose parent corporation is also the parent corporation of the owner or operator; or a firm with a substantial business relationship with the owner or operator of the commercial storage facility. EPA proposed to add this mechanism as § 761.65(g)(7) and redesignate existing (g)(7) as (g)(8). The proposal met with no negative comments and is finalized as proposed.

10. *Clarification of the term ''facility.''* In the NPRM, EPA solicited comments on the need to clarify the terms ''facility'' and ''facilities.'' The terms are used in different contexts throughout 40 CFR part 761. EPA's impetus for raising this issue came from reviewing the PCB Notification and Manifesting rule preamble (54 FR 52716, 52722, column 2). That preamble discussion focusses on the requirement for generators with on-site storage facilities to notify the Agency of their PCB waste handling activities. The first two sentences in the last paragraph read, ''In submitting their notifications to EPA, members of this class of generator/storer will submit a notification form for each of their storage areas that is subject to § 761.65. EPA will issue a unique identification number to each notifying storage facility, and this identification number will correspond to the physical location of the facility.''

Here the terms ''storage area'' and ''storage facility'' are used interchangeably to mean all structures on contiguous land or specified property, as opposed to a particular building, structure, cell, or unit. EPA did not intend to require notification for each storage unit on a contiguous piece of property, which would result in multiple, individual identification numbers for that property. A facility on a contiguous piece of property, regardless of the number of storage areas or units, need only notify once. Therefore, in this instance, the term facility means all contiguous land and structures used for the storage of PCB waste.

In other sections of the PCB regulations, however, the term ''facility'' means an individual unit or structure. For example, § 761.65(b)(1) states that a facility used for the storage of PCBs and PCB Items shall have an adequate roof, walls, and floor; continuous curbing with a minimum 6 inch high curb; no floor drains or expansions joints, etc.; and shall not be located at a site below the 100–year flood water elevation. It is clear in this instance, that EPA is not referring to a contiguous piece of property, but to an individual structure or unit.

In most of 40 CFR part 761, the term ''facility'' refers to a contiguous piece of property including the structures or individual storage or disposal units. There are, however, 10 or so places in the PCB regulations where the term ''facility'' refers only to the individual unit or structure. In these 10 places, EPA proposed to delete the term ''facility'' and insert a term whose definition will best represent the Agency's intent (i.e., an individual unit, structure, or building). EPA solicited comments on the most appropriate term to convey this meaning. For purposes of this final rule, the term ''unit'' will be used to indicate this change in the regulatory text. The term ''unit'' includes structures that meet the design criteria of § 761.65(b) and any functional equivalent recognized by the EPA Regional Administrator under § 761.77. EPA has added definitions of ''unit'' and ''facility'' to § 761.3 of today's final rule.

11. *Notification by transporters.* EPA wishes to clarify the status of subcontractors and permanently leased operators under the manifesting and notification regulations. The issue is whether a person who owns and operates a vehicle that is leased to a motor carrier and is being used to transport PCB waste must obtain an EPA Identification number or may use the ID number issued to the motor carrier.

EPA's PCB regulations generally require any person who is transporting PCB waste to have an EPA ID number. Specifically, 40 CFR 761.202(b)(2) states that a transporter of PCB waste shall not transport PCB waste without having received an EPA ID number from EPA, or deliver PCB waste to transporters, disposers, or commercial storers that have not received an EPA ID number. A ''Transporter of PCB Waste'' is defined at § 761.3 to mean ''any person engaged in the transportation of regulated PCB waste by air, rail, highway, or water for purposes other than consolidation by a generator.'' Section 761.3 defines a ''Person'' to mean ''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.''

Generally, EPA has interpreted these rules to require an EPA ID number for the person who is ultimately responsible for transporting the waste, but not for employees of that person. Thus a corporation that is transporting PCB waste would be the ''Transporter of PCB Waste'' and would have to obtain an ID number. Corporate employees who physically drive the trucks that contain the waste would use the corporate ID number rather than obtain their own. This approach is illustrated by EPA Form 7710-53, ''Notification of PCB Activity,'' which requires notification on behalf of facilities, not individual employees. Similarly, the Uniform Hazardous Waste Manifest, EPA Form 8700-22, used under subpart K associates the EPA ID number with the company name (Items no. 5 through 9).

In contrast, an individual who owns and operates his or her own truck as an independent PCB waste hauler, rather than as an employee, is the person ultimately responsible for moving the waste. Such a person is a ''Transporter of PCB Waste'' and is required to obtain his or her own unique EPA ID number.

In some situations, however, the owner/operator is driving the vehicle under a lease to another person, and is no longer operating with complete independence. The preamble to the proposed rule (59 FR 62841) noted that EPA interpreted the regulations to require a separate EPA ID number for individual owner/operators even if they had permanently leased their vehicles to a second person. EPA did not allow an owner/operator to use the second person's EPA ID number, based on the rationale that the owner/operator was operating independently and was not part of the entity that had been granted the EPA ID number.

Commenters questioned the merit of this interpretation. The commenters noted that under certain leases, the control of a motor carrier over a leased vehicle and its owner/operator approximates the control of an employer over an owned vehicle and its employee operator. Under such a lease, the motor carrier exercises control over the vehicle and driver, and is legally responsible for maintaining vehicle records and for insuring the vehicle. The motor carrier is also liable for the owner/operator's actions on the road, including Department of Transportation (DOT) violations and any accidents or releases of hazardous materials.

Comments also detailed how motor carriers are regulated under DOT/Interstate Commerce Commission (ICC) rules. Comments noted that DOT/ICC regulations do not compel a motor carrier to own vehicles; rather, they may lease vehicles, either from a leasing company or from individuals who own

and operate their own vehicle. For purposes of DOT/ICC regulations, once a vehicle is leased by a motor carrier, that vehicle is under the control of the motor carrier, and the owner/operator is no longer regulated as an independent entity. The vehicle is then considered part of the motor carrier's fleet, and it must be identified with the motor carrier's ICC, DOT, or State identification number. In addition, for DOT and ICC purposes, the motor carrier is the legal entity responsible and liable for the actions of the leased vehicle and its owner/operator.

In consideration of these comments, EPA believes it is appropriate to modify its interpretation of the regulation that requires a Transporter of PCB Waste to obtain an EPA ID number. The owner/operator of a vehicle may utilize the EPA ID number of a motor carrier while moving PCB waste in that vehicle provided the vehicle is leased to a motor carrier and, under the terms of the lease, the motor carrier has exclusive possession, control, and use of the vehicle and assumes complete responsibility and liability for the operation of the vehicle while it is being used under the lease. An example of such a lease is one complying with the ICC regulations at 49 CFR part 1057, subpart B. Alternatively, the owner/operator may use his or her own EPA identification number. This interpretation supersedes the earlier interpretation published in the proposed rule preamble at 59 FR 62841.

12. *Verification of a RCRA identification number for use for PCB waste handling activities under TSCA.* The current PCB regulations require that when a person has a RCRA identification number and wishes to engage in PCB waste handling activities, the person must submit the Notification of PCB Activity Form (EPA Form 7710-53) and have their RCRA identification number verified in writing before the person engages in certain PCB waste handling activities. Due to delays in verifying existing RCRA numbers, a notifier may use their RCRA identification number prior to receipt of written verification from EPA once the notifier has confirmed that EPA is in receipt of their PCB notification form. Confirmation of receipt of the form may be accomplished by submitting it through the U.S. mail--return receipt requested, telephoning to confirm receipt of mail or facsimile, commercial overnight carrier's delivery verification processes, or any other manner in which the submitter can demonstrate that the form was received by EPA Headquarters. Written verification that the RCRA identification number may be used for TSCA PCB waste handling activities will follow.

V. Chart of Marking and Recordkeeping Requirements and EPA Forms

The following chart clarifies the marking and recordkeeping provisions of 40 CFR part 761, amended to reflect today's final rule. Annual recordkeeping requirements are highlighted with an asterisk. M_L refers to the large PCB mark as defined at § 761.45. This chart is included as an informal reference guide only and is not a complete statement of all applicable requirements. Readers must refer to the actual regulations at 40 CFR part 761 for specific legal requirements.

The PCB Transformer Registration Form, EPA Form 7720-12, discussed at Unit IV.B.3.a., and the revised Notification of PCB Activity Form, EPA Form 7710-53, discussed at various units of this preamble, are reproduced here for the convenience of and use by the regulated community.

PCB Marking and Recordkeeping Requirements

Regulated Items	Marking Requirements	In-Service Records	Disposal and Storage-for-Disposal Records
PCB Containers	M_L	-Total Kg weight of all containers* -Description of contents*	-Date container -Serial or I.D. number * -Kg weight of each* -Description of contents* -Dates for: removal; transport; disposal* -Total number & Kg weight*
PCB Article Containers	M_L	-Total Kg weight of all containers* -Description of contents*	-Date container -Serial or I.D. number* -Kg weight of each* -Description of contents* -Dates for: removal; transport; disposal* -Total number & Kg weight*
PCB Transformers	M_L M_L or approved mark on access to unit (e.g., vault doors)	-Total number of units* -Total Kg weight* -Inspection and maintenance -Registration with EPA -Record of sale	-Date article -Serial or I.D. number* -Kg of fluid in each* -Dates for: removal; transport; disposal* -Total number & Kg weight*
PCB Large High or Low Voltage Capacitors	M_L on unit or on protected location	-Total number* (protected location records if applicable) -Record of sale	-Date article -Serial or I.D. number* -Kg of fluid in each* -Dates for: removal; transport; disposal* -Total number & Kg weight*
PCB Small Capacitors	**		

PCB Marking and Recordkeeping Requirements—Continued

Regulated Items	Marking Requirements	In-Service Records	Disposal and Storage-for-Disposal Records
PCB-Contaminated Electrical Equipment	Not required	-Record of sale	Not required (once drained)
PCB Equipment that contains PCB Large Capacitors or PCB Transformers	M_L	Records required for PCB Large Capacitors or PCB Transformers	Records required for PCB Large Capacitors or PCB Transformers
Natural Gas Pipelines, Compressors, Appurtenances Air compressor systems (≥2ppm)	M_L on above ground sources of PCB liquids ≥50 ppm		
Bulk PCB waste	M_L on container		-Kg weight/quantity dates of each batch in or out. Also disposition of each batch out. -Total Kg weight
Storage areas	M_L		-Annual records as required under § 761.180 -Records of attempts to comply with 1-year limit (if necessary)
Transport vehicles	M_L if contains a PCB Transformer or 45kg liquid PCBs		
PCB motors, hydraulic and heat-transfer systems	M_L (Note: use of these items no longer authorized)		

* Annual reporting requirement.

** Manufacturers are required to mark non-PCB Large Low Voltage capacitors, small capacitors, and fluorescent light ballasts with a ''No PCBs'' label until 7/1/98.

USEPA

United States
Environmental Protection Agency
Washington, DC 20460

Form Approved
OMB No. 2070-0112

Notification of PCB Activity

Return To:

Fibers & Organics Branch (7404)
Office of Pollution Prevention & Toxics
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

For Official Use Only

1. Name of Facility	Name of Owner Facility	2. EPA Identification Number (if already assigned under RCRA)

3. Facility Mailing Address (Street or PO Box, City, State, & Zip Code)	4. Location of Facility (No. Street, City, State, & Zip Code)

5. Installation Contact (Name and Title)

Telephone Number (Area Code and Number)

6. Type of PCB Activity (Mark 'X' in appropriate box. See Instructions.)

- ☐ A. Generator w/onsite storage facility
- ☐ B. Storer (Commercial)
- ☐ C. Transporter
- ☐ D. R&D/Treatability
- ☐ E. Approved Disposer
- ☐ F. Scrap Metal Recovery Oven/Smelter, High Efficiency Boilers

7. Certification

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as a company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Signature	Name and Official Title (Type of Print)	Date Signed

Paperwork Reduction Act Notice

The annual public burden for this collection of information is estimated to average 1.5 hours per response. This estimate includes time for reading instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing collection of information, including suggestions for reducing the burden to: Director, OPPE Regulatory Information Division, U.S. Environmental Protection Agency (mail code 2137), 401 M Street, S.W., Washington, D.C. 20460. Include the OMB number identified above in any correspondence. Do not send the completed form to this address. The actual information or form should be submitted in accordance with the instructions accompanying the form, or as specified in the corresponding regulations.

EPA Form 7710-53 (Rev.)
Previous editions are obsolete.

Item-by-Item Instructions for Completing EPA Form 7710-53

Return completed form to:

Fibers & Organics Branch (7404)
Office of Pollution Prevention & Toxics
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

No information on the form may be claimed confidential.

Type or print in black ink all items, except Item VII, "Certification." If you must use additional sheets, indicate clearly the number of the item on the form to which the information on the separate sheet applies.

Item 1 -- Name of facility: Enter the name of the facility and the name of the owner of the facility.

Item 2 -- EPA identification number (if already assigned under RCRA): Enter the identification number the facility was assigned under the RCRA hazardous waste notification regulations. If no identification number has been assigned, leave this space blank. A notifier may use their RCRA Identification number prior to receipt of written verification from EPA once they have confirmed that EPA is in receipt of their PCB notification form. Confirmation of receipt of the form may be accomplished by submitting it through the U.S. mail -- return receipt requested, telephoning to confirm receipt of mail or facsimile, commercial overnight carrier's delivery verification processes, or any other manner in which the submitter can demonstrate in that the form was received by EPA Headquarters.

Items 3 and 4 -- Facility mailing address and location: Complete Items III and IV. Please note that the address you give in Item IV, "Location of Facility," must be a physical address, not a post office box or route number. If the mailing address and physical location are the same, you may enter "Same" in Item IV. If the facility is a mobile incinerator, you may enter "mobile" in Item IV, and provide the mailing address for the installation contact in Item III.

Item 5 -- Installation contact: Enter the name, title, and business telephone number of the person who should be contacted regarding information submitted on this form.

Item 6 -- Type of PCB activity: Mark the appropriate box(es) to show which PCB activities are taking place at this facility.

A. Generator with onsite storage facility: You are a generator with an onsite storage facility under this notification requirement if you are a user, owner, or processor of PCBs or PCB items and you maintain your own storage facilities subject to 40 CFR 761.65(b) or (c)(7) for PCBs. If you are a generator with an onsite storage facility, mark an "X" in this box.

B. Commercial Storer: You are a commercial storer if you own or operate a storage facility which is subject to the storage facility standards of 40 CFR 761.65(b) or (c)(7), and which engages in off-site storage activities involving the PCB wastes generated by others. Most commercial storers of PCB waste perform waste storage services in exchange for a fee or other compensation, but the receipt of compensation is not necessary for your storage facility to qualify as a commercial storer of PCB wastes generated by others. See definition of commercial storer in 40 CFR 761.3. If you are a commercial storer, mark an "X" in this box.

C. Transporter: If you move PCBs by air, rail, highway, or water, then mark an "X" in this box.

D. R&D/Treatability: If you are engaged in conducting R&D into PCB disposal technologies and cannot accept waste on a commercial scale, mark an "X" in this box. You should also check this box if you conduct treatability studies even though you may have marked the "Approved Disposer" box.

E. Approved Disposer: If you currently hold a valid EPA permit to dispose of PCBs in concentrations exceeding 50 ppm in a landfill, through alternative technology or incineration, mark an "X" in this box.

F. Scrap Metal Recovery Oven/Smelter, High Efficiency Boilers: If you operate a device to dispose of PCBs, or if you dispose of PCBs in compliance with Section 761.71 (i.e., high efficiency boilers) or Section 761.72 (i.e., scrap metal recovery oven/smelter), mark an "X" in this box.

Item 7 -- Certification: This certification must be signed by the owner, operator, or an authorized representative of the facility. An "authorized representative" is a person responsible for the overall operation of the facility (i.e., a plant manager or superintendent, or a person of equal responsibility). All notifications must include this certification to be complete.

EPA Form 7710-53 Reverse

USEPA	United States **Environmental Protection Agency** Washington, DC 20460	Form Approved OMB No. 2070

PCB TRANSFORMER REGISTRATION

Return To: Fibers & Organics Branch (7404) Office of Pollution Prevention & Toxics U.S. Environmental Protection Agency 401 M Street, S.W. Washington, DC 20460	**For Official Use Only**

1. Company Name	Address	Contact Name & Phone #

2. a. Location of PCB Transformer(s) - Location #1	2. a. Location of PCB Transformer(s) - Location #2
b. No. of Transformers and wt. (kg):	b. No. of Transformers and wt. (kg):
c. Any transformers containing flammable dielectric fluid: **Yes** or **No**	c. Any transformers containing flammable dielectric fluid: **Yes** or **No**
2. a. Location of PCB Transformer(s) - Location #3	2. a. Location of PCB Transformer(s) - Location #4
b. No. of Transformers and wt. (kg):	b. No. of Transformers and wt. (kg):
c. Any transformers containing flammable dielectric fluid: **Yes** or **No**	c. Any transformers containing flammable dielectric fluid: **Yes** or **No**

7. Certification

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as a company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Signature	Name and Official Title (Type of Print)	Date Signed

Paperwork Reduction Act Notice

The annual public reporting burden for this collection of information is estimated to average 2 hours per response. This estimate includes time for reading instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Regulatory Information Division, U.S. Environmental Protection Agency (mail code 2137), 401 M Street, S.W., Washington, D.C. 20460. Include the OMB number identified above in any correspondence. Do not send the completed form to this address. The actual information or form should be submitted in accordance with the instructions accompanying the form, or as specified in the corresponding regulations.

EPA Form 7720-12

Item-by-Item Instructions for Completing EPA Form 7720-12

No information on this form may be claimed as confidential.

Return completed form to:

Fibers & Organics Branch (7404)
Office of Pollution Prevention & Toxics
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

PCB Transformer means any transformer that contains 500 ppm or greater PCB dielectric. For PCB concentration assumptions applicable to transformers containing three pounds or more of fluid other than mineral oil, see 40 CFR 761.2. For provisions permitting reclassification of electrical equipment containing 500 ppm or greater PCBs to PCB-Contaminated Electrical Equipment, see 40 CFR 761.30(a) and (h).

Type or print in black ink all items, except Item 3, "Certification." If you must use additional sheets, indicate clearly the number of the item on the form to which the information on the separate sheet applies.

Item 1 **Company Name:** Enter the name of the company which owns the equipment.
Address: Enter the street, city, state, and zip code of the company.
Contact Name and Phone Number: Enter the name and business telephone number of the person who should be contacted regarding information submitted on this form.

Item 2a **Location of PCB Transformers:** Enter the address (street, city, state, and zip code) where the PCB Transformer(s) is located. Please note that the address you give must be a physical address, not a P.O. Box. Route numbers are acceptable provided they include enough specificity to assist emergency response personnel in determining the location of the transformer(s).

Item 2b **Number (No.) of Transformers and weight (wt..):** Enter the total number of PCB (500 ppm or greater) Transformers at this location (address) and the total weight (wt..) in kilograms (kg) of the PCB dielectric fluid in the transformer(s).

Item 2c **Any transformers containing flammable dielectric fluid:** (Response optional) Circle yes or no if you have any knowledge that there are or are not transformers at this location (address) that contain flammable (see 40 CFR 261.21(a)(1) - Characteristics of Ignitability) dielectric fluid.

***Please note this form has been designed to accommodate companies submitting registrations for multiple locations. However, companies with more than 4 locations may choose to submit an additional form(s) or an attachment(s).

Item VII -- Certification: This certification must be signed by the owner, operator, or an authorized representative of the transformer owner or operator of the facility or property where the unit is located. An "authorized representative" is a person responsible for the overall operation of the facility (i.e., a plant manager or superintendent, or a person of equal responsibility). All notifications must include this certification to be complete.

VI. Rulemaking Record

The following list of documents includes basic information considered by the Agency in developing today's final rule. The official records of previous PCB rulemakings are incorporated as they exist in the TSCA Public Docket on the date this rule is promulgated. A full list of the materials included in the official rulemaking record is available for inspection and copying in the TSCA Nonconfidential Information Center (NCIC) from noon to 4 p.m. The TSCA NCIC is located in Rm. B607, Northeast Mall, 401 M St., SW., Washington, DC. However, any CBI that is a part of the record for this rulemaking is not available for public review. A public version of the record, from which CBI has been excluded, is available for inspection.

VII. References

1. USEPA, OHEA. *Development of Advisory Levels for Polychlorinated Biphenyls (PCBs) Cleanup*. OHEA-E-187 (May 1986): 199pp.

2. Versar, Inc. Assessment of Risks Associated with the PCB Disposal Amendments. (May 11, 1998): 42 pp.

3. USEPA, OPPTS, EETD. Cost Impacts of the Final Regulation Amending the PCB Disposal Regulations at 40 CFR Part 761. (April 30, 1998): 236pp.

4. USEPA, ORD. *PCBs Cancer Dose-Response Assessment and Application to Environmental Mixtures*. EPA/600/P-96/001F (September 1996): 75pp.

5. USEPA, OPPT, NPCD. Support Document for the PCB Disposal Amendments, Final Rule; Request for Data in Support of a TSCA Use Authorization for Non-Liquid PCB Applications. (April 16, 1998): 5pp.

6. USEPA, OSWER. *Test Methods for Evaluating Solid Waste, Third Edition*. SW-846, *Method Number 9095 Paint Filter Liquids Test*. 4pp.

7. USEPA, OIG. Memorandum from Kenneth A. Konz, Assistant Inspector General for Audit to Linda J. Fisher, Assistant Administrator, OPPTS, USEPA. Subject: Special Report No. E1EPG2–11–6000–2500065, Review of EPA Rule Regulating PCB Transformer Fires. (August 21, 1992): 24pp.

8. State of Connecticut, Department of Environmental Protection. Letter from Timothy R.E. Keeney to William K. Reilly (August 23, 1991): 2pp.

9. USEPA, OPTS, EED. Memorandum from K.A. Hammerstrom to D. Keenher, EED. Subject: Exposure to PCBs in recycled pipe. (July 7, 1988): 8pp.

10. USEPA, OPTS, EED. Letter from M.P. Halper to L.J. Ogden, Interstate Natural Gas Association of America. Subject: Responses to letter of March 17, 1988 re: natural gas pipeline removal and retirement. (June 6, 1988): 12pp.

11. USEPA. *Technical Guidance for the Abandonment in Place of Interstate Natural Gas Pipeline Systems* (October 24, 1990): 13pp.

12. USEPA, OPTS, OTS. *Guidance on Classification for Purposes of Disposal of Stored Natural Gas Pipe Which Was Not Part of a Pipe Removal Project Carried Out Under an EPA-Approved PCB Disposal Activity* (February 1991): 10pp.

13. USEPA, OPTS, OTS. *Technical Guidance for the Declassification of Interstate Natural Gas Pipeline Systems* (February 1991): 6pp.

14. USEPA, OSWER. Strategy for Minimization and Combustion. EPA/530-R-94-044. (November 1994): 23pp.

15. USEPA, OPTS. Letter from J.A. Moore, Assistant Administrator, Office of Pesticides and Toxic Substances, to T.K. Allen, Piper and Marbury, counsel for Utilities Solid Waste Activities Group. Subject: An interpretation of the PCB regulations on the disposal of drained carcasses from mineral oil transformers, (September 9, 1986): 4pp.

16. Hazardous Waste Treatment Council. *Petition For Rulemaking to Amend 40 CFR § 761.60 [under section 21 of TSCA]*. Submitted to USEPA by Richard C. Fortuna, Executive Director for the Hazardous Waste Treatment Council, Franklin D. Sales, President of Salesco Systems USA, Inc., and Brin McCagg, Vice-President of FulCircle Ballast Recyclers (December 15, 1992).

17. S.D. Myers, Inc. Summary of Results: PCB Levels in Light Ballast Compound. (August 11, 1993): 31pp.

18. Rollins Environmental Services, Inc. Analytical Protocol and Analytical Results from PCB Ballast Study (September 20, 1993): 112pp.

19. USEPA. Memorandum from Greg Schweer, Exposure Assessment Branch, to Jane Kim, Chemical Regulation Branch, Re: PCB Spill Exposure Scenarios (April 18, 1986): 3pp.

20. USEPA. Memorandum from Karen A. Hammerstrom, Exposure Assessment Branch, to Jane Kim, Chemical Regulation Branch, Re: Cleanup of PCB Spills Located Indoors (February 5, 1986): 8pp.

21. USEPA, OW. Proceedings of the EPA's Contaminated Sediment Management Strategy Forums (September 1992): 215pp.

22. USEPA, OPTS, EED, and USEPA, OSW. Project Summary--PCB, Lead and Cadmium Levels in Shredder Waste Materials: A Pilot Study. (EPA 560/5-90-008A). (April 1991): 14pp.

23. USEPA, Memorandum from Pat Jennings, Exposure Assessment Branch, to Denise Keehner, Chief, Chemical Regulation Branch, Re: Estimates of Exposure of Humans to PCBs from Disposal of Fluff (August 16, 1988): 21pp.

24. USEPA, OGC. Memorandum from Lisa K. Friedman to Pamela A. Hill, Applicability of the Household Waste Exclusion to Lead-Contaminated Soil (March 7, 1995): 6pp.

25. USEPA, OSWER. Letter from Michael Shapiro to Mark Veckman, Comprehensive Environmental Assessment, Status of (Household) Waste Generated from Abatement of Lead-Based Paint (May 24, 1994): 3pp.

26. U.S. Army, U.S. Army Corps of Engineers, Directorate of Civil Works. Letter from John P. D'Aniello, Acting Director of Civil Works, to RCRA Docket Information Center, OW, EPA (August 28, 1996): 7pp.

27. National Association of Corrosion Engineers (NACE). ''Standard Test Method, Visual Standard for Surfaces of New Steel Centrifugally Blast Cleaned with Steel Grit and Shot.'' TM0175-75 (1981): 5pp.

28. U.S. Navy, Puget Sound Naval Shipyard. Electronic mail from Peggy Sue Jones to John H. Smith, USEPA. Subject: NACE standards for cleanliness of blasted metal surfaces (January 26, 1998): 2pp.

29. Midwest Research Institute. Letter from K. Boggess to J. Smith, Chemical Regulations Branch, EED, OPTS, USEPA, Subject: ''PCB surface decontamination experiments using kerosene,'' EPA Contract No. 68-DO-0137, MRI Project No. 9801-A, Work Assignment No. 30, (June 25, 1992): 4pp.

30. Nishioka, M. and Hines, C. ''Final Report for Work Assignment 1-9, Technical Support for PCB Disposal Rulemaking'' (undated): 10pp.

31. USEPA, OGC. Letter from J.C. Nelson, to F.S. Blake, Swidler Berlin, Chartered, counsel for General Motors Corporation and Chrysler Corporation. Subject: Petition for review of the PCB manifest rule (December 20, 1990): 3pp.

32. USEPA, OGC. Letter from J.C. Nelson to M. Edgar of Piper Marbury, counsel for Chemical Waste Management, Inc. Subject: Petition for review re: PCB Notification and Manifesting Rule; Correction; dated June 27, 1990, (March 1, 1991): 2pp.

33. USEPA. Memorandum from Gregg Schweer, Exposure Assessment Branch, to Jane Kim, Chemical Regulation Branch, Re: Conservative Estimates of Potential Exposures of PCBs Resulting from Spills of One Pound of PCBs in Mineral Oil or Askaral Fluid. (October 24, 1986): 14pp.

34. USEPA, OSWER. ''Soil Screening Guidance Technical Background Document'' EPA/540/R-95/128. (May 1996): 168 pp. (plus appendices).

VIII. Regulatory Assessment Requirements

A. Executive Order 12866

Under Executive Order 12866, entitled *Regulatory Planning and Review* (58 FR 51735, October 4, 1993), OMB has determined that this is an ''economically significant regulatory action'' under section 3(f)(1) of the Executive Order. OMB has made this determination because the net annual economic impact of this rule is estimated to result in a potential total annual cost savings of between $178.1 million and $736.1 million. This action was submitted to OMB for review, and any changes made in response to OMB comments are available for review in the docket.

In support of the cost saving amendments contained in this final rule, EPA has conducted a thorough cost assessment of the estimated costs and cost savings associated with the provisions presented in the proposed rule, and those contained in the final rule. The cost assessment for the final rule is presented in a document entitled *Cost Impacts of the Final Regulation Amending the PCB Disposal Regulations at 40 CFR Part 761,* a copy of which is available in the docket for this rule. In addition, the Agency has also prepared a risk assessment, entitled *Assessment of Risks Associated with the PCB Disposal Amendments*, which summarizes the risks associated with the amendments provisions and upon which the Agency's findings of no unreasonable risks are based.

Although resulting in significant cost savings, these amended provisions will not reduce the benefits associated with the protection of human health and the environment afforded through the original regulation, which are summarized in Unit II.D. of this preamble. EPA has determined, therefore, that there is no need to revise the benefits analysis prepared for the original rule. In addition, since these amendments reduce the overall costs and burdens associated with the existing program requirements, it is not necessary in this case to conduct an extensive quantitative analysis of all the potential alternatives. The Agency has therefore conducted the necessary assessments in compliance with Executive Order 12866. The following is a brief summary of the cost assessment prepared for the final rule.

The net economic impact of the final regulation is a cost savings that will be distributed widely throughout the economy. In estimating cost savings, the final regulation was compared to two cost baselines, except for requirements related to the disposal of PCB-Contaminated ship hulls, in which case the Agency considered a third baseline. The first baseline is based on the costs derived from EPA policy as it has evolved in response to PCB waste handling issues, while the second baseline reflects a literal interpretation of the existing regulation. To estimate the costs associated with the disposal of PCB-Contaminated ship hulls, EPA has added a third baseline to reflect the special circumstances surrounding this activity. The Agency used these baselines in its assessment of costs for this rule because it is important to recognize the regulatory impact of changes that have resulted from the subsequent issuance of official Agency policy. In either case, the cost assessment indicates that the final regulation will generate a net cost savings when compared to either baseline, although the savings are substantially higher for the existing regulation baseline. The net, annual cost savings are $148.1 million when using the special circumstances baseline, $178.1 million using the EPA policy baseline, and $736.1 million using the existing regulation baseline.

Significant cost savings result from changes to the disposal requirements for PCB remediation waste. EPA will now allow wider latitude in selecting disposal methods for PCB remediation wastes, resulting in a lowering of disposal costs, and producing a cost savings estimated at approximately $80.5 million/year. EPA is also creating disposal requirements for PCB bulk product waste. This provision, which affects primarily generators of automobile shredder wastes and building demolition wastes, disposal of ship hulls, and PCB-Contaminated porous surfaces, generates savings of $593.4 million/year relative to the existing regulation. The savings relative to EPA policy are much smaller ($98.4 million/year) because EPA policy has allowed disposal of automobile shredder fluff as municipal solid waste. The annual savings for the disposal of ship hulls using the special circumstances baseline is also lower ($68.4 million) because the Navy is already disposing of ship hulls in a manner consistent with this rule.

Several provisions will affect electric utilities and industrial and nonindustrial entities that own PCB-Contaminated Electrical Equipment and generate PCB waste. The largest cost item is that for training industry personnel about the numerous new provisions of the final regulation. The first-year costs of this training are estimated at $6.5 million. Annualized over 10 years, this estimated cost is approximately $9.8 million per year. Numerous other items generate much smaller costs or cost savings. Cost-generating provisions include requirements for transformer registration, records of inspections and PCB cleanup activities, and storage for reuse. Savings-generating provisions include those that reduce the administrative burdens for obtaining approvals to decontaminate equipment, requirements for disposal of fluorescent light ballasts, and temporary storage of liquid PCBs.

The following table provides aggregate annual costs and cost savings estimates.

Aggregate Costs and Cost Savings ($Millions Per Year)

	Baseline Assumption:		
	Special Circumstances	EPA Policy	Existing Regulation
Compliance Costs[a]	13.0	13.0	13.0
Cost Savings	161.1	191.1	749.1
Net Cost Savings	148.1	178.1	736.1

[a]Compliance costs are identical regardless of the baseline used. All regulatory amendments generating compliance costs are entirely new. Totals do not add due to rounding.

B. Regulatory Flexibility Act

Pursuant to section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 601

et seq.), the Agency hereby certifies that this regulatory action will not have a significant economic impact on a substantial number of small entities. Information relating to this determination has been provided to the Chief Counsel for Advocacy of the Small Business Administration, and is included in the docket for this rulemaking.

The compliance costs and cost savings were distributed among the affected sectors (e.g., electric utility and non-utility entities, entities with PCB ballasts from fluorescent light fixtures, and entities operating natural gas pipelines) to identify the economic impacts throughout the economy. Most provisions will affect electric utilities and non-utility owners of PCB-Contaminated equipment or materials. Training costs represent the largest cost elements, and are annualized at approximately $9.8 million per year. Several cost savings also accrue to owners of PCB-Contaminated Electrical Equipment.

The net compliance costs (excluding the savings for PCB remediation waste) were distributed among utilities in the electric utility industry based on estimates regarding the share of PCB and PCB-Contaminated equipment owned by utilities. Ownership of such equipment was judged to be the best possible proxy for the distribution of compliance costs and cost savings by industry. In order to develop a conservative estimate of regulatory impacts on industry, the savings from remediation wastes were excluded in these calculations since savings from remediation wastes will be distributed very unevenly among firms.

Net compliance costs were distributed to entities in the electric utility industry based on the share of PCB and PCB-Contaminated equipment owned by utilities. Costs were further distributed to utilities based on the relative magnitude of electricity sales (in megawatt-hours) among various groups of utilities. Per entity compliance costs for small private utilities are estimated at $137 or 0.006% of revenues, while compliance costs for small public utilities were estimated at $36 or 0.006% of revenues. With the exclusions of certain cost saving items, as described above, the net compliance costs are quite small. They represent a negligible percentage of revenues for the affected industries. While savings will be distributed among electric utilities and industry, data are not sufficient to distribute these savings in detail by industry.

C. Paperwork Reduction Act

The information collection requirements contained in this rule have been submitted for approval to OMB under the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 *et seq.*, and in accordance with the procedures at 5 CFR 1320.11. An Information Collection Request (ICR) document has been prepared by EPA (EPA ICR No.1729.02) and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division, U.S. Environmental Protection Agency (2137), 401 M St., SW., Washington, DC 20460, by calling (202) 260-2740, or electronically by sending an e-mail message to ''farmer.sandy@epamail.epa.gov.'' An electronic copy has also been posted with the **Federal Register** notice on EPA's homepage with other information related to this action.

The information requirements contained in this rule are not effective until OMB approves them. An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information subject to OMB approval under the PRA unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations, after initial publication in the **Federal Register**, are maintained in a list at 40 CFR part 9. Upon OMB's approval, the Agency will publish a notice in the **Federal Register** to announce the OMB action and to ensure that any necessary changes are made to the list of OMB control numbers for EPA's regulations.

This information collection includes both reporting and recordkeeping requirements that are associated with the management of PCBs, PCB Items, and PCB waste. These reporting and recordkeeping requirements were implemented to ensure the Agency is knowledgeable of ongoing PCB activities (e.g., who, what, where) and that individuals using or disposing of PCBs are held accountable for their activities and can demonstrate compliance with the PCB provisions at 40 CFR part 761. EPA will use this information to ensure PCBs are managed in an environmentally safe manner and that activities are being conducted in compliance with the PCB regulations. Data collected under the transformer registration program ultimately will be provided to the EPA Regional Offices and other environmental offices, on an as requested basis (e.g., State environmental agencies, fire response personnel, etc.). Some data will be used to evaluate whether an unreasonable risk of injury to health or the environment will ensue from the respondents' PCB activities. Some data will be used to supplement the Office of Pollution Prevention and Toxics' (OPPT) data base on the identity and location of individuals who engage in PCB waste handling activities. Many of these requirements are triggered only by an individual's need to address a particular PCB scenario, while other requirements apply to the universe of individuals who use, process, distribute in commerce, or dispose of PCBs.

EPA anticipates that no one individual would be subject to all of the requirements contained in this rule. Responses to the collection of information are mandatory (see 40 CFR part 761). The burden to respondents for complying with this information collection is estimated to total 1,786,153 hours per year, with an annual cost of $78,422,831 which includes $20,819,000 for the acquisition of training services unaffiliated with specific respondent hours. Cost without training services is $57,603,831. These totals are based on an average burden range of 15 minutes to 550 hours per response for an estimated 68,079 respondents submitting 24 reports, and an average burden range of 50 minutes to 60 hours for an estimated 395,409 respondents maintaining required records.

Under the PRA, ''burden'' means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

Send any comments on the burden estimates and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques within 30 days to EPA at the address provided above, with a copy to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., NW., Washington, DC 20503, marked ''Attention: Desk Officer for EPA.'' Please remember to include the ICR number in any correspondence.

D. Unfunded Mandates Reform Act and Executive Order 12875

Pursuant to Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4), EPA has determined that this regulatory action does not contain any ''unfunded mandates,'' as described by the Act, for State, local or tribal governments, or the private sector. Nor does this action result in the expenditure of $100 million or more by any State, local, or tribal governments, or by anyone in the private sector. Furthermore, no nonfederal governmental inspections or activities are required under the final regulation. The relevant costs associated with this regulation are described in the Executive Order 12866 section above. Therefore, this action is not subject to the requirements of UMRA, or require special consultation under Executive Order 12875, entitled *Enhancing the Intergovernmental Partnership* (58 FR 58093, October 28, 1993).

E. Executive Order 12898

Pursuant to Executive Order 12898, entitled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (59 FR 7629, February 16, 1994), the Agency has considered environmental justice-related issues with regard to the potential impacts of this action on the environmental and health conditions in low-income and minority communities. As the Executive Order states, each Federal agency is required to ''analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities. . . .'' Accordingly, EPA examined the impact of the PCB disposal amendments on the geographic distribution of PCB management activities, relative to the socioeconomic characteristics of the surrounding communities. The final regulation affects the use, maintenance, storage, handling, and disposal of PCB Articles. None of the areas it covers, however, will influence the socioeconomic equity of actual or potential environmental exposures to PCB wastes. Several aspects of the regulation, pertinent to this issue, are discussed below.

The final regulation will affect the manner in which electric utilities and other industrial entities maintain and store PCB-Contaminated equipment. These activities will occur predominantly at existing utility and industrial locations where they will represent a very minor portion of the facility activities. The impending changes, which are designed to reduce potential work and environmental exposures, will not influence the geographic distribution of these activities. Further, the changes are unlikely to cause job activities to be redistributed among utility and industrial workers. The changes should also produce a net decrease in risk to the affected workers. In any case, there is no apparent avenue through which these changes might affect environmental justice considerations.

The final regulation will influence the disposal of PCB-Contaminated wastes but does not directly affect the siting of PCB management facilities. While the regulation will allow possible shifts in how PCBs are disposed among facilities, there is no direct influence on the location of such operations, and, therefore, no impact on the socioeconomic distribution of exposure risks.

The final regulation will allow PCB wastes to be handled at a wider range of facilities, including RCRA facilities, than under existing regulations. The final regulation will also allow low concentration PCB wastes to be disposed of in municipal solid waste facilities. In any case, the regulation might have a slight influence on the mix of wastes disposed of at these various facilities but will not otherwise affect the operation or maintenance of those facilities.

A recent report by the U.S. General Accounting Office entitled *Hazardous and Nonhazardous Waste: Demographics of People Living Near Waste Facilities* (1995) reviewed environmental justice research studies, and reached no definitive conclusion on whether existing RCRA facilities and other hazardous waste sites are located disproportionately in poor or minority neighborhoods. Studies that focused on commercial RCRA facilities (excluding Superfund and other uncontrolled hazardous waste sites, which are less relevant to this analysis) also did not find these facilities to be disproportionately located in poor or minority neighborhoods.

Based on the final rule's lack of influence on waste facility siting or the socioeconomic distribution of waste handling activities, EPA concludes that the final rule has no impact on environmental justice.

F. Executive Order 13045

This action is not subject to Executive Order 13045, entitled *Protection of Children from Environmental Health Risks and Safety Risks* (62 FR 19885, April 23, 1997), because this action was initiated and the Notice of Proposed Rulemaking for this action published prior to the date of the order. Under section 2-202 of the Executive Order, the order only applies to those regulatory actions initiated after the date of the order or for which a Notice of Proposed Rulemaking is published 1 year after the date of the order. In any case, although OMB has determined that this is an economically significant action (see Unit VIII.A. above), this regulatory action does not involve any environmental health or safety risks that the Agency has reason to believe may disproportionately affect children. In fact, the substantial net cost savings that are generated by the final rule, will not reduce the benefits associated with the protection of human health or the environment afforded through the original regulation.

G. National Technology Transfer and Advancement Act (NTTAA)

Under section 12(d) of the National Technology Transfer and Advancement Act (NTTAA), (15 U.S.C. 272 note) the Agency is required to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practice, etc.) which are developed or adopted by voluntary consensus standard bodies. Where available and potentially applicable voluntary consensus standards are not used by EPA, the Act requires the Agency to provide Congress, through OMB, an explanation of the reasons for not using such standards.

Although the PCB program has historically used, and continues to rely on, standards that have been developed under a voluntary consensus process, today's final rule imposes procedures that must be used in order to abandon PCB articles, as well as for sampling, site characterization, validation of decontamination efforts, and the disposal of various PCB wastes. The disposal options contained in this rule are much more flexible than those that currently exist. Given this level of flexibility, EPA must ensure that the ultimate disposal options which are selected by regulated entities are utilized in a manner that is protective of health and the environment. As a result, EPA is promulgating the procedures and requirements in subparts M through Q of this rule to ensure consistency in both the way disposal determinations are made and in the manner in which similar PCB wastes are disposed of. These requirements were subject to the

notice and comment process which is prescribed by the Administrative Procedures Act. All comments were reviewed and the requirements of subparts M through Q were modified as a result of EPA's consideration of those comments. A discussion of some of the changes that were made appears in Units IV.E.4., 8. and 9. of the preamble to this rule.

H. Submission to Congress and the General Accounting Office

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is a ''major rule'' as defined by 5 U.S.C. 804(2).

List of Subjects

40 CFR Part 750

Environmental protection, Administrative practice and procedure, Chemicals, Hazardous substances.

40 CFR Part 761

Environmental protection, Hazardous substances, Labeling, Polychlorinated biphenyls (PCBs), Reporting and recordkeeping requirements.

Dated: June 18, 1998.

Carol M. Browner,

Administrator.

Therefore, 40 CFR chapter I is amended as follows:

PART 750—[AMENDED]

1. In part 750:

a. The authority citation for part 750 continues to read as follows:

Authority: 15 U.S.C. 2605.

§ 750.31 [Amended]

b. In § 750.31(c)(9) introductory text and (c)(9)(vii), by revising the references to ''paragraphs (d)(1) through (8)'' to read ''paragraphs (c)(1) through (c)(8)''.

c. In § 750.31(c)(9)(ii) and (c)(9)(iii), by revising the references to ''paragraphs (d)(1), (3) and (5)'' to read ''paragraphs (c)(1), (c)(3), and (c)(5)''.

PART 761—[AMENDED]

2. In part 761:

a. The authority citation for part 761 continues to read as follows:

Authority: 15 U.S.C. 2605, 2607, 2611, 2614, and 2616.

b. In § 761.1, by revising paragraph (b) to read as follows:

§ 761.1 Applicability.

* * * * *

(b)(1) This part applies to all persons who manufacture, process, distribute in commerce, use, or dispose of PCBs or PCB Items. Substances that are regulated by this part include, but are not limited to: dielectric fluids; solvents; oils; waste oils; heat transfer fluids; hydraulic fluids; paints or coatings; sludges; slurries; sediments; dredge spoils; soils; materials containing PCBs as a result of spills; and other chemical substances or combinations of substances, including impurities and byproducts and any byproduct, intermediate, or impurity manufactured at any point in a process.

(2) Unless otherwise noted, PCB concentrations shall be determined on a weight-per-weight basis (e.g., milligrams per kilogram), or for liquids, on a weight-per-volume basis (e.g., milligrams per liter) if the density of the liquid is also reported. Unless otherwise provided, PCBs are quantified based on the formulation of PCBs present in the material analyzed. For example, measure Aroclor™ 1242 PCBs based on a comparison with Aroclor™ 1242 standards. Measure individual congener PCBs based on a comparison with individual PCB congener standards.

(3) Most provisions in this part apply only if PCBs are present in concentrations above a specified level. Provisions that apply to PCBs at concentrations of <50 ppm apply also to contaminated surfaces at PCB concentrations of ≤10/100 cm^2. Provisions that apply to PCBs at concentrations of ≥50 to <500 ppm apply also to contaminated surfaces at PCB concentrations of >10/100 cm^2 to <100 μg/100 cm^2. Provisions that apply to PCBs at concentrations of ≥500 ppm apply also to contaminated surfaces at PCB concentrations of ≥100 μg/100 cm^2.

(4) PCBs can be found in liquid, non-liquid and multi-phasic (combinations of liquid and non-liquid) forms. A person should use the following criteria to determine PCB concentrations to determine which provisions of this part apply to such PCBs.

(i) Any person determining PCB concentrations for non-liquid PCBs must do so on a dry weight basis.

(ii) Any person determining PCB concentrations for liquid PCBs must do so on a wet weight basis. Liquid PCBs containing more than 0.5 percent by weight non-dissolved material shall be analyzed as multi-phasic non-liquid/liquid mixtures.

(iii) Any person determining the PCB concentration of samples containing PCBs and non-dissolved non-liquid materials ≥0.5 percent, must separate the non-dissolved materials into non-liquid PCBs and liquid PCBs. For multi-phasic non-liquid/liquid or liquid/liquid mixtures, the phases shall be separated before chemical analysis. Following phase separation, the PCB concentration in each non-liquid phase shall be determined on a dry weight basis and the PCB concentration in each liquid phase shall be determined separately on a wet weight basis.

(iv) Any person disposing of multi-phasic non-liquid/liquid or liquid/liquid mixtures must use the PCB disposal requirements that apply to the individual phase with the highest PCB concentration except where otherwise noted. Alternatively, phases may be separated and disposed of using the PCB disposal requirements that apply to each separated, single-phase material.

(5) No person may avoid any provision specifying a PCB concentration by diluting the PCBs, unless otherwise specifically provided.

(6) Unless otherwise specified, references to weights or volumes of PCBs in this part apply to the total weight or total volume of the material (oil, soil, debris, etc.) that contains regulated concentrations of PCBs, not the calculated weight or volume of only the PCB molecules contained in the material.

* * * * *

c. By adding a new § 761.2 to read as follows:

§ 761.2 PCB concentration assumptions for use.

(a)(1) Any person may assume that transformers with <3 pounds (1.36 kilograms (kgs)) of fluid, circuit breakers, reclosers, oil-filled cable, and rectifiers whose PCB concentration is not established contain PCBs at <50 ppm.

(2) Any person must assume that mineral oil-filled electrical equipment that was manufactured before July 2, 1979, and whose PCB concentration is not established is PCB-Contaminated Electrical Equipment (i.e., contains ≥50 ppm PCB, but <500 ppm PCB). All pole-top and pad-mounted distribution transformers manufactured before July 2, 1979, must be assumed to be mineral-oil filled. Any person may assume that electrical equipment manufactured after July 2, 1979, is non-PCB (i.e., <50 ppm

PCBs). If the date of manufacture of mineral oil-filled electrical equipment is unknown, any person must assume it to be PCB-Contaminated.

(3) Any person must assume that a transformer manufactured prior to July 2, 1979, that contains 1.36 kg (3 pounds) or more of fluid other than mineral oil and whose PCB concentration is not established, is a PCB Transformer (i.e., ≧500 ppm). If the date of manufacture or the type of dielectric fluid is unknown, any person must assume the transformer to be a PCB Transformer.

(4) Any person must assume that a capacitor manufactured prior to July 2, 1979, whose PCB concentration is not established contains ≥500 ppm PCBs. Any person may assume that a capacitor manufactured after July 2, 1979, is non-PCB (i.e., <50 ppm PCBs). If the date of manufacture is unknown, any person must assume the capacitor contains ≥500 ppm PCBs. Any person may assume that a capacitor marked at the time of manufacture with the statement ''No PCBs'' in accordance with § 761.40(g) is non-PCB.

(b) PCB concentration may be established by:

(1) Testing the equipment; or

(2)(i) A permanent label, mark, or other documentation from the manufacturer of the equipment indicating its PCB concentration at the time of manufacture; and

(ii) Service records or other documentation indicating the PCB concentration of all fluids used in servicing the equipment since it was first manufactured.

d. In § 761.3, by revising the definitions for ''Commercial storer of PCB waste,'' ''PCB-Contaminated Electrical Equipment,'' ''PCB Item,'' ''PCB Transformer,'' and paragraph (2) of ''Qualified Incinerator''; by removing the definitions for ''Basel Convention'' and ''Emergency Situation''; and by adding alphabetically 36 definitions to read as follows:

§ 761.3 Definitions.

* * * * *

Air compressor system means air compressors, piping, receiver tanks, volume tanks and bottles, dryers, airlines, and related appurtenances.

* * * * *

ASTM means American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

* * * * *

CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601-9657).

* * * * *

Cleanup site means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of a cleanup of PCB remediation waste, regardless of whether the site was intended for management of waste.

* * * * *

Commercial storer of PCB waste means the owner or operator of each facility that is subject to the PCB storage unit standards of § 761.65(b)(1) or (c)(7) or meets the alternate storage criteria of § 761.65(b)(2), and who engages in storage activities involving either PCB waste generated by others or that was removed while servicing the equipment owned by others and brokered for disposal. The receipt of a fee or any other form of compensation for storage services is not necessary to qualify as a commercial storer of PCB waste. A generator who only stores its own waste is subject to the storage requirements of § 761.65, but is not required to obtain approval as a commercial storer. If a facility's storage of PCB waste generated by others at no time exceeds a total of 500 gallons of liquid and/or non-liquid material containing PCBs at regulated levels, the owner or operator is a commercial storer but is not required to seek EPA approval as a commercial storer of PCB waste. Storage of one company's PCB waste by a related company is not considered commercial storage. A ''related company'' includes, but is not limited to: a parent company and its subsidiaries; sibling companies owned by the same parent company; companies owned by a common holding company; members of electric cooperatives; entities within the same Executive agency as defined at 5 U.S.C. 105; and a company having a joint ownership interest in a facility from which PCB waste is generated (such as a jointly owned electric power generating station) where the PCB waste is stored by one of the co-owners of the facility. A ''related company'' does not include another voluntary member of the same trade association. Change in ownership or title of a generator's facility, where the generator is storing PCB waste, does not make the new owner of the facility a commercial storer of PCB waste.

* * * * *

DOT means the United States Department of Transportation.

Dry weight means the weight of the sample, excluding the weight of the water in the sample. Prior to chemical analysis the water may be removed by any reproducible method that is applicable to measuring PCBs in the sample matrix at the concentration of concern, such as air drying at ambient temperature, filtration, decantation, heating at low temperature followed by cooling in the presence of a desiccant, or other processes or combinations of processes which would remove water but not remove PCBs from the sample. Analytical procedures which calculate the dry weight concentration by adjusting for moisture content may also be used.

* * * * *

Facility means all contiguous land, and structures, other appurtenances, and improvements on the land, used for the treatment, storage, or disposal of PCB waste. A facility may consist of one or more treatment, storage, or disposal units.

* * * * *

High occupancy area means any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: 840 hours or more (an average of 16.8 hours or more per week) for non-porous surfaces and 335 hours or more (an average of 6.7 hours or more per week) for bulk PCB remediation waste. Examples could include a residence, school, day care center, sleeping quarters, a single or multiple occupancy 40 hours per week work station, a school class room, a cafeteria in an industrial facility, a control room, and a work station at an assembly line.

* * * * *

Liquid PCBs means a homogenous flowable material containing PCBs and no more than 0.5 percent by weight non-dissolved material.

Low occupancy area means any area where PCB remediation waste has been disposed of on-site and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is: less than 840 hours (an average of 16.8 hours per week) for non-porous surfaces and less than 335 hours (an average of 6.7 hours per week) for bulk PCB remediation waste. Examples could include an electrical substation or a location in an industrial facility where a worker spends small amounts of time per week (such as an unoccupied area outside a building, an electrical equipment vault, or in the non-office space in a warehouse where occupancy is transitory).

* * * * *

Natural gas pipeline system means natural gas gathering facilities, natural gas pipe, natural gas compressors, natural gas storage facilities, and natural gas pipeline appurtenances (including instrumentation and vessels directly in contact with transported natural gas such as valves, regulators, drips, filter

separators, etc., but not including air compressors).

* * * * *

Non-liquid PCBs means materials containing PCBs that by visual inspection do not flow at room temperature (25 °C or 77 °F) or from which no liquid passes when a 100 g or 100 ml representative sample is placed in a mesh number 60 ± 5 percent paint filter and allowed to drain at room temperature for 5 minutes.

* * * * *

Non-porous surface means a smooth, unpainted solid surface that limits penetration of liquid containing PCBs beyond the immediate surface. Examples are: smooth uncorroded metal; natural gas pipe with a thin porous coating originally applied to inhibit corrosion; smooth glass; smooth glazed ceramics; impermeable polished building stone such as marble or granite; and high density plastics, such as polycarbonates and melamines, that do not absorb organic solvents.

* * * * *

NTIS means the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161.

* * * * *

Open burning means the combustion of any PCB regulated for disposal, in a manner not approved or otherwise allowed under subpart D of this part, and without any of the following:

(1) Control of combustion air to maintain adequate temperature for efficient combustion.

(2) Containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion.

(3) Control of emission of the gaseous combustion products.

* * * * *

PCB bulk product waste means waste derived from manufactured products containing PCBs in a non-liquid state, at any concentration where the concentration at the time of designation for disposal was ≥50 ppm PCBs. PCB bulk product waste does not include PCBs or PCB Items regulated for disposal under § 761.60(a) through (c), § 761.61, § 761.63, or § 761.64. PCB bulk product waste includes, but is not limited to:

(1) Non-liquid bulk wastes or debris from the demolition of buildings and other man-made structures manufactured, coated, or serviced with PCBs. PCB bulk product waste does not include debris from the demolition of buildings or other man-made structures that is contaminated by spills from regulated PCBs which have not been disposed of, decontaminated, or otherwise cleaned up in accordance with subpart D of this part.

(2) PCB-containing wastes from the shredding of automobiles, household appliances, or industrial appliances.

(3) Plastics (such as plastic insulation from wire or cable; radio, television and computer casings; vehicle parts; or furniture laminates); preformed or molded rubber parts and components; applied dried paints, varnishes, waxes or other similar coatings or sealants; caulking; adhesives; paper; Galbestos; sound deadening or other types of insulation; and felt or fabric products such as gaskets.

(4) Fluorescent light ballasts containing PCBs in the potting material.

* * * * *

PCB Capacitor means any capacitor that contains ≥500 ppm PCB. Concentration assumptions applicable to capacitors appear under § 761.2.

* * * * *

PCB-Contaminated means a non-liquid material containing PCBs at concentrations ≥50 ppm but <500 ppm; a liquid material containing PCBs at concentrations ≥50 ppm but <500 ppm or where insufficient liquid material is available for analysis, a non-porous surface having a surface concentration >10 µg/100 cm^2 but <100 µg/100 cm^2, measured by a standard wipe test as defined in § 761.123.

PCB-Contaminated Electrical Equipment means any electrical equipment including, but not limited to, transformers (including those used in railway locomotives and self-propelled cars), capacitors, circuit breakers, reclosers, voltage regulators, switches (including sectionalizers and motor starters), electromagnets, and cable, that contains PCBs at concentrations of ≥50 ppm and <500 ppm in the contaminating fluid. In the absence of liquids, electrical equipment is PCB-Contaminated if it has PCBs at >10 µg/100 cm^2 and <100 µg/100 cm^2 as measured by a standard wipe test (as defined in § 761.123) of a non-porous surface.

* * * * *

PCB field screening test means a portable analytical device or kit which measures PCBs. PCB field screening tests usually report less than or greater than a specific numerical PCB concentration. These tests normally build in a safety factor which increases the probability of a false positive report and decreases the probability of a false negative report. PCB field screening tests do not usually provide: an identity record generated by an instrument; a quantitative comparison record from calibration standards; any identification of PCBs; and/or any indication or identification of interferences with the measurement of the PCBs. PCB field screening test technologies include, but are not limited to, total chlorine colorimetric tests, total chlorine x-ray fluorescence tests, total chlorine microcoulometric tests, and rapid immunoassay tests.

PCB household waste means PCB waste that is generated by residents on the premises of a temporary or permanent residence for individuals (including individually owned or rented units of a multi-unit construction), and that is composed primarily of materials found in wastes generated by consumers in their homes. PCB household waste includes unwanted or discarded non-commercial vehicles (prior to shredding), household items, and appliances or appliance parts and wastes generated on the premises of a residence for individuals as a result of routine household maintenance by or on behalf of the resident. Bulk or commingled liquid PCB wastes at concentrations of ≥50 ppm, demolition and renovation wastes, and industrial or heavy duty equipment with PCBs are not household wastes.

* * * * *

PCB Item means any PCB Article, PCB Article Container, PCB Container, PCB Equipment, or anything that deliberately or unintentionally contains or has as a part of it any PCB or PCBs.

* * * * *

PCB/radioactive waste means PCBs regulated for disposal under subpart D of this part that also contain source, special nuclear, or byproduct material subject to regulation under the Atomic Energy Act of 1954, as amended, or naturally-occurring or accelerator-produced radioactive material.

* * * * *

PCB remediation waste means waste containing PCBs as a result of a spill, release, or other unauthorized disposal, at the following concentrations: Materials disposed of prior to April 18, 1978, that are currently at concentrations ≥50 ppm PCBs, regardless of the concentration of the original spill; materials which are currently at any volume or concentration where the original source was ≥500 ppm PCB beginning on April 18, 1978, or ≥50 ppm PCB beginning on July 2, 1979; and materials which are currently at any concentration if the PCBs are from a source not authorized for use under this part. PCB remediation waste means soil, rags, and other debris generated as a result of any PCB spill cleanup, including, but not limited to:

(1) Environmental media containing PCBs, such as soil and gravel; dredged materials, such as sediments, settled

sediment fines, and aqueous decantate from sediment.

(2) Sewage sludge containing <50 ppm PCBs and not in use according to § 761.20(a)(4); PCB sewage sludge; commercial or industrial sludge contaminated as the result of a spill of PCBs including sludges located in or removed from any pollution control device; aqueous decantate from an industrial sludge.

(3) Buildings and other man-made structures, such as concrete or wood floors or walls contaminated from a leaking PCB or PCB-Contaminated transformer, porous surfaces and non-porous surfaces.

* * * * *

PCB sewage sludge means sewage sludge as defined in 40 CFR 503.9(w) which contains ≥50 ppm PCBs, as measured on a dry weight basis.

* * * * *

PCB Transformer means any transformer that contains ≥500 ppm PCBs. For PCB concentration assumptions applicable to transformers containing 1.36 kilograms (3 lbs.) or more of fluid other than mineral oil, see § 761.2. For provisions permitting reclassification of electrical equipment, including PCB Transformers, containing ≥500 ppm PCBs to PCB-Contaminated Electrical Equipment, see § 761.30(a) and (h).

* * * * *

Performance-based organic decontamination fluid (PODF) means kerosene, diesel fuel, terpene hydrocarbons, and terpene hydrocarbon/alcohol mixtures.

* * * * *

Porous surface means any surface that allows PCBs to penetrate or pass into itself including, but not limited to, paint or coating on metal; corroded metal; fibrous glass or glass wool; unglazed ceramics; ceramics with a porous glaze; porous building stone such as sandstone, travertine, limestone, or coral rock; low-density plastics such as styrofoam and low-density polyethylene; coated (varnished or painted) or uncoated wood; concrete or cement; plaster; plasterboard; wallboard; rubber; fiberboard; chipboard; asphalt; or tar paper. For purposes of cleaning and disposing of PCB remediation waste, porous surfaces have different requirements than non-porous surfaces.

* * * * *

Qualified incinerator means one of the following:

* * * * *

(2) A high efficiency boiler which complies with the criteria of § 761.71(a)(1), and for which the operator has given written notice to the appropriate EPA Regional Administrator in accordance with the notification requirements for the burning of mineral oil dielectric fluid under § 761.71(a)(2).

* * * * *

RCRA means the Resource Conservation and Recovery Act (40 U.S.C. 6901 *et seq.*).

* * * * *

Research and development (R&D) for PCB disposal means demonstrations for commercial PCB disposal approvals, pre-demonstration tests, tests of major modifications to previously approved PCB disposal technologies, treatability studies for PCB disposal technologies which have not been approved, development of new disposal technologies, and research on chemical transformation processes including, but not limited to, biodegradation.

* * * * *

Sewage sludge means sewage sludge as defined in § 503.9(w) of this chapter that contains <50 ppm (on a dry weight basis) PCBs.

* * * * *

Soil washing means the extraction of PCBs from soil using a solvent, recovering the solvent from the soil, separating the PCBs from the recovered solvent for disposal, and then disposal or reuse of the solvent.

Standard wipe sample means a sample collected for chemical extraction and analysis using the standard wipe test as defined in § 761.123. Except as designated elsewhere in part 761, the minimum surface area to be sampled shall be 100 cm^2.

* * * * *

SW-846 means the document having the title ''SW-846, Test Methods for Evaluating Solid Waste,'' which is available from either the National Technical Information Service (NTIS, U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161, telephone: (703) 487-4650 or the U.S. Government Printing Office (U.S. GPO, 710 North Capitol St., NW., Washington, DC 20401, telephone: (202) 783-3238.

* * * * *

TSCA means the Toxic Substances Control Act (15 U.S.C. 2601 *et seq.*).

* * * * *

TSCA PCB Coordinated Approval means the process used to recognize other Federal or State waste management documents governing the storage, cleanup, treatment, and disposal of PCB wastes. It is the mechanism under TSCA for accomplishing review, coordination, and approval of PCB waste management activities which are conducted outside of the TSCA PCB approval process, but require approval under the TSCA PCB regulations at 40 CFR part 761.

* * * * *

Unit means a particular building, structure, or cell used to manage PCB waste (including, but not limited to, a building used for PCB waste storage, a landfill, an industrial boiler, or an incinerator).

U.S. GPO means the U.S. Government Printing Office, 710 North Capitol St., NW., Washington, DC 20401.

* * * * *

Wet weight means reporting chemical analysis results by including either the weight, or the volume and density, of all liquids.

* * * * *

e. In § 761.19, the table in paragraph (b), in the second column, by revising the reference to ''§ 761.60(a)(3)(iii)(B)(6)'' wherever it appears to read ''§ 761.71(b)(2)(vi)'' and by revising the introductory text of paragraph (b) to read as follows:

§ 761.19 References.

* * * * *

(b) *Incorporation by reference*. The following material is incorporated by reference, and is available for inspection at the Office of the Federal Register, 800 North Capitol St., NW., Suite 700, Washington, DC. These incorporations by reference were approved by the Director of the Office of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the **Federal Register**. Copies of the incorporated material are available for inspection at the TSCA Nonconfidential Information Center (7407), Rm. B607, Northeast Mall, Office of Pollution Prevention and Toxics, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Copies of the incorporated material may be obtained from the American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.

* * * * *

f. Throughout part 761, by revising the references to ''Director, Chemical Management Division'' and ''Director, CMD,'' to read ''Director, National Program Chemicals Division''.

g. In § 761.20, by revising the section heading and paragraphs (a)(4), (c)(2), and (c)(5) to read as follows:

§ 761.20 Prohibitions and exceptions.

* * * * *

(a) * * *

(4) An authorization is not required to use sewage sludge where the uses are regulated at parts 257, 258, and 503 of this chapter. No person may blend or otherwise dilute PCBs regulated for disposal, including PCB sewage sludge

and sewage sludge not used pursuant to parts 257, 258, and 503 of this chapter, for purposes of use or to avoid disposal requirements under this part. Except as explicitly provided in subpart D of this part, no person may dispose of regulated PCB wastes including, but not limited to, PCB remediation waste, PCB bulk product waste, PCBs, and PCB industrial sludges, into treatment works, as defined in § 503.9(aa) of this chapter.

* * * * *

(c) * * *

(2) Any person may process and distribute in commerce for disposal PCBs at concentrations of ≥50 ppm, or PCB Items with PCB concentrations of ≥50 ppm, if they comply with the applicable provisions of this part.

(i) Processing activities which are primarily associated with and facilitate storage or transportation for disposal do not require a TSCA PCB storage or disposal approval.

(ii) Processing activities which are primarily associated with and facilitate treatment, as defined in § 261.10 of this chapter, or disposal require a TSCA PCB disposal approval unless they are part of an existing approval, are part of a self-implementing activity under § 761.61(a) or § 761.79(b) or (c), or are otherwise specifically allowed under subpart D of this part.

(iii) With the exception of provisions in § 761.60(a)(2) and (a)(3), in order to meet the intent of § 761.1(b), processing, diluting, or otherwise blending of waste prior to being introduced into a disposal unit for purposes of meeting a PCB concentration limit shall be done in accordance with a TSCA PCB disposal approval or comply with the requirements of § 761.79.

(iv) Where the rate of delivering liquids or non-liquids into a PCB disposal unit is an operating parameter, this rate shall be a condition of the TSCA PCB disposal approval for the unit when an approval is required.

* * * * *

(5) Decontaminated materials. Any person may distribute in commerce equipment, structures, or other liquid or non-liquid materials that were contaminated with PCBs ≥50 ppm, including those not otherwise authorized for distribution in commerce under this part, provided that one of the following applies:

(i) The materials were decontaminated in accordance with a TSCA PCB disposal approval issued under subpart D of this part, with § 761.79, or with applicable EPA PCB spill cleanup policies in effect at the time of the decontamination.

(ii) If not previously decontaminated, the materials now meet an applicable decontamination standard in § 761.79(b).

* * * * *

h. Section 761.30 is amended as follows:

i. Paragraph (a)(1) is amended by removing (a)(1)(iii)(A) through (a)(1)(iii)(C)(*2*)(*i*), and (a)(1)(iii)(D), and by redesignating (a)(1)(iii)(C)(*2*)(*ii*) and (a)(1)(iii)(C)(*2*)(*iii*) as (a)(1)(iii)(A) and (a)(1)(iii)(B), respectively; by revising paragraph (a)(1)(vi); in paragraph (a)(1)(vii)(C), by revising the phrase ''280/120 volt radial'' to read ''208/120 volt radial''; in paragraph (a)(1)(x) by revising the reference to ''§ 761.60'' to read ''subpart D of this part''; by adding new paragraphs (a)(1)(xii)(I) and (a)(1)(xii)(J); in paragraph (a)(1)(xv) introductory text by revising the reference to ''§ 761.3'' to read ''§ 761.2''; and by revising paragraph (a)(1)(xv)(D).

ii. Paragraph (b) is amended by revising paragraph (b)(1) and by removing paragraph (b)(2)(ii) and redesignating paragraphs (b)(2)(iii) through (b)(2)(vii) as (b)(2)(ii) through (b)(2)(vi), respectively.

iii. By revising paragraphs (c), (d), (e), (h)(1)(ii), (i), (j), (k) and (p); removing and reserving paragraphs (g), (n), and (o); and adding paragraphs (h)(1)(iii), (q), (r), (s), (t), and (u).

The revisions and additions read as follows:

§ 761.30 Authorizations.

(a) * * *

(1) * * *

(vi)(A) No later than December 28, 1998 all owners of PCB Transformers, including those in storage for reuse, must register their transformers with the Environmental Protection Agency, National Program Chemicals Division, Office of Pollution Prevention and Toxics (7404), 401 M St., SW., Washington, DC 20460. This registration requirement is subject to the limitations in paragraph (a)(1) of this section.

(*1*) A transformer owner who assumes a transformer is a PCB-Contaminated transformer, and discovers after December 28, 1998 that it is a PCB-Transformer, must register the newly-identified PCB Transformer, in writing, with the Environmental Protection Agency no later than 30 days after it is identified as such. This requirement does not apply to transformer owners who have previously registered with the EPA PCB Transformers located at the same address as the transformer that they assumed to be PCB-Contaminated and later determined to be a PCB Transformer.

(*2*) A person who takes possession of a PCB Transformer after December 28, 1998 is not required to register or re-register the transformer with the EPA.

(B) Any person submitting a registration under this section must include:

(*1*) Company name and address.

(*2*) Contact name and telephone number.

(*3*) Address where these transformers are located. For mobile sources such as ships, provide the name of the ship.

(*4*) Number of PCB Transformers and the total weight in kilograms of PCBs contained in the transformers.

(*5*) Whether any transformers at this location contain flammable dielectric fluid (optional).

(*6*) Signature of the owner, operator, or other authorized representative certifying the accuracy of the information submitted.

(C) A transformer owner must retain a record of each PCB Transformer's registration (e.g., a copy of the registration and the return receipt signed by EPA) with the inspection and maintenance records required for each PCB Transformer under paragraph (a)(1)(xii)(I) of this section.

(D) A transformer owner must comply with all requirements of paragraph (a)(1)(vi)(A) of this section to continue the PCB-Transformer's authorization for use, or storage for reuse, pursuant to this section and TSCA section 6(e)(2)(B).

* * * * *

(xii) * * *

(I) Record of the registration of PCB Transformer(s).

(J) Records of transfer of ownership of a PCB Item (excluding intact non-leaking small capacitors) with a PCB concentration of ≥500 ppm, when records are not maintained in compliance with § 761.180(a)(2).

* * * * *

(xv) * * *

(D) Register the PCB Transformer in writing with the building owner within 30 days of discovery.

* * * * *

(b) * * *

(1) *Use restrictions.* After July 1, 1986, use of railroad transformers that contain dielectric fluids with a PCB concentration >1,000 ppm is prohibited.

* * * * *

(c) *Use in mining equipment.* After January 1, 1982, PCBs may be used in mining equipment only at a concentration level of <50 ppm.

(d) *Use in heat transfer systems.* After July 1, 1984, PCBs may be used in heat transfer systems only at a concentration level of < 50 ppm. Heat transfer systems that were in operation after July 1, 1984, with a concentration level of <50 ppm PCBs may be serviced to maintain a concentration level of <50 ppm PCBs.

Heat transfer systems may only be serviced with fluids containing <50 ppm PCBs.

(e) *Use in hydraulic systems.* After July 1, 1984, PCBs may be used in hydraulic systems only at a concentration level of <50 ppm. Hydraulic systems that were in operation after July 1, 1984, with a concentration level of <50 ppm PCBs may be serviced to maintain a concentration level of <50 ppm PCBs. Hydraulic systems may only be serviced with fluids containing <50 ppm PCBs.

* * * * *

(g) [Reserved]

(h) * * *

(1) * * *

(ii) Use and storage for reuse of voltage regulators which contain 1.36 kilograms (3 lbs) or more of dielectric fluid with a PCB concentration of ≥500 ppm are subject to the following provisions:

(A) The owner of the voltage regulator must mark its location in accordance with § 761.40.

(B) If a voltage regulator is involved in a fire-related incident, the owner must immediately report the incident to the National Response Center (Toll-free: 1–800–424–8802; in Washington, DC: 202–426–2675). A fire-related incident is defined as any incident that involves the generation of sufficient heat and/or pressure, by any source, to result in the violent or non-violent rupture of the voltage regulator and the release of PCBs.

(C) The owner of the voltage regulator must inspect it in accordance with the requirements of paragraphs (a)(1)(ix), (a)(1)(xiii), and (a)(1)(xiv) of this section that apply to PCB Transformers.

(D) The owner of the voltage regulator must comply with the recordkeeping and reporting requirements at § 761.180.

(iii) The owner of a voltage regulator that assumes it contains <500 ppm PCBs as provided in § 761.2, and discovers by testing that it is contaminated at ≥500 ppm PCBs, must comply with paragraph (h)(1)(ii)(A) of this section 7 days after the discovery, and paragraphs (h)(1)(ii)(B), (h)(1)(ii)(C), and (h)(1)(ii)(D) of this section immediately upon discovery.

* * * * *

(i) *Use and reuse of PCBs in natural gas pipeline systems; use and reuse of PCB-Contaminated natural gas pipe and appurtenances.* (1)(i) PCBs are authorized for use in natural gas pipeline systems at concentrations <50 ppm.

(ii) PCBs are authorized for use, at concentrations ≥50 ppm, in natural gas pipeline systems not owned or operated by a seller or distributor of natural gas.

(iii)(A) PCBs are authorized for use, at concentrations ≥50 ppm, in natural gas pipeline systems owned or operated by a seller or distributor of natural gas, if the owner or operator:

(*1*) Submits to EPA, upon request, a written description of the general nature and location of PCBs ≥50 ppm in their natural gas pipeline system. Each written description shall be submitted to the EPA Regional Administrator having jurisdiction over the segment or component of the system (or the Director, National Program Chemicals Division, Office of Prevention, Pesticides, and Toxic Substances, if the system is contaminated in more than one region).

(*2*) Within 120 days after discovery of PCBs ≥50 ppm in natural gas pipeline systems, or by December 28, 1998, whichever is later, characterizes the extent of PCB contamination by collecting and analyzing samples to identify the upstream and downstream end points of the segment or component where PCBs ≥50 ppm were discovered.

(*3*) Within 120 days of characterization of the extent of PCB contamination, or by December 28, 1998, whichever is later, samples and analyzes all potential sources of introduction of PCBs into the natural gas pipeline system for PCBs ≥50 ppm. Potential sources include natural gas compressors, natural gas scrubbers, natural gas filters, and interconnects where natural gas is received upstream from the most downstream sampling point where PCBs ≥50 ppm were detected; potential sources exclude valves, drips, or other small liquid condensate collection points.

(*4*) Within 1 year of characterization of the extent of PCB contamination, reduces all demonstrated sources of PCBs ≥50 ppm to <50 ppm, or removes such sources from the natural gas pipeline system; or implements other engineering measures or methods to reduce PCB levels to <50 ppm and to prevent further introduction of PCBs ≥50 ppm into the natural gas pipeline system (e.g., pigging, decontamination, in-line filtration).

(*5*) Repeats sampling and analysis at least annually where PCBs are ≥50 ppm, until sampling results indicate the natural gas pipeline segment or component is <50 ppm PCB in two successive samples with a minimum interval between samples of 180 days.

(*6*) Marks aboveground sources of PCB liquids in natural gas pipeline systems with the M_L Mark in accordance with § 761.45(a), where such sources have been demonstrated through historical data or recent sampling to contain PCBs ≥50 ppm.

(B) Owners or operators of natural gas pipeline systems which do not include potential sources of PCB contamination as described in paragraph (i)(1)(iii)(A)(*3*) of this section containing ≥50 ppm PCB are not subject to paragraphs (i)(1)(iii)(A)(*2*), (i)(1)(iii)(A)(*3*), (i)(1)(iii)(A)(*4*), or (i)(1)(iii)(A)(*6*) of this section. Owners or operators of these systems, however, must comply with the other provisions of this section (e.g., sampling of any collected PCB liquids and recordkeeping).

(C) The owner or operator of a natural gas pipeline system must document in writing all data collected and actions taken, or not taken, pursuant to the authorization in paragraph (i)(1)(iii)(A) of this section. They must maintain the information for 3 years after the PCB concentration in the component or segment is reduced to <50 ppm, and make it available to EPA upon request.

(D) The Director, National Program Chemicals Division, after consulting with the appropriate EPA Region(s) may, based on a finding of no unreasonable risk, modify in writing the requirements of paragraph (i)(1)(iii)(A) of this section, including extending any compliance date, approving alternative formats for documentation, waiving one or more requirements for a segment or component, requiring sampling and analysis, and requiring implementation of engineering measures to reduce PCB concentrations. EPA will make such modifications based on the natural gas pipeline system size, configuration, and current operating conditions; nature, extent or source of contamination; proximity of contamination to end-users; or previous sampling, monitoring, remedial actions or documentation of activities taken regarding compliance with this authorization or other applicable Federal, State, or local laws and regulations. The Director, National Program Chemicals Division, may delegate the authority described in this paragraph, upon request, to the appropriate EPA Region.

(E) The owner or operator of a natural gas pipeline system may use historical data to fulfill the requirements of paragraphs (i)(1)(iii)(A)(*1*), (i)(1)(iii)(A)(*2*) and (i)(1)(iii)(A)(*3*) of this section. They may use documented historical actions taken to reduce PCB concentrations in known sources; decontaminate components or segments of natural gas pipeline systems; or otherwise to reduce PCB levels to fulfill the requirements of paragraph (i)(1)(iii)(A)(*4*) of this section.

(2) Any person may reuse PCB-Contaminated natural gas pipe and appurtenances in a natural gas pipeline

system, provided all free-flowing liquids have been removed.

(3) Any person may use PCB-Contaminated natural gas pipe, drained of all free-flowing liquids, in the transport of liquids (e.g., bulk hydrocarbons, chemicals, petroleum products, or coal slurry), as casing to provide secondary containment or protection (e.g., protection for electrical cable), as industrial structural material (e.g., fence posts, sign posts, or bridge supports), as temporary flume at construction sites, as equipment skids, as culverts under transportation systems in intermittent flow situations, for sewage service with written consent of the Publicly Owned Treatment Works (POTW), for steam service, as irrigation systems (<20 inch diameter) of less than 200 miles in length, and in a totally enclosed compressed air system.

(4) Any person characterizing PCB contamination in natural gas pipe or natural gas pipeline systems must do so by analyzing liquids collected at existing condensate collection points in the pipe or pipeline system. The level of PCB contamination found at a collection point is assumed to extend to the next collection point downstream. Any person characterizing multi-phasic liquids must do so in accordance with § 761.1(b)(4); if no liquids are present, they must use standard wipe samples in accordance with subpart M of this part.

(5)(i) Any person disposing of liquids containing PCBs ≥50 ppm removed, spilled, or otherwise released from a natural gas pipeline system must do so in accordance with § 761.60(a) based on the PCB concentration at the time of removal from the system. Any person disposing of materials contaminated by spills or other releases of PCBs ≥50 ppm from a natural gas pipeline systems, must do so in accordance with §§ 761.61 or 761.79, as applicable.

(ii) Any person who markets or burns for energy recovery liquids containing PCBs at concentrations <50 ppm PCBs at the time of removal from a natural gas pipeline system must do so in accordance with the provisions pertaining to used oil at § 761.20(e). No other use of liquid containing PCBs at concentrations above the quantifiable level/level of detection removed from a natural gas pipeline system is authorized.

(j) *Research and development.* For purposes of this section, authorized research and development (R&D) activities include, but are not limited to: the chemical analysis of PCBs, including analyses to determine PCB concentration; determinations of the physical properties of PCBs; studies of environmental transport processes; studies of biochemical transport processes; studies of effects of PCBs on the environment; and studies of the health effects of PCBs, including direct toxicity and toxicity of metabolic products of PCBs. Authorized R&D activities do not include research, development, or analysis for the development of any PCB product. Any person conducting R&D activities under this section is also responsible for determining and complying with all other applicable Federal, State, and local laws and regulations. Although the use of PCBs and PCBs in analytical reference samples derived from waste material is authorized in conjunction with PCB-disposal related activities, R&D for PCB disposal (as defined under § 761.3) is addressed in § 761.60(j). PCBs and PCBs in analytical reference samples derived from waste materials are authorized for use, in a manner other than a totally enclosed manner, provided that:

(1) They obtain the PCBs and PCBs in analytical reference samples derived from waste materials from sources authorized under § 761.80 to manufacture, process, and distribute PCBs in commerce and the PCBs are packaged in compliance with the Hazardous Materials Regulations at 49 CFR parts 171 through 180.

(2) They store all PCB wastes resulting from R&D activities (e.g., spent laboratory samples, residuals, contaminated media such as clothing, etc.) in compliance with § 761.65(b) and dispose of all PCB wastes in compliance with § 761.64.

(3) They use manifests, pursuant to subpart K of this part, for all R&D PCB wastes being transported from the R&D facility to a commercial storer and/or a disposal facility. However, no manifests are required if the residuals or unused analytical reference samples of PCB waste material are returned either to the physical location where the samples were collected or a location where other regulated PCBs from the physical location where the samples were collected are being stored for disposal.

(4) No person may manufacture, process, or distribute in commerce PCBs for research and development unless they have been granted an exemption to do so under TSCA section 6(e)(3)(B).

(k) *Use in scientific instruments.* PCBs may be used indefinitely in scientific instruments, for example, in oscillatory flow birefringence and viscoelasticity instruments for the study of the physical properties of polymers, as microscopy mounting fluids, as microscopy immersion oil, and as optical liquids in a manner other than a totally enclosed manner. No person may manufacture, process, or distribute in commerce PCBs for use in scientific instruments unless they have been granted an exemption to do so under TSCA section 6(e)(3)(B).

* * * * *

(n)—(o) [Reserved]

(p) *Continued use of porous surfaces contaminated with PCBs regulated for disposal by spills of liquid PCBs.* (1) Any person may use porous surfaces contaminated by spills of liquid PCBs at concentrations >10 μg/100 cm^2 for the remainder of the useful life of the surfaces and subsurface material if the following conditions are met:

(i) The source of PCB contamination is removed or contained to prevent further release to porous surfaces.

(ii) If the porous surface is accessible to superficial surface cleaning:

(A) The double wash rinse procedure in subpart S of this part is conducted on the surface to remove surface PCBs.

(B) The treated surface is allowed to dry for 24 hours.

(iii) After accessible surfaces have been cleaned according to paragraph (p)(1)(ii) of this section and for all surfaces inaccessible to cleanup:

(A) The surface is completely covered to prevent release of PCBs with:

(*1*) Two solvent resistant and water repellent coatings of contrasting colors to allow for a visual indication of wear through or loss of outer coating integrity; or

(*2*) A solid barrier fastened to the surface and covering the contaminated area or all accessible parts of the contaminated area. Examples of inaccessible areas are underneath a floor-mounted electrical transformer and in an impassible space between an electrical transformer and a vault wall.

(B) The surface is marked with the M_L Mark in a location easily visible to individuals present in the area; the M_L Mark shall be placed over the encapsulated area or the barrier to the encapsulated area.

(C) M_L Marks shall be replaced when worn or illegible.

(2) Removal of a porous surface contaminated with PCBs from its location or current use is prohibited except for removal for disposal in accordance with §§ 761.61 or 761.79 for surfaces contaminated by spills, or § 761.62 for manufactured porous surfaces.

(q) [Reserved]

(r) *Use in and servicing of rectifiers.* Any person may use PCBs at any concentration in rectifiers for the remainder of the PCBs' useful life, and may use PCBs <50 ppm in servicing (including rebuilding) rectifiers.

(s) *Use of PCBs in air compressor systems.* (1) Any person may use PCBs

in air compressor systems at concentrations <50 ppm.

(2) Any person may use PCBs in air compressor systems (or components thereof) at concentrations ≥50 ppm provided that:

(i) All free-flowing liquids containing PCBs ≥50 ppm are removed from the air compressor crankcase and the crankcase is refilled with non-PCB liquid.

(ii) Other air compressor system components contaminated with PCBs ≥50 ppm, are decontaminated in accordance with § 761.79 or disposed of in accordance with subpart D of this part.

(iii) Air compressor piping with a nominal inside diameter of <2 inches is decontaminated by continuous flushing for 4 hours, at no <300 gallons per hour (§ 761.79 contains solvent requirements).

(3) The requirements in paragraph (s)(2) of this section must be completed by August 30, 1999 or within 1 year of the date of discovery of PCBs at ≥50 ppm in the air compressor system, whichever is later. The EPA Regional Administrator for the EPA Region in which an air compressor system is located may, at his/her discretion and in writing, extend this timeframe.

(t) *Use of PCBs in other gas or liquid transmission systems.* (1) PCBs are authorized for use in intact and non-leaking gas or liquid transmission systems at concentrations <50 ppm PCBs.

(2) PCBs are authorized for use at concentrations ≥50 ppm in intact and non-leaking gas or liquid transmission systems not owned or operated by a seller or distributor of the gas or liquid transmitted in the system.

(3) Any person may use PCBs at concentrations ≥50 ppm in intact and non-leaking gas or liquid transmission systems, with the written approval of the Director, National Program Chemicals Division, subject to the requirements applicable to natural gas pipeline systems at paragraphs (i)(1)(iii)(A), (i)(1)(iii)(C) through (i)(1)(iii)(E), and (i)(2) through (i)(5) of this section.

(u) *Use of decontaminated materials.* (1) Any person may use equipment, structures, other non-liquid or liquid materials that were contaminated with PCBs during manufacture, use, servicing, or because of spills from, or proximity to, PCBs ≥50 ppm, including those not otherwise authorized for use under this part, provided:

(i) The materials were decontaminated in accordance with:

(A) A TSCA PCB disposal approval issued under subpart D of this part;

(B) Section 761.79; or

(C) Applicable EPA PCB spill cleanup policies (e.g., TSCA, RCRA, CERCLA, EPA regional) in effect at the time of the decontamination; or

(ii) If not previously decontaminated, the materials now meet an applicable decontamination standard in § 761.79(b).

(2) No person shall use or reuse materials decontaminated in accordance with paragraph (u)(1)(i) of this section or meeting an applicable decontamination standard in paragraph (u)(1)(ii) of this section, in direct contact with food, feed, or drinking water unless otherwise allowed under this section or this part.

(3) Any person may use water containing PCBs at concentrations ≤0.5µg/L PCBs without restriction.

(4) Any person may use water containing PCBs at concentrations <200 µg/L (i.e., < 200 ppb PCBs) for non-contact use in a closed system where there are no releases (e.g., as a non-contact cooling water).

i. By adding § 761.35 to read as follows:

§ 761.35 Storage for reuse.

(a) The owner or operator of a PCB Article may store it for reuse in an area which is not designed, constructed, and operated in compliance with § 761.65(b), for no more than 5 years after the date the Article was originally removed from use (e.g., disconnected electrical equipment) or 5 years after August 28, 1998, whichever is later, if the owner or operator complies with the following conditions:

(1) Follows all use requirements at § 761.30 and marking requirements at subpart C of this part that are applicable to the PCB Article.

(2) Maintains records starting at the time the PCB Article is removed from use or August 28, 1998. The records must indicate:

(i) The date the PCB Article was removed from use or August 28, 1998, if the removal date is not known.

(ii) The projected location and the future use of the PCB Article.

(iii) If applicable, the date the PCB Article is scheduled for repair or servicing.

(b) The owner or operator of a PCB Article may store it for reuse in an area that does not comply with § 761.65(b) for a period longer than 5 years, provided that the owner or operator has received written approval from the EPA Regional Administrator for the Region in which the PCB Article is stored. An owner or operator of a PCB Article seeking approval to extend the 5–year period must submit a request for extension to the EPA Regional Administrator at least 6 months before the 5-year storage for reuse period expires and must include an item-by-item justification for the desired extension. The EPA Regional Administrator may include any conditions to such approval deemed necessary to protect health or the environment. The owner or operator of the PCB Article being stored for reuse must comply with the other applicable provisions of this part, including the record retention requirements at § 761.180(a).

(c) Any person may store a PCB Article for reuse indefinitely in:

(1) A unit in compliance with § 761.65(b).

(2) A unit permitted under section 3004 of RCRA to manage hazardous wastes in containers.

(3) A unit permitted by a State authorized under section 3006 of RCRA to manage hazardous waste.

j. In § 761.40, by revising paragraphs (a)(5), (b), (e), and (h), and adding paragraphs (k) and (l) to read as follows:

§ 761.40 Marking requirements.

(a) * * *

(5) PCB Large Low Voltage Capacitors at the time of removal from use (see also paragraph (k) of this section).

* * * * *

(b) As of October 1, 1979, each transport vehicle loaded with PCB Containers that contain more than 45 kg (99.4 lbs.) of liquid PCBs at concentrations of ≥50 ppm or with one or more PCB Transformers shall be marked on each end and each side with the M_L mark as described in § 761.45(a).

* * * * *

(e) As of October 1, 1979, applicable PCB Items in paragraphs (a)(1), (a)(6), (a)(7), and (a)(8) of this section containing PCBs in concentrations of 50 to 500 ppm shall be marked with the M_L mark as described in § 761.45(a).

* * * * *

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

* * * * *

(k) As of April 26, 1999 the following PCB Items shall be marked with the M_L mark as described in § 761.45(a):

(1) All PCB Large Low Voltage Capacitors not marked under paragraph (a) of this section shall be marked individually, or if one or more PCB Large Low Voltage Capacitors are installed in a protected location such as on a power pole, or structure, or behind

a fence, then the owner or operator shall mark the pole, structure, or fence with the M_L mark, and maintain a record or procedure identifying the PCB Capacitors at the protected location. PCB Large Low Voltage Capacitors in inaccessible locations inside equipment need not be marked individually, provided the owner or operator marks the equipment in accordance with paragraph (k)(2) of this section, and marks the individual capacitors at the time of removal from use in accordance with paragraph (a) of this section.

(2) All equipment not marked under paragraph (a) of this section containing a PCB Transformer or a PCB Large High or Low Voltage Capacitor.

(l)(1) All voltage regulators with a PCB concentration of ≥500 ppm must be marked individually with the M_L mark as described in § 761.45(a).

(2) Locations of voltage regulators containing PCBs ≥500 ppm PCBs shall be marked as follows: the vault door, machinery room door, fence, hallway, or means of access, other than grates or manhole covers, must be marked with the M_L mark as described in § 761.45(a).

k. By amending subpart D by removing the ''Note'' appearing just after the heading for subpart D and adding § 761.50, reading as follows:

§ 761.50 Applicability.

(a) *General PCB disposal requirements.* Any person storing or disposing of PCB waste must do so in accordance with subpart D of this part. The following prohibitions and conditions apply to all PCB waste storage and disposal:

(1) No person may open burn PCBs. Combustion of PCBs approved under § 761.60(a) or (e), or otherwise allowed under part 761, is not open burning.

(2) No person may process liquid PCBs into non-liquid forms to circumvent the high temperature incineration requirements of § 761.60(a).

(3) No person may discharge water containing PCBs to a treatment works (as defined § 503.9(aa) of this chapter) or to navigable waters unless the PCB concentration is <3 µg/L (approximately 3 ppb), or unless the discharge is in accordance with a PCB discharge limit included in a permit issued under section 307(b) or 402 of the Clean Water Act.

(4) Spills and other uncontrolled discharges of PCBs at concentrations of ≥50 ppm constitute the disposal of PCBs.

(5) Any person land disposing of non-liquid PCBs may avoid otherwise-applicable sampling requirements by presuming that the PCBs disposed of are ≥500 ppm (or ≥100 µg/100 cm^2 if no free-flowing liquids are present).

(6) Any person storing or disposing of PCBs is also responsible for determining and complying with all other applicable Federal, State, and local laws and regulations.

(b) *PCB waste.* (1) *PCB liquids.* Any person removing PCB liquids from use (i.e., not PCB remediation waste) must dispose of them in accordance with § 761.60(a), or decontaminate them in accordance with § 761.79.

(2) *PCB Items.* Any person removing from use a PCB Item containing an intact and non-leaking PCB Article must dispose of it in accordance with § 761.60(b), or decontaminate it in accordance with § 761.79. PCB Items where the PCB Articles are no longer intact and non-leaking are regulated for disposal as PCB bulk product waste under § 761.62(a) or (c).

(i) Fluorescent light ballasts containing PCBs only in an intact and non-leaking PCB Small Capacitor are regulated for disposal under § 761.60(b)(2)(ii).

(ii) Fluorescent light ballasts containing PCBs in the potting material are regulated for disposal as PCB bulk product waste under § 761.62.

(3) *PCB remediation waste.* PCB remediation waste, including PCB sewage sludge, is regulated for cleanup and disposal in accordance with § 761.61.

(i) Any person responsible for PCB waste at concentrations ≥50 ppm placed in a land disposal facility, spilled, or otherwise released into the environment prior to April 18, 1978, must dispose of the waste as follows:

(A) Sites containing these wastes are presumed not to present an unreasonable risk of injury to health or the environment from exposure to PCBs at the site. However, the EPA Regional Administrator may inform the owner or operator of the site that there is reason to believe that spills, leaks, or other uncontrolled releases or discharges, such as leaching, from the site constitute ongoing disposal that may present an unreasonable risk of injury to health or the environment from exposure to PCBs at the site, and may require the owner or operator to generate data necessary to characterize the risk. If after reviewing any such data, the EPA Regional Administrator makes a finding, that an unreasonable risk exists, then he or she may direct the owner or operator of the site to dispose of the PCB remediation waste in accordance with § 761.61 such that an unreasonable risk of injury no longer exists.

(B) Unless directed by the EPA Regional Administrator to dispose of PCB remediation waste in accordance with paragraph (b)(3)(i)(A) of this section, any person responsible for PCB remediation waste placed in a land disposal facility, spilled, or otherwise released into the environment prior to April 18, 1978, who unilaterally decides to dispose of that waste (for example, to obtain insurance or to sell the property), is not required to cleanup in accordance with § 761.61. Disposal of the PCB remediation waste must comply with § 761.61. However, cleanup of those wastes that is not in complete compliance with § 761.61 will not afford the responsible party with relief from the applicable PCB regulations for that waste.

(ii) Any person responsible for PCB waste placed in a land disposal facility, spilled, or otherwise released into the environment on or after April 18, 1978, must dispose of it as follows:

(A) In accordance with the PCB Spill Cleanup Policy (Policy) at subpart G of this part, for those PCB remediation wastes that meet the criteria of the Policy. Consult the Policy for a description of the spills it covers and its notification and timing requirements.

(B) In accordance with § 761.61. Complete compliance with § 761.61 does not create a presumption against enforcement action for penalties for any unauthorized PCB disposal.

(iii) The owner or operator of a site containing PCB remediation waste has the burden of proving the date that the waste was placed in a land disposal facility, spilled, or otherwise released into the environment, and the concentration of the original spill.

(4) *PCB bulk product waste*—(i) *General.* Any person disposing of PCB bulk product waste must do so in accordance with § 761.62. PCB bulk product waste, as that term is defined in § 761.3, is waste that was ≥50 ppm when originally removed from service, even if its current PCB concentration is <50 ppm. PCB bulk product waste is regulated for disposal based on the risk from the waste once disposed of. For waste which is land disposed, the waste is regulated based on how readily the waste is released from disposal to the environment, in particular by leaching out from the land disposal unit.

(ii) *Metal surfaces in contact with PCBs.* Any person disposing of metal surfaces in contact with PCBs (e.g., painted metal) may use thermal decontamination procedures in accordance with § 761.79(c)(6) (see § 761.62(a)(6)).

(5) *PCB household waste.* Any person storing or disposing of PCB household

waste, as that term is defined in § 761.3, must do so in accordance with § 761.63.

(6) *PCB research and development waste.* Any person disposing of PCB wastes generated during and as a result of research and development for use under § 761.30(j), or for disposal under § 761.60(j), must do so in accordance with § 761.64.

(7) *PCB/Radioactive waste.* (i) Any person storing PCB/radioactive waste ≥50 ppm PCBs must do so taking into account both its PCB concentration and its radioactive properties, except as provided in § 761.65(a)(1), (b)(1)(ii), and (c)(6)(i).

(ii) Any person disposing of PCB/radioactive waste must do so taking into account both its PCB concentration and its radioactive properties. If, taking into account only the properties of the PCBs in the waste (and not the radioactive properties of the waste), the waste meets the requirements for disposal in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill (e.g., PCB bulk product waste under § 761.62(b)(1)), then the person may dispose of the PCB/radioactive waste, without regard to the PCB component of the waste, on the basis of its radioactive properties in accordance with all applicable requirements for the radioactive component of the waste.

(8) *Porous surfaces.* In most cases a person must dispose of porous surfaces as materials where PCBs have penetrated far beneath the surface, rather than a simple surface contamination. Any person disposing of porous surfaces on which PCBs have been spilled and meeting the definition of PCB remediation waste at § 761.3 must do so in accordance with § 761.61(a)(5)(iii). Any person disposing of porous surfaces which are part of manufactured non-liquid products containing PCBs and meeting the definition of PCB bulk product waste at § 761.3 must do so in accordance with § 761.62. Any person may decontaminate concrete surfaces upon which PCBs have been spilled in accordance with § 761.79(b)(4), if the decontamination procedure is commenced within 72 hours of the initial spill of PCBs to the concrete or portion thereof being decontaminated. Any person may decontaminate porous non-liquid PCBs in contact with non-porous surfaces, such as underground metal fuel tanks coated with fire retardant resin or pitch, for purposes of unrestricted use or disposal in a smelter in accordance with § 761.79(b)(3).

(c) *Storage for disposal.* Any person who holds PCB waste must store it in accordance with § 761.65.

(d) *Performance specifications for disposal technologies*—(1) *Incinerators.* Any person using an incinerator to dispose of PCBs must use an incinerator that meets the criteria set forth in § 761.70.

(2) *High efficiency boilers.* Any person using a high efficiency boiler to dispose of PCBs must use a boiler that meets the criteria set forth in § 761.71.

(3) *Scrap metal recovery ovens and smelters.* Any person using scrap metal recovery ovens and smelters to dispose of PCBs must use a device that meets the criteria set forth in § 761.72.

(4) *Chemical waste landfills.* Any person using a chemical waste landfill to dispose of PCBs must use a chemical waste landfill that meets the criteria set forth in § 761.75.

(e) *TSCA PCB Coordinated Approval.* Any person seeking a TSCA PCB Coordinated Approval must follow the procedures set forth in § 761.77.

l. In § 761.60 by revising paragraphs (a)(1) through (a)(3), by removing paragraphs (a)(4), (a)(5), and (a)(6); in paragraph (b) by adding introductory text just after the italic heading ''PCB Articles,'' and by revising paragraphs (b)(1)(i)(B), (b)(2)(iv) introductory text, (b)(2)(vi), revising paragraphs (b)(3) and (b)(4); by redesignating paragraphs (b)(5) and (b)(6) as (b)(6) and (b)(7), respectively; by adding new paragraphs (b)(5), (b)(6)(iii), and (b)(6)(iv), and by revising newly designated (b)(6)(ii); in paragraph (c)(3) by removing the term ''facility'' and adding, in its place, the term ''unit''; removing and reserving paragraphs (d) and (f)(2); revising paragraph (e); adding paragraphs (g)(1)(iii) and (g)(2)(iii); by revising paragraph (i)(2), and adding paragraph (j) to read as follows:

§ 761.60 Disposal requirements.

(a) *PCB liquids.* PCB liquids at concentrations ≥50 ppm must be disposed of in an incinerator which complies with § 761.70, except that PCB liquids at concentrations ≥50 ppm and <500 ppm may be disposed of as follows:

(1) For mineral oil dielectric fluid, in a high efficiency boiler according to § 761.71(a).

(2) For liquids other than mineral oil dielectric fluid, in a high efficiency boiler according to § 761.71(b).

(3) For liquids from incidental sources, such as precipitation, condensation, leachate or load separation and are associated with PCB Articles or non-liquid PCB wastes, in a chemical waste landfill which complies with § 761.75 if:

(i) Disposal does not violate § 268.32(a)(2) or § 268.42(a)(1) of this chapter.

(ii) Information is provided to or obtained by the owner or operator of the chemical waste landfill that shows that the liquids do not exceed 500 ppm PCB and are not an ignitable waste as described in § 761.75(b)(8)(iii).

(b) *PCB Articles.* This paragraph does not authorize disposal that is otherwise prohibited in § 761.20 or elsewhere in this part.

(1) * * *

(i) * * *

(B) In a chemical waste landfill approved under § 761.75; provided that all free-flowing liquid is removed from the transformer, the transformer is filled with a solvent, the transformer is allowed to stand for at least 18 continuous hours, and then the solvent is thoroughly removed. Any person disposing of PCB liquids, including both the dielectric fluid and all solvents used as a flush, that are removed from the transformer, shall do so in accordance with paragraph (a)(1) of this section or decontaminate them in accordance with § 761.79. Solvents may include kerosene, xylene, toluene, and other solvents in which PCBs are readily soluble. Any person disposing of these PCB liquids must ensure that the solvent flushing procedure is conducted in accordance with applicable safety and health standards as required by Federal or State regulations.

* * * * *

(2) * * *

(iv) Any person who manufactures or at any time manufactured PCB Capacitors or PCB Equipment, and acquired the PCB Capacitor in the course of such manufacturing, shall place the PCB Small Capacitors in a container meeting the DOT packaging requirements at 49 CFR parts 171 through 180 and dispose of them in accordance with either of the following:

* * * * *

(vi) Any person disposing of large PCB capacitors or small PCB capacitors described in paragraph (b)(2)(iv) of this section in a chemical waste landfill approved under § 761.75, shall first place them in a container meeting the DOT packaging requirements at 49 CFR parts 171 through 180. In all cases, the person must fill the interstitial space in the container with sufficient absorbent material (such as soil) to absorb any liquid PCBs remaining in the capacitors.

(3) *PCB hydraulic machines.* (i) Any person disposing of PCB hydraulic machines containing PCBs at concentrations of ≥50 ppm, such as die casting machines, shall do so by one of the following methods:

(A) In accordance with § 761.79.

(B) In a facility which is permitted, licensed, or registered by a State to manage municipal solid waste subject to part 258 of this chapter or non-municipal non-hazardous waste subject to §§ 257.5 through 257.30 of this chapter, as applicable (excluding thermal treatment units).

(C) In an industrial furnace operating in compliance with § 761.72.

(D) In a disposal facility approved under this part.

(ii) All free-flowing liquid must be removed from each machine and the liquid must be disposed of in accordance with the provisions of paragraph (a) of this section. If the PCB liquid contains ≥1,000 ppm PCB, then the hydraulic machine must be decontaminated in accordance with § 761.79 or flushed prior to disposal with a solvent listed at paragraph (b)(1)(i)(B) of this section which contains <50 ppm PCB. The solvent must be disposed of in accordance with paragraph (a) of this section or § 761.79.

(4) *PCB-Contaminated Electrical Equipment.* Any person disposing of any PCB-Contaminated Electrical Equipment, except capacitors, shall do so by removing all free-flowing liquid from the electrical equipment and disposing of the removed liquid in accordance with paragraph (a) of this section. The drained PCB-Contaminated Electrical Equipment, including any residual liquids, shall be disposed of by one of the following methods:

(i)(A) In a facility which is permitted, licensed, or registered by a State to manage municipal solid waste subject to part 258 of this chapter or non-municipal non-hazardous waste subject to §§ 257.5 through 257.30 of this chapter, as applicable (excluding thermal treatment units).

(B) In an industrial furnace operating in compliance with § 761.72.

(C) In a disposal facility or process approved under this part.

(ii) Any person disposing of Large Capacitors that contain ≥50 ppm but <500 ppm PCBs shall do so in a disposal facility approved under this part.

(iii) The storage for disposal of PCB-Contaminated Electrical Equipment containing no free-flowing liquid is not regulated under subpart D of this part.

(5) *Natural gas pipeline systems containing PCBs.* The owner or operator of natural gas pipeline systems containing ≥50 ppm PCBs, when no longer in use, shall dispose of the system either by abandonment in place of the pipe under paragraph (b)(5)(i) of this section or removal with subsequent action under paragraph (b)(5)(ii) of this section. Any person determining the PCB concentrations in natural gas pipeline systems shall do so in accordance with paragraph (b)(5)(iii) of this section.

(i) *Abandonment.* Natural gas pipe containing ≥50 ppm PCBs may be abandoned in place under one or more of the following provisions:

(A) Natural gas pipe having a nominal inside diameter of ≤4 inches, and containing PCBs at any concentration but no free-flowing liquids, may be abandoned in the place it was used to transport natural gas if each end is sealed closed and the pipe is either:

(*1*) Included in a public service notification program, such as a ''one-call'' system under 49 CFR 192.614(a) and (b).

(*2*) Filled to 50 percent or more of the volume of the pipe with grout (such as a hardening slurry consisting of cement, bentonite, or clay) or high density polyurethane foam.

(B) PCB-Contaminated natural gas pipe of any diameter, where the PCB concentration was determined in accordance with subpart M of this part after the last transmission of gas through the pipe or at the time of abandonment, that contains no free-flowing liquids may be abandoned in the place it was used to transport natural gas if each end is sealed closed.

(C) Natural gas pipe of any diameter which contains PCBs at any concentration but no free-flowing liquids, may be abandoned in the place it was used to transport natural gas, if each end is sealed closed, and either:

(*1*) The interior surface is decontaminated with one or more washes of a solvent in accordance with the use and disposal requirements of § 761.79(d). This decontamination process must result in a recovery of 95 percent of the solvent volume introduced into the system, and the PCB concentration of the recovered wash must be <50 ppm (see § 761.79(a)(1) for requirements on use and disposal of decontaminating fluids).

(*2*) The pipe is filled to 50 percent of the volume of the pipe with grout (such as a hardening slurry-like cement, bentonite, or clay) or high density polyurethane foam (except that only cement shall be used as grout under rivers or streams) and each end is sealed closed.

(D) Natural gas pipe of any diameter which contains PCBs at any concentration may be abandoned in place after decontamination in accordance with § 761.79(c)(3), (c)(4) or (h) or a PCB disposal approval issued under § 761.60(e) or § 761.62(c).

(ii) *Removal with subsequent action.* Natural gas pipeline systems may be disposed of under one of the following provisions:

(A) The following classifications of natural gas pipe containing no free-flowing liquids may be disposed of in a facility permitted, licensed, or registered by a State to manage municipal solid waste subject to part 258 of this chapter or non-municipal non-hazardous waste subject to §§ 257.5 through 257.30 of this chapter, as applicable (excluding thermal treatment units); scrap metal recovery oven and smelter operating in compliance with the requirements of § 761.72; or a disposal facility approved under this part:

(*1*) PCB-Contaminated natural gas pipe of any diameter where the PCB concentration was determined in accordance with subpart M of this part after the last transmission of gas through the pipe or during removal from the location it was used to transport natural gas.

(*2*) Natural gas pipe containing PCBs at any concentration and having a nominal inside diameter ≤4 inches.

(B) Any component of a natural gas pipeline system may be disposed of under one of the following provisions:

(*1*) In an incinerator operating in compliance with § 761.70.

(*2*) In a chemical waste landfill operating in compliance with § 761.75, provided that all free-flowing liquid PCBs have been thoroughly drained.

(*3*) As a PCB remediation waste in compliance with § 761.61.

(*4*) In accordance with § 761.79.

(iii) *Characterization of natural gas pipeline systems by PCB concentration in condensate.* (A) Any person disposing of a natural gas pipeline system under paragraphs (b)(5)(i)(B) or (b)(5)(ii)(A)(*1*) of this section must characterize it for PCB contamination by analyzing organic liquids collected at existing condensate collection points in the natural gas pipeline system. The level of PCB contamination found at a collection point is assumed to extend to the next collection point downstream. If no organic liquids are present, drain free-flowing liquids and collect standard wipe samples according to subpart M of this part. Collect condensate within 72 hours of the final transmission of natural gas through the part of the system to be abandoned and wipe samples after the last transmission of gas through the pipe or during removal from the location it was used to transport natural gas.

(B) PCB concentration of the organic phase of multi-phasic liquids shall be determined in accordance with § 761.1(b)(4).

(iv) *Disposal of pipeline liquids.* (A) Any person disposing of liquids

containing PCBs ≥50 ppm removed, spilled, or otherwise released from a natural gas pipeline system must do so in accordance with § 761.61(a)(5)(iv) based on the PCB concentration at the time of removal from the system. Any person disposing of material contaminated by spills or other releases of PCBs ≥50 ppm from a natural gas pipeline system, must do so in accordance with § 761.61 or § 761.79, as applicable.

(B) Any person who markets or burns for energy recovery liquid containing PCBs at concentrations <50 ppm PCBs at the time of removal from a natural gas pipeline system must do so in accordance with the provisions pertaining to used oil at § 761.20(e). No other use of liquid containing PCBs at concentrations above the quantifiable level/level of detection removed from a natural gas pipeline system is authorized.

(6) * * *

(ii) Any person disposing of PCB-Contaminated Articles must do so by removing all free-flowing liquid from the article, disposing of the liquid in accordance with paragraph (a)(2) or (a)(3) of this section and disposing of the PCB-Contaminated Articles with no free-flowing liquid by one of the following methods:

(A) In accordance with § 761.79.

(B) In a facility permitted, licensed, or registered by a State to manage municipal solid waste subject to part 258 of this chapter or non-municipal non-hazardous waste subject to §§ 257.5 through 257.30 of this chapter, as applicable (excluding thermal treatment units).

(C) In an industrial furnace operating in compliance with § 761.72.

(D) In a disposal facility approved under this part.

(iii) Fluorescent light ballasts containing PCBs in their potting material must be disposed of in a TSCA-approved disposal facility, as bulk product waste under § 761.62, as household waste under § 761.63 (where applicable), or in accordance with the decontamination provisions of § 761.79.

(iv) Any person with access to, or in direct contact with, PCB-Contaminated surfaces must be protected from dermal exposure to those surfaces.

* * * * *

(d) [Reserved]

(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 an incinerator approved under § 761.70 or a high efficiency boiler operating in compliance with § 761.71, must submit a written request to either the EPA Regional Administrator or the Director, National Program Chemicals Division, for a waiver from the incineration requirements of § 761.70 or § 761.71. Requests for approval of alternate methods that will be operated in more than one Region must be submitted to the Director, National Program Chemicals Division except for research and development activities involving less than 500 pounds of PCB material (see paragraph (i)(2) of this section). Requests for approval of alternate methods that will be operated in only one Region must be submitted to the appropriate EPA Regional Administrator. The applicant must show that his or her 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 EPA Regional Administrator or the Director, National Program Chemicals Division may, in his or her discretion, approve the use of the alternate method if he or she finds that the alternate disposal method provides PCB destruction equivalent to disposal in a § 761.70 incinerator or a § 761.71 high efficiency boiler and will not present an unreasonable risk of injury to health or the environment. Any approval must be stated in writing and may include such conditions and provisions as the EPA Regional Administrator or Director, National Program Chemicals Division deems appropriate. The person to whom such waiver is issued must comply with all limitations contained in such determination. No person may use the alternate method of destroying PCBs or PCB Items prior to obtaining permission from the appropriate EPA official.

(f)(1) * * *

(2) [Reserved]

(g) * * *

(1) * * *

(iii) Unless otherwise specified in this part, any person conducting the chemical analysis of PCBs shall do so using gas chromatography. Any gas chromatographic method that is appropriate for the material being analyzed may be used, including EPA Method 608, ''Organochlorine Pesticides and PCBs'' at 40 CFR part 136, Appendix A;'' EPA Method 8082, ''Polychlorinated Biphenyls (PCBs) by Capillary Column Gas Chromatography'' of SW-846, ''OSW Test Methods for Evaluating Solid Waste,'' which is available from NTIS; and ASTM Standard D-4059, ''Standard Test Method for Analysis of Polychlorinated Biphenyls in Insulating Liquids by Gas Chromatography,'' which is available from ASTM.

(2) * * *

(iii) Unless otherwise specified in this part, any person conducting the chemical analysis of PCBs shall do so using gas chromatography. Any gas chromatographic method that is appropriate for the material being analyzed may be used, including those indicated in paragraph (g)(1)(iii) of this section.

* * * * *

(i) * * *

(2) Except for activity authorized under paragraph (j) of this section, research and development (R&D) for PCB disposal using a total of <500 pounds of PCB material (regardless of PCB concentration) will be reviewed and approved by the EPA Regional Administrator for the Region where the R&D will be conducted, and R&D for PCB disposal using 500 pounds or more of PCB material (regardless of PCB concentration) will be reviewed and approved by the Director, National Program Chemicals Division.

* * * * *

(j) *Self-implementing requirements for research and development (R&D) for PCB disposal.*

(1) Any person may conduct R&D for PCB disposal without prior written approval from EPA if they meet the following conditions:

(i) File a notification and obtain an EPA identification number pursuant to subpart K of this part.

(ii) Notify in writing the EPA Regional Administrator, the State environmental protection agency, and local environmental protection agency, having jurisdiction where the R&D for PCB disposal activity will occur at least 30 days prior to the commencement of any R&D for PCB disposal activity conducted under this section. Each written notification shall include the EPA identification number of the site where the R&D for PCB disposal activities will be conducted, the quantity of PCBs to be treated, the type of R&D technology to be used, the general physical and chemical properties of material being treated, and an estimate of the duration of the PCB activity. The EPA Regional Administrator, the State environmental protection agency, and the local environmental protection agency may waive notification in writing prior to commencement of the research.

(iii) The amount of material containing PCBs treated annually by the facility during R&D for PCB disposal activities does not exceed 500 gallons or

70 cubic feet of liquid or non-liquid PCBs and does not exceed a maximum concentration of 10,000 ppm PCBs.

(iv) No more than 1 kilogram total of pure PCBs per year is disposed of in all R&D for PCB disposal activities at a facility.

(v) Each R&D for PCB disposal activity under this section lasts no more than 1 calendar year.

(vi) Store all PCB wastes (treated and untreated PCB materials, testing samples, spent laboratory samples, residuals, untreated samples, contaminated media or instrumentation, clothing, etc.) in compliance with § 761.65(b) and dispose of them according to the undiluted PCB concentration prior to treatment. However, PCB materials not treated in the R&D for PCB disposal activity may be returned either to the physical location where the samples were collected or a location where other regulated PCBs from the physical location where the samples were collected are being stored for disposal.

(vii) Use manifests pursuant to subpart K of this part for all R&D PCB wastes being transported from the R&D facility to an approved PCB storage or disposal facility. However, §§ 761.207 through 761.218 do not apply if the residuals or treated samples are returned either to the physical location where the samples were collected or a location where other regulated PCBs from the physical location where the samples were collected are being stored for disposal.

(viii) Package and ship all PCB wastes pursuant to DOT requirements under 49 CFR parts 171 through 180.

(ix) Comply with the recordkeeping requirements of § 761.180.

(2) Do not exceed material limitations set out in paragraphs (j)(1)(iii) and (iv) of this section and the time limitation set out in paragraph (j)(1)(v) of this section without prior written approval from EPA. Requests for approval to exceed the material limitations for PCBs in R&D for PCB disposal activities as specified in this section must be submitted in writing to the EPA Regional Administrator for the Region in which the facility conducting R&D for PCB disposal activities is located. Each request shall specify the quantity or concentration requested or additional time needed for disposal and include a justification for each increase. For extensions to the duration of the R&D for PCB disposal activity, the request shall also include a report on the accomplishments and progress of the previously authorized R&D for PCB disposal activity for which the extension is sought. The EPA Regional Administrator may grant a waiver in writing for an increase in the volume of PCB material, the maximum concentration of PCBs, the total amount of pure PCBs, or the duration of the R&D activity. Approvals will state all requirements applicable to the R&D for PCB disposal activity.

(3) The EPA Regional Administrator for the Region in which an R&D for PCB disposal activity is conducted may determine, at any time, that an R&D PCB disposal approval is required under paragraphs (e) and (i)(2) of this section or § 761.70(d) to ensure that any R&D for PCB disposal activity does not present an unreasonable risk of injury to health or the environment.

m. By adding §§ 761.61, 761.62, 761.63, and 761.64 to subpart D to read as follows:

§ 761.61 PCB remediation waste.

This section provides cleanup and disposal options for PCB remediation waste. Any person cleaning up and disposing of PCBs managed under this section shall do so based on the concentration at which the PCBs are found. This section does not prohibit any person from implementing temporary emergency measures to prevent, treat, or contain further releases or mitigate migration to the environment of PCBs or PCB remediation waste.

(a) *Self-implementing on-site cleanup and disposal of PCB remediation waste.* EPA designed the self-implementing procedure for a general, moderately-sized site where there should be low residual environmental impact from remedial activities. The procedure may be less practical for larger or environmentally diverse sites. For these other sites, the self-implementing procedure still applies, but an EPA Regional Administrator may authorize more practical procedures through paragraph (c) of this section. Any person may conduct self-implementing cleanup and disposal of PCB remediation waste in accordance with the following requirements without prior written approval from EPA.

(1) *Applicability.* (i) The self-implementing procedures may not be used to clean up:

(A) Surface or ground waters.

(B) Sediments in marine and freshwater ecosystems.

(C) Sewers or sewage treatment systems.

(D) Any private or public drinking water sources or distribution systems.

(E) Grazing lands.

(F) Vegetable gardens.

(ii) The self-implementing cleanup provisions shall not be binding upon cleanups conducted under other authorities, including but not limited to, actions conducted under section 104 or section 106 of CERCLA, or section 3004(u) and (v) or section 3008(h) of RCRA.

(2) *Site characterization.* Any person conducting self-implementing cleanup of PCB remediation waste must characterize the site adequately to be able to provide the information required by paragraph (a)(3) of this section. Subpart N of this part provides a method for collecting new site characterization data or for assessing the sufficiency of existing site characterization data.

(3) *Notification and certification.* (i) At least 30 days prior to the date that the cleanup of a site begins, the person in charge of the cleanup or the owner of the property where the PCB remediation waste is located shall notify, in writing, the EPA Regional Administrator, the Director of the State or Tribal environmental protection agency, and the Director of the county or local environmental protection agency where the cleanup will be conducted. The notice shall include:

(A) The nature of the contamination, including kinds of materials contaminated.

(B) A summary of the procedures used to sample contaminated and adjacent areas and a table or cleanup site map showing PCB concentrations measured in all pre-cleanup characterization samples. The summary must include sample collection and analysis dates. The EPA Regional Administrator may require more detailed information including, but not limited to, additional characterization sampling or all sample identification numbers from all previous characterization activities at the cleanup site.

(C) The location and extent of the identified contaminated area, including topographic maps with sample collection sites cross referenced to the sample identification numbers in the data summary from paragraph (a)(3)(i)(B) of this section.

(D) A cleanup plan for the site, including schedule, disposal technology, and approach. This plan should contain options and contingencies to be used if unanticipated higher concentrations or wider distributions of PCB remediation waste are found or other obstacles force changes in the cleanup approach.

(E) A written certification, signed by the owner of the property where the cleanup site is located and the party conducting the cleanup, that all sampling plans, sample collection procedures, sample preparation

procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at the location designated in the certificate, and are available for EPA inspection. Persons using alternate methods for chemical extraction and chemical analysis for site characterization must include in the certificate a statement that such a method will be used and that a comparison study which meets or exceeds the requirements of subpart Q of this part, and for which records are on file, has been completed prior to verification sampling.

(ii) Within 30 calendar days of receiving the notification, the EPA Regional Administrator will respond in writing approving of the self-implementing cleanup, disapproving of the self-implementing cleanup, or requiring additional information. If the EPA Regional Administrator does not respond within 30 calendar days of receiving the notice, the person submitting the notification may assume that it is complete and proceed with the cleanup according to the information the person provided to the EPA Regional Administrator. Once cleanup is underway, the person conducting the cleanup must provide any proposed changes from the notification to the EPA Regional Administrator in writing no less than 14 calendar days prior to the proposed implementation of the change. The EPA Regional Administrator will determine in his or her discretion whether to accept the change, and will respond to the change notification verbally within 7 calendar days and in writing within 14 calendar days of receiving it. If the EPA Regional Administrator does not respond verbally within 7 calendar days and in writing within 14 calendar days of receiving the change notice, the person who submitted it may deem it complete and acceptable and proceed with the cleanup according to the information in the change notice provided to the EPA Regional Administrator.

(iii) Any person conducting a cleanup activity may obtain a waiver of the 30-day notification requirement, if they receive a separate waiver, in writing, from each of the agencies they are required to notify under this section. The person must retain the original written waiver as required in paragraph (a)(9) of this section.

(4) *Cleanup levels.* For purposes of cleaning, decontaminating, or removing PCB remediation waste under this section, there are four general waste categories: bulk PCB remediation waste, non-porous surfaces, porous surfaces, and liquids. Cleanup levels are based on the kind of material and the potential exposure to PCBs left after cleanup is completed.

(i) *Bulk PCB remediation waste.* Bulk PCB remediation waste includes, but is not limited to, the following non-liquid PCB remediation waste: soil, sediments, dredged materials, muds, PCB sewage sludge, and industrial sludge.

(A) *High occupancy areas.* The cleanup level for bulk PCB remediation waste in high occupancy areas is ≤1 ppm without further conditions. High occupancy areas where bulk PCB remediation waste remains at concentrations >1 ppm and ≤10 ppm shall be covered with a cap meeting the requirements of paragraphs (a)(7) and (a)(8) of this section.

(B) *Low occupancy areas.* (*1*) The cleanup level for bulk PCB remediation waste in low occupancy areas is ≤25 ppm unless otherwise specified in this paragraph.

(*2*) Bulk PCB remediation wastes may remain at a cleanup site at concentrations >25 ppm and ≤50 ppm if the site is secured by a fence and marked with a sign including the M_L mark.

(*3*) Bulk PCB remediation wastes may remain at a cleanup site at concentrations >25 ppm and ≤100 ppm if the site is covered with a cap meeting the requirements of paragraphs (a)(7) and (a)(8) of this section.

(ii) *Non-porous surfaces.* In high occupancy areas, the surface PCB cleanup standard is ≤ 10 μg/100 cm^2 of surface area. In low occupancy areas, the surface cleanup standard is <100 μg/100 cm^2 of surface area. Select sampling locations in accordance with subpart P of this part or a sampling plan approved under paragraph (c) of this section.

(iii) *Porous surfaces.* In both high and low occupancy areas, any person disposing of porous surfaces must do so based on the levels in paragraph (a)(4)(i) of this section. Porous surfaces may be cleaned up for use in accordance with § 761.79(b)(4) or § 761.30(p).

(iv) *Liquids.* In both high and low occupancy areas, cleanup levels are the concentrations specified in § 761.79(b)(1) and (b)(2).

(v) *Change in the land use for a cleanup site.* Where there is an actual or proposed change in use of an area cleaned up to the levels of a low occupancy area, and the exposure of people or animal life in or at that area could reasonably be expected to increase, resulting in a change in status from a low occupancy area to a high occupancy area, the owner of the area shall clean up the area in accordance with the high occupancy area cleanup levels in paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

(vi) The EPA Regional Administrator, as part of his or her response to a notification submitted in accordance with § 761.61(a)(3) of this part, may require cleanup of the site, or portions of it, to more stringent cleanup levels than are otherwise required in this section, based on the proximity to areas such as residential dwellings, hospitals, schools, nursing homes, playgrounds, parks, day care centers, endangered species habitats, estuaries, wetlands, national parks, national wildlife refuges, commercial fisheries, and sport fisheries.

(5) *Site cleanup.* In addition to the options set out in this paragraph, PCB disposal technologies approved under §§ 761.60 and 761.70 are acceptable for on-site self-implementing PCB remediation waste disposal within the confines of the operating conditions of the respective approvals.

(i) *Bulk PCB remediation waste.* Any person cleaning up bulk PCB remediation waste shall do so to the levels in paragraph (a)(4)(i) of this section.

(A) Any person cleaning up bulk PCB remediation waste on-site or using a soil washing process may do so without EPA approval, subject to all of the following:

(*1*) A non-chlorinated solvent is used.

(*2*) The process occurs at ambient temperature.

(*3*) The process is not exothermic.

(*4*) The process uses no external heat.

(*5*) The process has secondary containment to prevent any solvent from being released to the underlying or surrounding soils or surface waters.

(*6*) Solvent disposal, recovery, and/or reuse is in accordance with relevant provisions of approvals issued according to paragraphs (b)(1) or (c) of this section or applicable paragraphs of § 761.79.

(B) Bulk PCB remediation waste may be sent off-site for decontamination or disposal in accordance with this paragraph, provided the waste is either dewatered on-site or transported off-site in containers meeting the requirements of the DOT Hazardous Materials Regulations (HMR) at 49 CFR parts 171 through 180.

(*1*) Removed water shall be disposed of according to paragraph (b)(1) of this section.

(*2*) Any person disposing off-site of dewatered bulk PCB remediation waste shall do so as follows:

(*i*) Unless characterized for disposal according to subpart O, the bulk PCB remediation waste shall be assumed to contain ≥50 ppm PCBs.

(*ii*) Bulk PCB remediation wastes with a PCB concentration of <50 ppm shall be disposed of in accordance with paragraph (a)(5)(v)(A) of this section.

(*iii*) Bulk PCB remediation wastes with a PCB concentration ≥50 ppm shall be disposed of in a hazardous waste landfill permitted by EPA under section 3004 of RCRA, or by a State authorized under section 3006 of RCRA, or a PCB disposal facility approved under this part.

(*iv*) The generator must provide written notice, including the quantity to be shipped and highest concentration of PCBs (using extraction EPA Method 3500B/3540C or Method 3500B/3550B followed by chemical analysis using EPA Method 8082 in SW-846 or methods validated under subpart Q of this part) at least 15 days before the first shipment of bulk PCB remediation waste from each cleanup site by the generator, to each off-site facility where the waste is destined for an area not subject to a TSCA PCB Disposal Approval.

(*3*) Any person may decontaminate bulk PCB remediation waste in accordance with § 761.79 and return the waste to the cleanup site for disposal as long as the cleanup standards of paragraph (a)(4) of this section are met.

(ii) *Non-porous surfaces.* PCB remediation waste non-porous surfaces shall be cleaned on-site or off-site for disposal on-site, disposal off-site, or use, as follows:

(A) For on-site disposal, non-porous surfaces shall be cleaned on-site or off-site to the levels in paragraph (a)(4)(ii) of this section using:

(*1*) Procedures approved under § 761.79.

(*2*) Technologies approved under § 761.60(e).

(*3*) Procedures or technologies approved under paragraph (c) of this section.

(B) For off-site disposal, non-porous surfaces:

(*1*) Having surface concentrations <100 µg/100 cm² shall be disposed of in accordance with paragraph (a)(5)(i)(B)(*3*)(*ii*) of this section. Metal surfaces may be thermally decontaminated in accordance with § 761.79(c)(6)(i).

(*2*) Having surface concentrations ≥100 µg/100 cm² shall be disposed of in accordance with paragraph (a)(5)(i)(B)(*3*)(*iii*) of this section. Metal surfaces may be thermally decontaminated in accordance with § 761.79(c)(6)(ii).

(C) For use, non-porous surfaces shall be decontaminated on-site or off-site to the standards specified in § 761.79(b)(3) or in accordance with § 761.79(c).

(iii) *Porous surfaces.* Porous surfaces shall be disposed on-site or off-site as bulk PCB remediation waste according to paragraph (a)(5)(i) of this section or decontaminated for use according to § 761.79(b)(4), as applicable.

(iv) *Liquids.* Any person disposing of liquid PCB remediation waste shall either:

(A) Decontaminate the waste to the levels specified in § 761.79(b)(1) or (b)(2).

(B) Dispose of the waste in accordance with paragraph (b) of this section or an approval issued under paragraph (c) of this section.

(v) *Cleanup wastes.* Any person generating the following wastes during and from the cleanup of PCB remediation waste shall dispose of or reuse them using one of the following methods:

(A) Non-liquid cleaning materials and personal protective equipment waste at any concentration, including non-porous surfaces and other non-liquid materials such as rags, gloves, booties, other disposable personal protective equipment, and similar materials resulting from cleanup activities shall be disposed of in a facility permitted, licensed, or registered by a State to manage municipal solid waste subject to part 258 of this chapter or non-municipal non-hazardous waste subject to §§ 257.5 through 257.30 of this chapter, as applicable, a RCRA Subtitle C landfill permitted by a State to accept PCB waste, or a PCB disposal facility approved under this part. Requirements in subpart K of this part do not apply to this waste. Decontaminate this same waste in accordance with § 761.79(b) or (c).

(B) Cleaning solvents, abrasives, and equipment may be reused after decontamination in accordance with § 761.79.

(6) *Cleanup verification*—(i) *Sampling and analysis.* Any person collecting and analyzing samples to verify the cleanup and on-site disposal of bulk PCB remediation wastes and porous surfaces must do so in accordance with subpart O of this part. Any person collecting and analyzing samples from non-porous surfaces must do so in accordance with subpart P of this part. Any person collecting and analyzing samples from liquids must do so in accordance with § 761.269. Any person conducting interim sampling during PCB remediation waste cleanup to determine when to sample to verify that cleanup is complete, may use PCB field screening tests.

(ii) *Verification.* (A) Where sample analysis results in a measurement of PCBs less than or equal to the levels specified in paragraph (a)(4) of this section, self-implementing cleanup is complete.

(B) Where sample analysis results in a measurement of PCBs greater than the levels specified in paragraph (a)(4) of this section, self-implementing cleanup of the sampled PCB remediation waste is not complete. The owner or operator of the site must either dispose of the sampled PCB remediation waste, or reclean the waste represented by the sample and reinitiate sampling and analysis in accordance with paragraph (a)(6)(i) of this section.

(7) *Cap requirements.* A cap means, when referring to on-site cleanup and disposal of PCB remediation waste, a uniform placement of concrete, asphalt, or similar material of minimum thickness spread over the area where remediation waste was removed or left in place in order to prevent or minimize human exposure, infiltration of water, and erosion. Any person designing and constructing a cap must do so in accordance with § 264.310(a) of this chapter, and ensure that it complies with the permeability, sieve, liquid limit, and plasticity index parameters in § 761.75(b)(1)(ii) through (b)(1)(v). A cap of compacted soil shall have a minimum thickness of 25 cm (10 inches). A concrete or asphalt cap shall have a minimum thickness of 15 cm (6 inches). A cap must be of sufficient strength to maintain its effectiveness and integrity during the use of the cap surface which is exposed to the environment. A cap shall not be contaminated at a level ≥1 ppm PCB per Aroclor™ (or equivalent) or per congener. Repairs shall begin within 72 hours of discovery for any breaches which would impair the integrity of the cap.

(8) *Deed restrictions for caps, fences and low occupancy areas.* When a cleanup activity conducted under this section includes the use of a fence or a cap, the owner of the site must maintain the fence or cap, in perpetuity. In addition, whenever a cap, or the procedures and requirements for a low occupancy area, is used, the owner of the site must meet the following conditions:

(i) Within 60 days of completion of a cleanup activity under this section, the owner of the property shall:

(A) Record, in accordance with State law, a notation on the deed to the property, or on some other instrument which is normally examined during a title search, that will in perpetuity notify any potential purchaser of the property:

(*1*) That the land has been used for PCB remediation waste disposal and is

restricted to use as a low occupancy area as defined in § 761.3.

(*2*) Of the existence of the fence or cap and the requirement to maintain the fence or cap.

(*3*) The applicable cleanup levels left at the site, inside the fence, and/or under the cap.

(B) Submit a certification, signed by the owner, that he/she has recorded the notation specified in paragraph (a)(8)(i)(A) of this section to the EPA Regional Administrator.

(ii) The owner of a site being cleaned up under this section may remove a fence or cap after conducting additional cleanup activities and achieving cleanup levels, specified in paragraph (a)(4) of this section, which do not require a cap or fence. The owner may remove the notice on the deed no earlier than 30 days after achieving the cleanup levels specified in this section which do not require a fence or cap.

(9) *Recordkeeping.* For paragraphs (a)(3), (a)(4), and (a)(5) of this section, recordkeeping is required in accordance with § 761.125(c)(5).

(b) *Performance-based disposal.* (1) Any person disposing of liquid PCB remediation waste shall do so according to § 761.60(a) or (e), or decontaminate it in accordance with § 761.79.

(2) Any person disposing of non-liquid PCB remediation waste shall do so by one of the following methods:

(i) Dispose of it in a high temperature incinerator approved under § 761.70(b), an alternate disposal method approved under § 761.60(e), a chemical waste landfill approved under § 761.75, or in a facility with a coordinated approval issued under § 761.77.

(ii) Decontaminate it in accordance with § 761.79.

(3) Any person may manage or dispose of material containing <50 ppm PCBs that has been dredged or excavated from waters of the United States:

(i) In accordance with a permit that has been issued under section 404 of the Clean Water Act, or the equivalent of such a permit as provided for in regulations of the U.S. Army Corps of Engineers at 33 CFR part 320.

(ii) In accordance with a permit issued by the U.S. Army Corps of Engineers under section 103 of the Marine Protection, Research, and Sanctuaries Act, or the equivalent of such a permit as provided for in regulations of the U.S. Army Corps of Engineers at 33 CFR part 320.

(c) *Risk-based disposal approval.* (1) Any person wishing to sample, cleanup, or dispose of PCB remediation waste in a manner other than prescribed in paragraphs (a) or (b) of this section, or store PCB remediation waste in a manner other than prescribed in § 761.65, must apply in writing to the EPA Regional Administrator in the Region where the cleanup site is located. Each application must contain information described in the notification required by § 761.61(a)(3). EPA may request other information that it believes necessary to evaluate the application. No person may conduct cleanup activities under this paragraph prior to obtaining written approval by EPA.

(2) EPA will issue a written decision on each application for a risk-based method for PCB remediation wastes. EPA will approve such an application if it finds that the method will not pose an unreasonable risk of injury to health or the environment.

§ 761.62 Disposal of PCB bulk product waste.

PCB bulk product waste shall be disposed of in accordance with paragraph (a), (b), or (c) of this section. Under some of these provisions, it may not be necessary to determine the PCB concentration or leaching characteristics of the PCB bulk product waste. When it is necessary to analyze the waste to make either of these determinations, use the applicable procedures in subpart R of this part to sample the waste for analysis, unless EPA approves another sampling plan under paragraph (c) of this section.

(a) *Performance-based disposal.* Any person disposing of PCB bulk product waste may do so as follows:

(1) In an incinerator approved under § 761.70.

(2) In a chemical waste landfill approved under § 761.75.

(3) In a hazardous waste landfill permitted by EPA under section 3004 of RCRA, or by a State authorized under section 3006 of RCRA.

(4) Under an alternate disposal approval under § 761.60(e).

(5) In accordance with the decontamination provisions of § 761.79.

(6) For metal surfaces in contact with PCBs, in accordance with the thermal decontamination provisions of § 761.79(c)(6).

(7) In accordance with a TSCA PCB Coordinated Approval issued under § 761.77.

(b) *Disposal in solid waste landfills.* (1) Any person may dispose of the following PCB bulk product waste in a facility permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill:

(i) Plastics (such as plastic insulation from wire or cable; radio, television and computer casings; vehicle parts; or furniture laminates); preformed or molded rubber parts and components; applied dried paints, varnishes, waxes or other similar coatings or sealants; caulking; Galbestos; non-liquid building demolition debris; or non-liquid PCB bulk product waste from the shredding of automobiles or household appliances from which PCB small capacitors have been removed (shredder fluff).

(ii) Other PCB bulk product waste, sampled in accordance with the protocols set out in subpart O of this part, that leaches PCBs at <10 µg/L of water measured using a procedure used to simulate leachate generation.

(2) Any person may dispose of PCB bulk product waste other than those materials meeting the conditions of paragraph (b)(1) of this section, (e.g., paper or felt gaskets contaminated by liquid PCBs in a facility that is permitted, licensed, or registered by a State to manage municipal solid waste subject to part 258 of this chapter or non-municipal non-hazardous waste subject to §§ 257.5 through 257.30 of this chapter, as applicable, if:

(i) The PCB bulk product waste is segregated from organic liquids disposed of in the landfill unit.

(ii) Leachate is collected from the landfill unit and monitored for PCBs.

(3) Any release of PCBs (including but not limited to leachate) from the landfill unit shall be cleaned up in accordance with § 761.61.

(4)(i) Any person disposing off-site of PCB bulk product waste regulated under paragraph (b)(1) of this section at a waste management facility not having a commercial PCB storage or disposal approval must provide written notice to the facility a minimum of 15 days in advance of the first shipment from the same disposal waste stream. The notice shall state that the PCB bulk product waste may include components containing PCBs at ≤50 ppm based on analysis of the waste in the shipment or application of a general knowledge of the waste stream (or similar material) which is known to contain PCBs at those levels, and that the PCB bulk product waste is known or presumed to leach <10 µg/L PCBs.

(ii) Any person disposing off-site of PCB bulk product waste regulated under paragraph (b)(2) of this section at a waste management facility not having a commercial PCB storage or disposal approval must provide written notice to the facility a minimum of 15 days in advance of the first shipment from the same disposal waste stream and with each shipment thereafter. The notice shall state that the PCB bulk product waste may include components containing PCBs at ≥50 ppm based on

analysis of the waste in the shipment or application of a general knowledge of the waste stream (or similar material) which is known to contain PCBs at those levels, and that the PCB bulk product waste is known or presumed to leach ≥10 µg/L PCBs.

(5) Any person disposing of PCB bulk product waste must maintain a written record of all sampling and analysis of PCBs or notifications made under this paragraph for 3 years from the date of the waste's generation. The records must be made available to EPA upon request.

(6) Requirements in subparts C and K of this part do not apply to waste disposed of under paragraph (b) of this section.

(c) *Risk-based cleanup approval.* (1) Any person wishing to sample or dispose of PCB bulk product waste in a manner other than prescribed in paragraphs (a) or (b) of this section, or store PCB bulk product waste in a manner other than prescribed in § 761.65, must apply in writing to: the EPA Regional Administrator in the Region where the disposal or storage site is located, for disposal or storage occurring in a single EPA Region; or the Director of the National Program Chemicals Division, for disposal or storage occurring in more than one EPA Region. Each application must contain information indicating that, based on technical, environmental, or waste-specific characteristics or considerations, the proposed storage or disposal methods or locations will not pose an unreasonable risk of injury to health or the environment. EPA may request other information that it believes necessary to evaluate the application. No person may conduct disposal or storage activities under this paragraph prior to obtaining written approval by EPA.

(2) EPA will issue a written decision on each application for a risk-based storage or disposal method for PCB bulk product wastes. EPA will approve such an application if it finds that the method will not pose an unreasonable risk of injury to health or the environment.

(d) *Disposal as daily landfill cover or roadbed.* Bulk product waste described in paragraph (b)(1) of this section may be disposed of:

(1) As daily landfill cover as long as the daily cover remains in the landfill and is not released or dispersed by wind or other action; or

(2) Under asphalt as part of a road bed.

§ 761.63 PCB household waste storage and disposal.

PCB household waste, as defined at § 761.3, managed in a facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, or in a facility with an approval to dispose of PCB bulk product waste under § 761.62(c), is not subject to any other requirements of part 761 of this chapter. PCB household waste stored in a unit regulated for storage of PCB waste must not be commingled with PCB waste.

§ 761.64 Disposal of wastes generated as a result of research and development activities authorized under § 761.30(j) and chemical analysis of PCBs.

This section provides disposal requirements for wastes generated during and as a result of research and development authorized under § 761.30(j). This section also provides disposal requirements for wastes generated during the chemical analysis of samples containing PCBs under part 761, including §§ 761.30, 761.60, 761.61, 761.62, and 761.79. For determining the presence of PCBs in samples, chemical analysis includes: sample preparation, sample extraction, extract cleanup, extract concentration, addition of PCB standards, and instrumental analysis.

(a) Portions of samples of a size designated in a chemical extraction and analysis method for PCBs and extracted for purposes of determining the presence of PCBs or concentration of PCBs are unregulated for PCB disposal under this part.

(b) All other wastes generated during these activities are regulated for disposal based on their concentration at the time of disposal as follows:

(1) Liquid wastes, including rinse solvents, must be disposed of according to § 761.61(a)(5)(iv).

(2) Non-liquid wastes must be disposed of in the same manner as non-liquid cleaning materials and personal protective equipment waste according to § 761.61(a)(5)(v)(A).

n. In § 761.65, by revising paragraphs (a), (b) introductory text, (b)(1)(ii), (b)(1)(iv), and by adding paragraph (b)(2); by revising paragraph (c)(1)(iv); by removing the terms ''facilities'' and ''facility'' and adding, in their place, the terms ''units'' and ''unit'', respectively in paragraph (c)(4), by revising paragraphs (c)(5), (c)(6), (c)(7) introductory text, and (c)(8); by redesignating paragraph (c)(9) as (c)(10) and adding a new paragraph (c)(9); in paragraph (d)(2)(iii) by removing the term ''facility'' and adding, in its place, the term ''unit''; by redesignating paragraph (g)(7) as (g)(8) and by adding new paragraphs (g)(7) and (g)(9); by redesignating paragraph (j) as paragraph (k) and adding a new paragraph (j), to read as follows:

§ 761.65 Storage for disposal.

* * * * *

(a)(1) *Storage limitations.* Any PCB waste shall be disposed of as required by subpart D of this part within 1-year from the date it was determined to be PCB waste and the decision was made to dispose of it. This date is the date of removal from service for disposal and the point at which the 1-year time frame for disposal begins. PCB/radioactive waste removed from service for disposal is exempt from the 1-year time limit provided that the provisions at paragraphs (a)(2)(ii) and (a)(2)(iii) of this section are followed and the waste is managed in accordance with all other applicable Federal, State, and local laws and regulations for the management of radioactive material.

(2) *One-year extension.* Any person storing PCB waste that is subject to the 1-year time limit for storage and disposal in paragraph (a)(1) of this section may provide written notification to the EPA Regional Administrator for the Region in which the PCB waste is stored that their continuing attempts to dispose of or secure disposal for their waste within the 1-year time limit have been unsuccessful. Upon receipt of the notice by the EPA Regional Administrator, the time for disposal is automatically extended for 1 additional year (2 years total) if the following conditions are met:

(i) The notification is received by the EPA Regional Administrator at least 30 days before the initial 1-year time limit expires and the notice identifies the storer, the types, volumes, and locations of the waste and the reasons for failure to meet the initial 1-year time limit.

(ii) A written record documenting all continuing attempts to secure disposal is maintained until the waste is disposed of.

(iii) The written record required by paragraph (a)(2)(ii) of this section is available for inspection or submission if requested by EPA.

(iv) Continuing attempts to secure disposal were initiated within 270 days after the time the waste was first subject to the 1-year time limit requirement, as specified in paragraph (a)(1) of this section. Failure to initiate and continue attempts to secure disposal throughout the total time the waste is in storage shall automatically disqualify the notifier from receiving an automatic extension under this section.

(3) *Additional extensions.* Upon written request, the EPA Regional Administrator for the Region in which the wastes are stored or the Director, National Program Chemicals Division, may grant additional extensions beyond the 1-year extension authorized in paragraph (a)(2) of this section. At the time of the request, the requestor must supply specific justification for the additional extension and indicate what measures the requestor is taking to secure disposal of the waste or indicate why disposal could not be conducted during the period of the prior extension. The EPA Regional Administrator or the Director, National Program Chemicals Division may require, as a condition to granting any extension under this section, specific actions including, but not limited to, marking, inspection, recordkeeping, or financial assurance to ensure that the waste does not pose an unreasonable risk of injury to health or the environment.

(4) *Storage at an approved facility.* Increased time for storage may be granted as a condition of any TSCA PCB storage or disposal approval, by the EPA Regional Administrator for the Region in which the PCBs or PCB Items are to be stored or disposed of, or by the Director, National Program Chemicals Division, if EPA determines that there is a demonstrated need or justification for additional time, that the owner or operator of the facility is pursuing relevant treatment or disposal options, and that no unreasonable risk of injury to health or the environment will result from the increased storage time. In making this determination, EPA will consider such factors as absence of any approved treatment technology and insufficient time to complete the treatment or destruction process. EPA may require as a condition of the approval that the owner or operator submit periodic progress reports.

(b) Except as provided in paragraphs (b)(2), (c)(1), (c)(7), (c)(9), and (c)(10) 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 storage unit requirements:

(1) * * *

(ii) An adequate floor that has continuous curbing with a minimum 6 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 or 25 percent of the total internal volume of all PCB Articles or PCB Containers stored there, whichever is greater. PCB/radioactive wastes are not required to be stored in an area with a minimum 6 inch high curbing. However, the floor and curbing must still provide a containment volume equal to at least two times the internal volume of the largest PCB Container or 25 percent of the total internal volume of all PCB Containers stored there, whichever is greater.

* * * * *

(iv) Floors and curbing constructed of Portland cement, concrete, or a continuous, smooth, non-porous surface as defined at § 761.3, which prevents or minimizes penetration of PCBs.

* * * * *

(2) No person may store PCBs and PCB Items designated for disposal in a storage unit other than one approved pursuant to paragraph (d) of this section or meeting the design requirements of paragraph (b) of this section, unless the unit meets one of the following conditions:

(i) Is permitted by EPA under section 3004 of RCRA to manage hazardous waste in containers, and spills of PCBs are cleaned up in accordance with subpart G of this part.

(ii) Qualifies for interim status under section 3005 of RCRA to manage hazardous waste in containers, meets the requirements for containment at § 264.175 of this chapter, and spills of PCBs are cleaned up in accordance with subpart G of this part.

(iii) Is permitted by a State authorized under section 3006 of RCRA to manage hazardous waste in containers, and spills of PCBs are cleaned up in accordance with subpart G of this part.

(iv) Is approved or otherwise regulated pursuant to a State PCB waste management program no less stringent in protection of health or the environment than the applicable TSCA requirements found in this part.

(v) Is subject to a TSCA Coordinated Approval, which includes provisions for storage of PCBs, issued pursuant to § 761.77.

(vi) Has a TSCA PCB waste management approval, which includes provisions for storage, issued pursuant to § 761.61(c) or § 761.62(c).

(c)(1) * * *

(iv) PCB containers containing liquid PCBs at concentrations of ≥50 ppm, provided a Spill Prevention, Control and Countermeasure Plan has been prepared for the temporary storage area in accordance with part 112 of this chapter and the liquid PCB waste is in packaging authorized in the DOT Hazardous Materials Regulations at 49 CFR parts 171 through 180 or stationary bulk storage tanks (including rolling stock such as, but not limited to, tanker trucks, as specified by DOT).

* * * * *

(5) All PCB Items in storage shall be checked for leaks at least once every 30 days. Any leaking PCB Items and their contents shall be transferred immediately to properly marked non-leaking containers. Any spilled or leaked materials shall be immediately cleaned up and the materials and residues containing PCBs shall be disposed of in accordance with § 761.61. Records of inspections, maintenance, cleanup and disposal must be maintained in accordance with § 761.180(a) and (b).

(6) Except as provided in paragraphs (c)(6)(i) and (c)(6)(ii) of this section, any container used for the storage of liquid or non-liquid PCB waste shall be in accordance with the requirements set forth in the DOT Hazardous Materials Regulations (HMR) at 49 CFR parts 171 through 180. PCB waste not subject to the HMR (i.e., PCB wastes at concentrations of <20 ppm or <1 pound of PCBs regardless of concentration) must be packaged in accordance with Packaging Group III, unless other hazards associated with the PCB waste cause it to require packaging in accordance with Packaging Groups I or II. For purposes of describing PCB waste not subject to DOT's HMR on a manifest, one may use the term ''Non-DOT Regulated PCBs.''

(i) Containers other than those meeting HMR performance standards may be used for storage of PCB/ radioactive waste provided the following requirements are met:

(A) Containers used for storage of liquid PCB/radioactive wastes must be non-leaking.

(B) Containers used for storage of non-liquid PCB/ radioactive wastes must be designed to prevent the buildup of liquids if such containers are stored in an area meeting the containment requirements of paragraph (b)(1)(ii) of this section, as well as all other applicable State or Federal regulations or requirements for control of radioactive materials.

(C) Containers used to store both liquid and non-liquid PCB/radioactive wastes must meet all regulations and requirements pertaining to nuclear criticality safety. Acceptable container materials currently include polyethylene and stainless steel provided that the container material is chemically compatible with the wastes being stored. Other containers may be used to store both liquid and non-liquid PCB/radioactive wastes if the users are able to demonstrate, to the appropriate Regional Administrator and other appropriate regulatory authorities (i.e., Nuclear Regulatory Commission, Department of Energy or the Department

of Transportation), that the use of such containers is protective of health and the environment as well as public health and safety.

(ii) The following DOT specification containers that conform to the requirements of 49 CFR, chapter I, subchapter C in effect on September 30, 1991, may be used for storage and transportation activities that are not subject to DOT regulation, and may be used on a transitional basis as permitted at 49 CFR 171.14. For liquid PCBs: Specification 5 container without removable head, Specification 5B container without removable head, Specification 6D overpack with Specification 2S or 2SL polyethylene containers, or Specification 17E container. For non-liquid PCBs: Specification 5 container, Specification 5B container, or Specification 17C container.

(7) Stationary storage containers for liquid PCBs can be larger than the containers specified in paragraph (c)(6) of this section provided that:

* * * * *

(8) PCB Items shall be dated on the item when they are removed from service for disposal. The storage shall be managed so that the PCB Items can be located by this date. Storage containers provided in paragraph (c)(7) of this section, 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) Bulk PCB remediation waste or PCB bulk product waste may be stored at the clean-up site or site of generation for 180 days subject to the following conditions:

(i) The waste is placed in a pile designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting.

(ii) The waste must not generate leachate through decomposition or other reactions.

(iii) The storage site must have:

(A) A liner that is designed, constructed, and installed to prevent any migration of wastes off or through the liner into the adjacent subsurface soil, ground water or surface water at any time during the active life (including the closure period) of the storage site. The liner may be constructed of materials that may allow waste to migrate into the liner. The liner must be:

(*1*) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation.

(*2*) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift.

(*3*) Installed to cover all surrounding earth likely to be in contact with the waste.

(B) A cover that meets the requirements of paragraph (c)(9)(iii)(A) of this section, is installed to cover all of the stored waste likely to be contacted with precipitation, and is secured so as not to be functionally disabled by winds expected under normal seasonal meteorological conditions at the storage site.

(C) A run-on control system designed, constructed, operated, and maintained such that:

(*1*) It prevents flow onto the stored waste during peak discharge from at least a 25-year storm.

(*2*) It collects and controls at least the water volume resulting from a 24-hour, 25-year storm. Collection and holding facilities (e.g., tanks or basins) must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(iv) The provisions of this paragraph may be modified under § 761.61(c).

* * * * *

(g) * * *

(7) The corporate guarantee as specified in § 264.143(f)(10) of this chapter.

* * * * *

(9) A modification to a facility storing PCB waste that increases the maximum storage capacity indicated in the permit requires that a new financial assurance mechanism be established or an existing one be amended. When such a modification occurs, the Director of the Federal or State issuing authority must be notified in writing no later than 30 days from the completion of the modification. The new or revised financial assurance mechanism must be established and activated no later than 30 days after the Director of the Federal or State issuing authority is notified of the completion of the modification, but prior to the use of the modified portion of the facility.

* * * * *

(j) *Changes in ownership or operational control of a commercial storage facility*. The date of transfer of interim status or final approval shall be the date the EPA Regional Administrator (or Director, National Program Chemicals Division) provides written approval of the transfer. EPA will provide a final written decision within 90 days of receipt of the complete new or amended application. The Agency will approve the transfer if the following conditions are met:

(1) The transferee has established financial assurance for closure pursuant to paragraph (g) of this section using a mechanism effective as of the date of final approval so that there will be no lapse in financial assurance for the transferred facility.

(2) The transferor or transferee has resolved any deficiencies (e.g., technical operations, closure plans, cost estimates, etc.) the Agency has identified in the transferor's application.

* * * * *

o. By adding §§ 761.71 and 761.72 to read as follows:

§ 761.71 High efficiency boilers.

(a) To burn mineral oil dielectric fluid containing a PCB concentration of ≥50 ppm, but <500 ppm:

(1) The boiler shall comply with the following criteria:

(i) The boiler is rated at a minimum of 50 million BTU hours.

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

(iii) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is ≤100 ppm and the excess oxygen is at least 3 percent when PCBs are being burned.

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

(v) 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).

(vi) The owner or operator of the boiler:

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

(B) If the boiler will burn <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.

(vii) 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.

(viii) 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 section, the flow of mineral oil dielectric fluid to the boiler shall be stopped immediately.

(2) 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:

(i) The name and address of the owner or operator of the boiler and the address of the boiler.

(ii) The boiler rating in units of BTU/hour.

(iii) 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.

(iv) 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.

(3) 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 paragraph (a)(2)(iii) of this section were taken.

(4) Any person burning mineral oil dielectric fluid in a boiler obtains the following information and retains the information for 5 years at the boiler location:

(i) The data required to be collected under paragraphs (a)(1)(vi) and (vii) of this section.

(ii) The quantity of mineral oil dielectric fluid burned in the boiler each month.

(b) To burn liquids, other than mineral oil dielectric fluid, containing a PCB concentration of ≥50 ppm, but <500 ppm:

(1) The boiler shall comply with the following criteria:

(i) The boiler is rated at a minimum of 50 million BTU/hour.

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

(iii) If the boiler uses coal as the primary fuel, the carbon monoxide concentration in the stack is ≤100 ppm and the excess oxygen is at least 3 percent when PCBs are being burned.

(iv) The waste does not comprise more than 10 percent (on a volume basis) of the total fuel feed rate.

(v) 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).

(vi) The owner or operator of the boiler must:

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

(B) If the boiler will burn <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.

(vii) 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.

(viii) 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 either (a)(1)(ii) or (a)(1)(iii) of this section, the flow of waste to the boiler shall be stopped immediately.

(2) 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:

(i) The name and address of the owner or operator of the boiler and the address of the boiler.

(ii) The boiler rating in units of BTU/hour.

(iii) 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.

(iv) 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.

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

(vi) 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 follows: Carbon and hydrogen content using ASTM D-3178-84, nitrogen content using ASTM E-258-67 (Reapproved 1987), sulfur content using ASTM D-2784-89, ASTM D-1266-87, or ASTM D-129-64, chlorine content using ASTM D-808-87, water and sediment content using either ASTM D-2709-88 or ASTM D-1796-83 (Reapproved 1990), ash content using ASTM D-482-87, calorific value using ASTM D-240-87, carbon residue using either ASTM D-2158-89 or ASTM D-524-88, and flash point using ASTM D-93-90.

(vii) The quantity of wastes estimated to be burned in a 30–day period.

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

(3) On the basis of the information in paragraph (b)(2) of this section and any other available information, the Regional Administrator may, at his/her 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.

(4) When burning PCB wastes, the boiler must operate at a level of output no less than the output at which the measurements required under paragraph (b)(2)(iii) of this section were taken.

(5) Any person burning liquids in boilers approved as provided in paragraph (b)(3) of this section, must obtain the following information and retain the information for 5 years at the boiler location:

(i) The data required to be collected in paragraphs (b)(1)(vi) and (b)(1)(vii) of this section.

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

(iii) The analysis of the waste required by paragraph (b)(2)(vi) of this section taken once a month for each month during which low concentration PCB liquid is burned in the boiler.

§ 761.72 Scrap metal recovery ovens and smelters.

Any person may dispose of residual PCBs associated with PCB-Contaminated articles regulated for

disposal under § 761.60(b), metal surfaces in PCB remediation waste regulated under § 761.61, or metal surfaces in PCB bulk product waste regulated under §§ 761.62(a)(6) and 761.79(c)(6), from which all free-flowing liquids have been removed:

(a) In a scrap metal recovery oven:

(1) The oven shall have at least two enclosed (i.e., negative draft, no fugitive emissions) interconnected chambers.

(2) The equipment with all free-flowing liquid removed shall first be placed in the primary chamber at room temperature.

(3) The primary chamber shall operate at a temperature between 537 °C and 650 °C for a minimum of 2½ hours and reach a minimum temperature of 650 °C (1,202 °F) once during each heating cycle or batch treatment of unheated, liquid-free equipment.

(4) Heated gases from the primary chamber must feed directly into the secondary chamber (i.e., afterburner) which must operate at a minimum temperature of 1,200 °C (2,192 °F) with at least a 3 percent excess oxygen and a retention time of 2.0 seconds with a minimum combustion efficiency of 99.9 percent according to the definition in § 761.70(a)(2).

(5) Heating of the primary chamber shall not commence until the secondary chamber has reached a temperature of 1,200 ± 100 °C (2,192 ° ± 180 °F).

(6) Continuous emissions monitors and recorders for carbon dioxide, carbon monoxide, and excess oxygen in the secondary chamber and continuous temperature recorders in the primary and secondary chambers shall be installed and operated while the primary and secondary chambers are in operation to assure that the two chambers are within the operating parameters in paragraphs (a)(3) through (a)(5) of this section.

(7) Emissions from the secondary chamber shall be vented through an exhaust gas stack in accordance with valid State and local air regulations and permits, which include a standard for PCBs or meets the standards in paragraph (a)(8) of this section.

(8) Exhaust gas stack emissions shall be for: particulates <0.015 grains/dry standard cubic foot, sulfur dioxide <35 parts per million by volume (ppmv), nitrogen oxide <150 ppmv, carbon monoxide <35 ppmv, and hydrogen chloride <35 ppmv.

(9) A measurement of the temperature in the secondary chamber at the time the primary chamber starts heating must be taken, recorded and retained at the facility for 3 years from the date each charge is introduced into the primary chamber.

(b) By smelting:

(1) The operating temperature of the hearth must be at least 1,000 °C at the time it is charged with any PCB-Contaminated non-porous surface.

(2) Each charge containing a PCB-Contaminated item must be added into molten metal or a hearth at ≥1,000 °C.

(3) Successive charges may not be introduced into the hearth in less than 15–minute intervals.

(4) The smelter must operate in compliance with any applicable emissions standards in part 60 of this chapter.

(5) The smelter must have an operational device which accurately measures directly or indirectly, the temperature in the hearth.

(6) Take, record and retain at the disposal facility for 3 years from the date each charge is introduced, a reading of the temperature in the hearth at the time it is charged with a non-porous surface item.

(c)(1) Scrap metal recovery ovens and smelters must either have a final permit under RCRA (part 266, subpart H of this chapter and § 270.66 of this chapter) or be operating under a valid State air emissions permit which includes a standard for PCBs.

(2) Scrap metal recovery ovens and smelters disposing of PCBs must provide notification as disposers of PCBs, are not required to submit annual reports, and shall otherwise comply with all applicable provisions of subparts J and K of this part, as well as other applicable Federal, State, and local laws and regulations.

(3) In lieu of the requirement in paragraphs (a) and (b) of this section, upon written request by the owner or operator of a scrap metal recovery oven or smelter, the EPA Regional Administrator, for the Region where the oven or smelter is located, may make a finding in writing, based on a site-specific risk assessment, that the oven or smelter does not pose an unreasonable risk of injury to health or the environment because it is operating in compliance with the parameters and conditions listed in paragraphs (a)(1) through (a)(8) and (b)(1) through (b)(9) of this section even though the oven or smelter does not have a RCRA or State air permit as required by paragraph (c)(1) of this section. The written request shall include a site-specific risk assessment.

(d) PCB liquids, other liquid waste qualifying as waste oils which may be used as provided for at § 761.20(e), or PCB remediation waste, other than PCB-Contaminated articles, may not be disposed of in a scrap metal recovery oven or smelter unless approved or otherwise allowed under subpart D of this part.

§ 761.75 [Amended]

p. In § 761.75, by removing the term ''facility'' and adding, in its place, the term ''unit'' wherever it appears in paragraphs (b)(7)(i), (b)(7)(ii), and (b)(7)(iii).

q. By adding § 761.77 to read as follows:

§ 761.77 Coordinated approval.

(a) *General requirements.* Notwithstanding any other provision of this part, the EPA Regional Administrator for the Region in which a PCB disposal or PCB commercial storage facility described in paragraphs (b) and (c) of this section is located may issue a TSCA PCB Coordinated Approval to the persons described in those paragraphs if the conditions listed in this section are met. A TSCA PCB Coordinated Approval will designate the persons who own and who are authorized to operate the facilities described in paragraphs (b) and (c) of this section and will apply only to such persons. All requirements, conditions, and limitations of any other permit or waste management document cited or described in paragraphs (b) and (c) of this section, as the technical or legal basis on which the TSCA PCB Coordinated Approval is issued, are conditions of the TSCA PCB Coordinated Approval.

(1) Persons seeking a TSCA PCB Coordinated Approval shall submit a request for approval by certified mail, to the EPA Regional Administrator for the Region in which the activity will take place. Persons seeking a TSCA PCB Coordinated Approval for a new PCB activity shall submit the request for approval at the same time they seek a permit, approval, or other action for a PCB waste management activity under any other Federal or State authority.

(i) The request for a TSCA PCB Coordinated Approval shall include a copy of the letter from EPA announcing or confirming the EPA identification number issued to the facility for conducting PCB activities; the name, organization, and telephone number of the person who is the contact point for the non-TSCA Federal or State waste management authority; a copy of the relevant permit or waste management document specified in paragraphs (b) and (c) of this section, including all requirements, conditions, and limitations, if the EPA Regional Administrator does not have a copy of the document, or a description of the waste management activities to be

conducted if a permit or other relevant waste management document has not been issued; and a certification that the person who owns or operates the facility is aware of and will adhere to the TSCA PCB reporting and recordkeeping requirements at subparts J and K of this part.

(ii) The EPA Regional Administrator shall review the request for completeness, for compliance with the requirements of paragraphs (b) and (c) of this section, and to ensure that the PCB activity for which approval is requested will not present an unreasonable risk of injury to health or the environment. The EPA Regional Administrator shall either:

(A) Issue a written notice of deficiency explaining why the request for approval is deficient. If appropriate, the EPA Regional Administrator may either:

(*1*) Request additional information to cure the deficiency.

(*2*) Deny the request for a TSCA PCB Coordinated Approval.

(B) Issue a letter granting or denying the TSCA PCB Coordinated Approval. If the EPA Regional Administrator grants the TSCA PCB Coordinated Approval, he or she may acknowledge the non-TSCA approval meets the regulatory requirements under TSCA as written, or require additional conditions the EPA Regional Administrator has determined are necessary to prevent unreasonable risk of injury to health or the environment.

(C) If the EPA Regional Administrator denies a request for a Coordinated Approval under paragraphs (a)(1)(ii)(A) or (a)(1)(ii)(B) of this section, the person who requested the TSCA PCB Coordinated Approval may submit an application for a TSCA Disposal Approval.

(2) The EPA Regional Administrator may issue a notice of deficiency, revoke the TSCA PCB Coordinated Approval, require the person to whom the TSCA PCB Coordinated Approval was issued to submit an application for a TSCA PCB approval, or bring an enforcement action under TSCA if he or she determines that:

(i) Conditions of the approval relating to PCB waste management activities are not met.

(ii) The PCB waste management process is being operated in a manner which may result in an unreasonable risk of injury to health or the environment.

(iii) The non-TSCA approval expires, is revoked, is suspended, or otherwise ceases to be in full effect.

(3) Any person with a TSCA PCB Coordinated Approval must notify the EPA Regional Administrator in writing within 5 calendar days of changes relating to PCB waste requirements in the non-TSCA waste management document which serves as the basis for a TSCA PCB Coordinated Approval. Changes in the ownership of a commercial storage facility which holds a TSCA PCB Coordinated Approval shall be handled pursuant to § 761.65(j).

(b) Any person who owns or operates a facility that he or she intends to use to landfill PCB wastes; incinerate PCB wastes; dispose of PCB wastes using an alternative disposal method that is equivalent to disposal in an incinerator approved under § 761.70 or a high efficiency boiler operating in compliance with § 761.71; or stores PCB wastes may apply for a TSCA PCB Coordinated Approval. The EPA Regional Administrator may approve the request if the EPA Regional Administrator determines that the activity will not pose an unreasonable risk of injury to health or the environment and the person:

(1)(i) Has a waste management permit or other decision or enforcement document which exercises control over PCB wastes, issued by EPA or an authorized State Director for a State program that has been approved by EPA and is no less stringent in protection of health or the environment than the applicable TSCA requirements found in this part; or

(ii) Has a PCB waste management permit or other decision or enforcement document issued by a State Director pursuant to a State PCB waste management program no less stringent in protection of health or the environment than the applicable TSCA requirements found in this part; or

(iii) Is subject to a waste management permit or other decision or enforcement document which is applicable to the disposal of PCBs and which was issued through the promulgation of a regulation published in Title 40 of the Code of Federal Regulations.

(2) Complies with the terms and conditions of the permit or other decision or enforcement document described in paragraph (b)(1) of this section.

(3) Unless otherwise waived or modified in writing by the EPA Regional Administrator, complies with § 761.75(b); § 761.70(a)(1) through (a)(9), (b)(1) and (b)(2), and (c); or the PCB storage requirements at §§ 761.65(a), (c), and (d)(2), as appropriate.

(4) Complies with the reporting and recordkeeping requirements in subparts J and K of this part.

(c) A person conducting research and development (R&D) into PCB disposal methods (regardless of PCB concentration), or conducting PCB remediation activities may apply for a TSCA PCB Coordinated Approval. The EPA Regional Administrator may approve the request if the EPA Regional Administrator determines that the activity will not pose an unreasonable risk of injury to health or the environment and the person:

(1)(i) Has a permit or other decision and enforcement document issued or otherwise agreed to by EPA, or permit or other decision and enforcement document issued by an authorized State Director for a State program that has been approved by EPA, which exercises control over the management of PCB wastes, and that person is in compliance with all terms and conditions of that document; or

(ii) Has a permit, which exercises control over the management of PCB wastes, issued by a State Director pursuant to a State PCB disposal program no less stringent than the requirements in this part.

(2) Complies with the terms and conditions of that permit or other decision and enforcement document.

(3) Complies with the reporting and recordkeeping requirements in subparts J and K of this part.

r. By revising § 761.79 to read as follows:

§ 761.79 Decontamination standards and procedures.

(a) *Applicability*. This section establishes decontamination standards and procedures for removing PCBs, which are regulated for disposal, from water, organic liquids, non-porous surfaces (including scrap metal from disassembled electrical equipment), concrete, and non-porous surfaces covered with a porous surface, such as paint or coating on metal.

(1) Decontamination in accordance with this section does not require a disposal approval under subpart D of this part.

(2) Materials from which PCBs have been removed by decontamination in accordance with this section may be distributed in commerce in accordance with § 761.20(c)(5).

(3) Materials from which PCBs have been removed by decontamination in accordance with this section may be used or reused in accordance with § 761.30(u).

(4) Materials from which PCBs have been removed by decontamination in accordance with this section, not including decontamination waste and residuals under paragraph (g) of this section, are unregulated for disposal under subpart D of this part.

(5) Any person decontaminating porous surfaces other than concrete under paragraph (b)(4) of this section and non-porous surfaces covered with a porous surface, such as paint or coating on metal, under paragraph (b)(3) or (c)(8) of this section must obtain an alternative decontamination approval in accordance with paragraph (h) of this section.

(6) Any person engaging in decontamination under this section is responsible for determining and complying with all other applicable Federal, State, and local laws and regulations.

(b) *Decontamination standards.* Chopping (including wire chopping), distilling, filtering, oil/water separation, spraying, soaking, wiping, stripping of insulation, scraping, scarification or the use of abrasives or solvents may be used to remove or separate PCBs, to the following standards, from liquids, concrete, or non-porous surfaces.

(1) The decontamination standard for water containing PCBs is:

(i) Less than 200 µg/L (i.e., <200 ppb PCBs) for non-contact use in a closed system where there are no releases;

(ii) For water discharged to a treatment works (as defined in § 503.9(aa) of this chapter) or to navigable waters, <3 µg/L (approximately <3 ppb) or a PCB discharge limit included in a permit issued under section 307(b) or 402 of the Clean Water Act; or

(iii) Less than or equal to 0.5 µg/L (i.e., approximately ≤0.5 ppb PCBs) for unrestricted use.

(2) The decontamination standard for organic liquids and non-aqueous inorganic liquids containing PCBs is <2 milligrams per kilogram (i.e., <2 ppm PCBs).

(3) The decontamination standard for non-porous surfaces in contact with liquid and non-liquid PCBs is:

(i) For unrestricted use:

(A) For non-porous surfaces previously in contact with liquid PCBs at any concentration, where no free-flowing liquids are currently present, ≤10 micrograms PCBs per 100 square centimeters (≤10 µg/100 cm^2) as measured by a standard wipe test (§ 761.123) at locations selected in accordance with subpart P of this part.

(B) For non-porous surfaces in contact with non-liquid PCBs (including non-porous surfaces covered with a porous surface, such as paint or coating on metal), cleaning to Visual Standard No. 2, Near-White Blast Cleaned Surface Finish, of the National Association of Corrosion Engineers (NACE). A person shall verify compliance with standard No. 2 by visually inspecting all cleaned areas.

(ii) For disposal in a smelter operating in accordance with § 761.72(b):

(A) For non-porous surfaces previously in contact with liquid PCBs at any concentration, where no free-flowing liquids are currently present, <100 µg/100 cm^2 as measured by a standard wipe test (§ 761.123) at locations selected in accordance with subpart P of this part.

(B) For non-porous surfaces in contact with non-liquid PCBs (including non-porous surfaces covered with a porous surface, such as paint or coating on metal), cleaning to Visual Standard No. 3, Commercial Blast Cleaned Surface Finish, of the National Association of Corrosion Engineers (NACE). A person shall verify compliance with standard No. 3 by visually inspecting all cleaned areas.

(4) The decontamination standard for concrete is ≤10 µg/100 cm^2 as measured by a standard wipe test (§ 761.123) if the decontamination procedure is commenced within 72 hours of the initial spill of PCBs to the concrete or portion thereof being decontaminated.

(c) *Self-implementing decontamination procedures.* The following self-implementing decontamination procedures are available as an alternative to the measurement-based decontamination methods specified in paragraph (b) of this section. Any person performing self-implementing decontamination must comply with one of the following procedures.

(1) Any person decontaminating a PCB Container must do so by flushing the internal surfaces of the container three times with a solvent containing <50 ppm PCBs. Each rinse shall use a volume of the flushing solvent equal to approximately 10 percent of the PCB Container capacity.

(2) Any person decontaminating movable equipment contaminated by PCBs and used in storage areas, tools, and sampling equipment may do so by:

(i) Swabbing surfaces that have contacted PCBs with a solvent;

(ii) A double wash/rinse as defined in subpart S of this part; or

(iii) Another applicable decontamination procedure in this section.

(3) Any person decontaminating a non-porous surface in contact with free-flowing mineral oil dielectric fluid (MODEF) at levels ≤10,000 ppm PCBs must do so as follows:

(i) Drain the free-flowing MODEF and allow the residual surfaces to drain for an additional 15 hours.

(ii) Dispose of drained MODEF according to paragraph (g) of this section.

(iii) Soak the surfaces to be decontaminated in a sufficient amount of clean (containing <2 ppm PCBs) performance-based organic decontamination fluid (PODF) such that there is a minimum of 800 ml of PODF for each 100 cm^2 of contaminated or potentially contaminated surface for at least 15 hours at ≥20 °C.

(iv) Approved PODFs include:

(A) Kerosene.

(B) Diesel fuel.

(C) Terpene hydrocarbons.

(D) Mixtures of terpene hydrocarbons and terpene alcohols.

(v) Drain the PODF from the surfaces.

(vi) Dispose of the drained PODF in accordance with paragraph (g) of this section.

(4) Any person decontaminating a non-porous surface in contact with free-flowing MODEF containing >10,000 ppm PCB in MODEF or askarel PCB (up to 70 percent PCB in a mixture of trichlorobenzenes and tetrachlorobenzenes) must do so as follows:

(i) Drain the free-flowing MODEF or askarel and allow the residual surfaces to drain for an additional 15 hours.

(ii) Dispose of drained MODEF or askarel according to paragraph (g) of this section.

(iii) Soak the surfaces to be decontaminated in a sufficient amount of clean PODF (containing <2 ppm PCBs) such that there is a minimum of 800 ml of PODF for each 100 cm^2 of contaminated or potentially contaminated surface for at least 15 hours at ≥20 °C.

(iv) Approved PODFs include:

(A) Kerosene.

(B) Diesel fuel.

(C) Terpene hydrocarbons.

(D) Mixtures of terpene hydrocarbons and terpene alcohols.

(v) Drain the PODF from the surfaces.

(vi) Dispose of the drained PODF in accordance with paragraph (g) of this section.

(vii) Resoak the surfaces to be decontaminated, pursuant to paragraph (c)(3)(iii) of this section, in a sufficient amount of clean PODF (containing <2 ppm PCBs) such that there is a minimum of 800 ml of PODF for each 100 cm^2 of surface for at least 15 hours at ≥20 °C.

(viii) Drain the PODF from the surfaces.

(ix) Dispose of the drained PODF in accordance with paragraph (g) of this section.

(5) Any person decontaminating piping and air lines in an air compressor system must do so as follows:

(i) Before decontamination proceeds, disconnect or bypass the air compressors and air dryers from the piping and air lines and decontaminate the air compressors and air dryers separately in accordance with paragraphs (b), (c)(1) through (c)(6), or (c)(8) of this section. Dispose of filter media and desiccant in the air dyers based on their existing PCB concentration.

(ii) Test the connecting line and appurtenances of the system to assure that there is no leakage. Test by introducing air into the closed system at from 90 to 100 pounds per square inch (psi). Only if there is a pressure drop of <5 psi in 30 minutes may decontamination take place.

(iii) When there is no leakage, fill the piping and air lines with clean (containing <2 ppm PCBs) solvent. Solvents include PODF, aqueous potassium hydroxide at a pH between 9 and 12, or water containing 5 percent sodium hydroxide by weight.

(iv) Circulate the solvent to achieve turbulent flow through the piping and air lines in the air compressor system until the total volume of solvent circulated equals 10 times the total volume of the particular article being decontaminated, then drain the solvent. Calculate the total volume of solvent circulated by multiplying the pump rate by the time of pumping. Turbulent flow means a Reynolds number range from 20,000 to 43,000. Refill the system with clean PODF and repeat the circulation and drain process.

(6) Any person using thermal processes to decontaminate metal surfaces in contact with PCBs, as required by § 761.62(a)(6), must use one of the following options:

(i) Surfaces in contact with liquid and non-liquid PCBs at concentrations <500 ppm may be decontaminated in an industrial furnace for purposes of disposal in accordance with § 761.72.

(ii) Surfaces in contact with liquid or non-liquid PCBs at concentrations ≥500 ppm may be smelted in an industrial furnace operating in accordance with § 761.72(b), but must first be decontaminated in accordance with § 761.72(a) or to a surface concentration of <100 μg/100 cm^2.

(d) *Decontamination solvents.* (1) Unless otherwise provided in paragraphs (c)(3) through (c)(5) of this section, the solubility of PCBs in any solvent used for purposes of decontamination under this section must be 5 percent or more by weight.

(2) The solvent may be reused for decontamination so long as its PCB concentration is <50 ppm.

(3) Solvent shall be disposed of under paragraph (g) of this section.

(4) Other than as allowed in paragraphs (c)(3) and (c)(4) of this section, solvents may be tested and validated for performance-based decontamination of non-porous surfaces contaminated with MODEF or other PCB liquids, in accordance with the self-implementing procedures found in subpart T of this part. Specific conditions for the performance-based testing from this validation are determined in the validation study.

(e) *Limitation of exposure and control of releases.* (1) Any person conducting decontamination activities under this section shall take necessary measures to protect against direct release of PCBs to the environment from the decontamination area.

(2) Persons participating in decontamination activities shall wear or use protective clothing or equipment to protect against dermal contact or inhalation of PCBs or materials containing PCBs.

(f) *Sampling and recordkeeping.* (1) Confirmatory sampling is required under paragraph (b) of this section. For liquids described in paragraphs (b)(1) and (b)(2) of this section, sample in accordance with §§ 761.269 and 761.272. For non-porous surfaces and concrete described in paragraphs (b)(3) and (b)(4) of this section, sample in accordance with subpart P of this part. A written record of such sampling must be established and maintained for 3 years from the date of any decontamination under this section. The record must show sampling locations and analytical results and must be retained at the site of the decontamination or a copy of the record must be made available to EPA in a timely manner, if requested. In addition, recordkeeping is required in accordance with § 761.180(a) for all wastes generated by a decontamination process and regulated for disposal under this subpart.

(2) Confirmatory sampling is not required for self-implementing decontamination procedures under paragraph (c) of this section. Any person using these procedures must retain a written record documenting compliance with the procedures for 3 years after completion of the decontamination procedures (e.g., video recordings, photographs).

(g) *Decontamination waste and residues.* Decontamination waste and residues shall be disposed of at their existing PCB concentration unless otherwise specified.

(1) Distillation bottoms or residues and filter media are regulated for disposal as PCB remediation waste.

(2) PCBs physically separated from regulated waste during decontamination (such as by chopping, shredding, scraping, abrading or oil/water separation, as opposed to solvent rinsing and soaking), other than wastes described in paragraph (g)(1) of this section, are regulated for disposal at their original concentration.

(3) Hydrocarbon solvent used or reused for decontamination under this section that contains <50 ppm PCB must be burned and marketed in accordance with the requirements for used oil in § 761.20(e), disposed of in accordance with § 761.60(a) or (e), or decontaminated pursuant to this section.

(4) Chlorinated solvent at any PCB concentration used for decontamination under this section shall be disposed of in an incinerator operating in compliance with § 761.70, or decontaminated pursuant to this section.

(5) Solvents ≥50 ppm other than those described in paragraphs (g)(3) and (g)(4) of this section shall be disposed of in accordance with § 761.60(a) or decontaminated pursuant to this section.

(6) Non-liquid cleaning materials and personal protective equipment waste at any concentration, including non-porous surfaces and other non-liquid materials such as rags, gloves, booties, other disposable personal protective equipment, and similar materials resulting from decontamination shall be disposed of in accordance with § 761.61(a)(5)(v).

(h) *Alternative decontamination or sampling approval.* (1) Any person wishing to decontaminate material described in paragraph (a) of this section in a manner other than prescribed in paragraph (b) of this section must apply in writing to the EPA Regional Administrator in the Region where the activity would take place. Each application must describe the material to be decontaminated and the proposed decontamination method, and must demonstrate that the proposed method is capable of decontaminating the material to the applicable level set out in paragraphs (b)(1) through (b)(4) of this section.

(2) Any person wishing to decontaminate material described in paragraph (a) of this section using a self-implementing procedure other than prescribed in paragraph (c) of this section must apply in writing to the EPA Regional Administrator in the Region where the activity would take

place. Each application must describe the material to be decontaminated and the proposed self-implementing decontamination method and must include a proposed validation study to confirm performance of the method.

(3) Any person wishing to sample decontaminated material in a manner other than prescribed in paragraph (f) of this section, must apply in writing to the EPA Regional Administrator in the Region where the activity would take place. Each application must contain a description of the material to be decontaminated, the nature and PCB concentration of the contaminating material (if known), the decontamination method, the proposed sampling procedure, and a justification for how the proposed sampling is equivalent to or more comprehensive than the sampling procedure required under paragraph (f) of this section.

(4) EPA may request additional information that it believes necessary to evaluate the application.

(5) EPA will issue a written decision on each application for risk-based decontamination or sampling. No person may conduct decontamination or sampling under this paragraph prior to obtaining written approval from EPA. EPA will approve an application if it finds that the proposed decontamination or sampling method will not pose an unreasonable risk of injury to health or the environment.

s. In § 761.80, by adding paragraphs (e) and (i) to read as follows:

§ 761.80 Manufacturing, processing, and distribution in commerce exemptions.

* * * * *

(e) The Administrator grants a class exemption to all research and development (R&D) facilities for a period of 1 year to manufacture or import PCBs for use solely in the manufacturer or importer's own research for the development of PCB disposal technologies. Each person that wishes to be part of the exemption must meet the following conditions:

(1) A petition for an exemption from the PCB prohibition on manufacturing PCBs must be received by EPA 60 days prior to engaging in these activities.

(2) Requests for renewal must be filed pursuant to § 750.11 of this chapter. EPA will deem any properly filed request for the renewal of the exemption by any member of the class as a renewal request for the entire class.

(3) The quantity of the PCBs manufactured annually must not exceed 500 grams by total weight of pure PCBs. Any person who wishes to manufacture or import more than 500 grams of PCBs in 1 year must receive written approval from the Director, National Program Chemicals Division to exceed the limitations established by this provision. The Director, National Program Chemicals Division may grant approval without further rulemaking. Any increase granted will be in writing and will extend only for a maximum of the time remaining in a specific exemption year.

(4) The owner or operator of the facility must notify the EPA Regional Administrator in writing 30 days prior to the commencement of R&D activities that include the manufacture or import of PCBs under the exemption, unless the facility has obtained a PCB R&D approval from EPA pursuant to § 761.60(e), § 761.60(i)(2), § 761.70(a), or § 761.70(b) and the approval contains a provision allowing the manufacture of PCBs.

(5) Records are maintained of their PCB activities for a period of 3 years after ceasing operations. The records must include the sources and the annual amounts of PCBs received if imported and the type and annual amount of PCBs that were manufactured.

(6) All PCBs and materials containing PCBs, regardless of concentration, remaining from the disposal-related studies must be disposed of according to § 761.60(j)(1)(vi), or decontaminated pursuant to § 761.79, based on the original PCB concentration.

* * * * *

(i) The Administrator grants a class exemption to all persons who manufacture, import, process, distribute in commerce, or export PCBs, or analytical reference samples derived from PCB waste material, provided the PCBs are manufactured, imported, processed, distributed in commerce, or exported solely for the purpose of R&D and the following conditions are met:

(1) Notification in the form of a petition for an exemption from the PCB prohibitions on manufacture, import, processing, distribution in commerce, or export is received by EPA 60 days prior to engaging in these activities.

(2) Requests for renewal are filed pursuant to §§ 750.11 and 750.31 of this chapter. EPA will deem any properly filed request for the renewal of the exemption by any member of the class as a renewal request for the entire class.

(3) The PCBs are packaged in one or more hermetically sealed containers of a volume of no more than 5.0 ml each. Analytical reference samples derived from PCB waste material may be packaged in a container larger than 5.0 ml when packaged pursuant to applicable DOT performance standards.

(4) The quantity of PCBs manufactured, imported, processed, distributed in commerce, or exported annually must not exceed 500 grams by total weight of pure PCBs. Any person who expects to manufacture, import, process, distribute in commerce, or export more than 500 grams of PCBs in 1 year or to exceed the 5.0 ml packaging requirement must obtain a written approval from the Director, National Program Chemicals Division and must identify the sites of PCB activities and the quantity of PCBs to be manufactured, imported, processed, distributed in commerce, or exported. Each request must include a justification. The Director, National Program Chemicals Division, may grant approval without further rulemaking. Any increase granted will be in writing and will extend only for a maximum of the time remaining in a specific exemption year.

(5) All treated and untreated PCB regulated material and material coming into contact with regulated material must be stored and disposed of according to subpart D of this part, or decontaminated pursuant to § 761.79.

(6) All PCB materials must be distributed in DOT-authorized packaging.

(7) Records are maintained of their PCB activities for a period of 3 years after ceasing operations. The records must include the sources and the annual amounts of PCBs received if imported, the annual amount of PCBs that were manufactured, the annual amount of PCBs that were processed and/or distributed in commerce (to include export), and the persons to whom the PCBs were shipped.

* * * * *

t. By revising § 761.93 to read as follows:

§ 761.93 Import for disposal.

(a) *General provisions.* No person may import PCBs or PCB Items for disposal without an exemption issued under the authority of TSCA section 6(e)(3).

(b) [Reserved]

u. By revising § 761.97(a)(1) and (a)(2) to read as follows:

§ 761.97 Export for disposal.

(a) * * *

(1) PCBs and PCB Items at concentrations <50 ppm (or <10 μg PCB/100 cm^2 if no free-flowing liquids are present) may be exported for disposal.

(2) For the purposes of this section, PCBs and PCB Items of unknown concentrations shall be treated as if they contain ≥50 ppm.

* * * * *

v. By adding § 761.99 to subpart F to read as follows:

§ 761.99 Other transboundary shipments.

For purposes of this subpart, the following transboundary shipments are not considered exports or imports:

(a) PCB waste generated in the United States, transported outside the Customs Territory of the United States (including any residuals resulting from cleanup of spills of such wastes in transit) through another country or its territorial waters, or through international waters, and returned to the United States for disposal.

(b) PCB waste in transit, including any residuals resulting from cleanup of spills during transit, through the United States (e.g., from Mexico to Canada, from Canada to Mexico).

w. Section 761.125 is amended by revising the second sentence of the introductory text of paragraph (a)(1) and in paragraphs (a)(2) and (c)(4)(i) by revising the reference to ''§ 761.60'' to read ''subpart D of this part'', to read as follows:

§ 761.125 Requirements for PCB spill cleanup.

(a) * * *

(1) * * * For example, under the National Contingency Plan all spills involving 1 pound or more by weight of PCBs must currently be reported to the National Response Center (1-800-424-8802). * * *

* * * * *

§ 761.180 [Amended]

x. In § 761.180:

i. By revising the phrase in paragraph (e)(1) to ''§ 761.60(a)(2)(iii)(A)(*8*) and § 761.60(a)(3)(iii)(A)(*8*)'' to read ''§ 761.71(a)(1)(viii) and § 761.71(b)(1)(viii)''.

ii. By revising the phrase in paragraph (e)(2) to ''§ 761.60(a)(2)(iii)(A)(*7*) and § 761.60(a)(3)(iii)(A)(*7*)'' to read ''§ 761.71(a)(1)(vii) and § 761.71(b)(1)(vii)''.

iii. By revising the reference in paragraph (e)(3) to ''§ 761.60(a)(3)(iii)(B)(*6*)'' to read ''§ 761.71(b)(2)(vi)''.

iv. By adding paragraphs (a)(1)(iii), (a)(2)(ix), (a)(3), (a)(4), (b)(1)(iii), and (b)(5), and by revising the introductory text of paragraph (b)(3).

The revisions and additions read as follows:

§ 761.180 Records and monitoring.

* * * * *

(a) * * *

(1) * * *

(iii) Records of inspections and cleanups performed in accordance with § 761.65(c)(5).

(2) * * *

(ix) Whenever a PCB Item, excluding small capacitors, with a concentration of ≥50 ppm is distributed in commerce for reuse pursuant to § 761.20(c)(1), the name, address, and telephone number of the person to whom the item was transferred, date of transfer, and the serial number of the item or the internal identification number, if a serial number is not available, must be recorded in the annual document log. The serial number or internal identification number shall be permanently marked on the equipment.

(3) [Reserved]

(4) For purposes of this paragraph, PCB Voltage Regulators shall be recorded as PCB Transformers.

(b) * * *

(1) * * *

(iii) Records of inspections and cleanups performed in accordance with § 761.65(c)(5).

* * * * *

(3) The owner or operator of a PCB disposal facility (including an owner or operator who disposes of his/her own waste and does not receive or generate manifests) or a commercial storage facility shall submit an annual report, which briefly summarizes the records and annual document log required to be maintained and prepared under paragraphs (b)(1) and (b)(2) of this section to the EPA Regional Administrator of the Region in which the facility is located by July 15 of each year, beginning with July 15, 1991. The first annual report submitted on July 15, 1991, shall be for the period starting February 5, 1990, and ending December 31, 1990. The annual report shall contain no confidential business information. The annual report shall consist of the information listed in paragraphs (b)(3)(i) through (b)(3)(vi) of this section.

* * * * *

(5) For purposes of this paragraph, PCB Voltage Regulators shall be recorded and reported as PCB Transformers.

* * * * *

y. In § 761.205, by adding paragraph (f) to read as follows:

§ 761.205 Notification of PCB waste activity (EPA Form 7710-53).

* * * * *

(f) When a facility has previously notified EPA of its PCB waste handling activities using EPA Form 7710-53 and those activities change, the facility must resubmit EPA Form 7710-53 to reflect those changes no later than 30 days from when a change is made. Examples of when a PCB waste handler must renotify the Agency include, but are not limited to the following: the company changes location of the facility; or the company had notified solely as engaging in a certain type of PCB waste handling activity and now wishes to engage in another PCB waste activity (e.g., previously only commercially stored PCB waste and now wishes to transport PCB waste).

z. In § 761.207, by revising paragraph (j) to read as follows:

§ 761.207 The manifest—general requirements.

* * * * *

(j) The requirements of this section apply only to PCB wastes as defined in § 761.3. This includes PCB wastes with PCB concentrations below 50 ppm where the PCB concentration below 50 ppm was the result of dilution; these PCB wastes are required under § 761.1(b) to be managed as if they contained PCB concentrations of 50 ppm and above. An example of such a PCB waste is spill cleanup material containing <50 ppm PCBs when the spill involved material containing PCBs at a concentration of ≥50 ppm. However, there is no manifest requirement for material currently below 50 ppm which derives from pre-April 18, 1978, spills of any concentration, pre-July 2, 1979, spills of < 500 ppm PCBs, or materials decontaminated in accordance with § 761.79.

aa. In § 761.215, by revising the introductory text of paragraphs (b), (c), and (d), and adding paragraph (f) to read as follows:

§ 761.215 Exception reporting.

* * * * *

(b) A generator of PCB waste subject to the manifesting requirements shall submit an Exception Report to the EPA Regional Administrator for the Region in which the generator is located if the generator has not received a copy of the manifest with the hand written signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter. The exception report shall be submitted to EPA no later than 45 days from the date on which the generator should have received the manifest. The Exception Report shall include the following:

* * * * *

(c) A disposer of PCB waste shall submit a One-year Exception Report to the EPA Regional Administrator for the Region in which the disposal facility is located no later than 45 days from the end of the 1-year storage for disposal date when the following occurs:

* * * * *

(d) A generator or commercial storer of PCB waste who manifests PCBs or PCB Items to a disposer of PCB waste shall submit a One-year Exception

Report to the EPA Regional Administrator for the Region in which the generator or commercial storer is located no later than 45 days from the date the following occurs:

* * * * *

(f) PCB/radioactive waste that is exempt from the 1-year storage for disposal time limit pursuant to § 761.65(a)(1) is also exempt from the exception reporting requirements of paragraphs (c), (d), and (e) of this section.

bb. In § 761.218, by revising paragraph (b) to read as follows:

§ 761.218 Certificate of disposal.

* * * * *

(b) The owner or operator of the disposal facility shall send the Certificate of Disposal to the generator identified on the manifest which accompanied the shipment of PCB waste within 30 days of the date that disposal of each item of PCB waste identified on the manifest was completed unless the generator and the disposer contractually agree to another time frame.

* * * * *

cc. By adding subparts L, M, N, O, P, Q, R, S, and T to read as follows:

Subpart L—[Reserved]

Subpart M—Determining a PCB Concentration for Purposes of Abandonment or Disposal of Natural Gas Pipeline: Selecting Sample Sites, Collecting Surface Samples, and Analyzing Standard PCB Wipe Samples

Sec.

761.240 Scope and definitions.
761.243 Standard wipe sample method and size.
761.247 Sample site selection for pipe segment removal or pipeline section abandonment.
761.250 Sample site selection for pipeline section abandonment.
761.253 Chemical analysis.
761.257 Determining the regulatory status of sampled pipe.

Subpart N—Cleanup Site Characterization Sampling for PCB Remediation Waste in Accordance with § 761.61(a)(2)

Sec.

761.260 Applicability.
761.265 Sampling bulk PCB remediation waste and porous surfaces.
761.267 Sampling non-porous surfaces.
761.269 Sampling liquid PCB remediation waste.
761.272 Chemical extraction and analysis of samples.
761.274 Reporting PCB concentrations in samples.

Subpart O—Sampling to Verify Completion of Self-Implementing Cleanup and On-Site Disposal of Bulk PCB Remediation Waste and Porous Surfaces in Accordance with § 761.61(a)(6)

Sec.

761.280 Application and scope.
761.283 Determination of the number of samples to collect and sample collection locations.
761.286 Sample size and procedure for collecting a sample.
761.289 Compositing samples.
761.292 Chemical extraction and analysis of individual samples and composite samples.
761.295 Reporting and recordkeeping of the PCB concentrations in samples.
761.298 Decisions based on PCB concentration measurements resulting from sampling.

Subpart P—Sampling Non-Porous Surfaces for Measurement-Based Use, Reuse, and On-Site or Off-Site Disposal under § 761.61(a)(6) and Determination under § 761.79(b)(3)

Sec.

761.300 Applicability.
761.302 Proportion of the total surface area to sample.
761.304 Determining sample location.
761.306 Sampling 1 meter square surfaces by random selection of halves.
761.308 Sample selection by random number generation on any two-dimensional square grid.
761.310 Collecting the sample.
761.312 Compositing of samples.
761.314 Chemical analysis of standard wipe test samples.
761.316 Interpreting PCB concentration measurements resulting from this sampling scheme.

Subpart Q—Self-Implementing Alternative Extraction and Chemical Analysis Procedures for Non-liquid PCB Remediation Waste Samples

Sec.

761.320 Applicability.
761.323 Sample preparation.
761.326 Conducting the comparison study.

Subpart R—Sampling Non-Liquid, Non-Metal PCB Bulk Product Waste for Purposes of Characterization for PCB Disposal in Accordance With § 761.62, and Sampling PCB Remediation Waste Destined for Off-Site Disposal, in Accordance With § 761.61

Sec.

761.340 Applicability.
761.345 Form of the waste to be sampled.
761.346 Three levels of sampling.
761.347 First level sampling—waste from existing piles.
761.348 Contemporaneous sampling.
761.350 Subsampling from composite samples.
761.353 Second level of sample selection.
761.355 Third level of sample selection.
761.356 Conducting a leach test.
761.357 Reporting the results of the procedure used to simulate leachate generation.
761.358 Determining the PCB concentration of samples of waste.
761.359 Reporting the PCB concentrations in samples.

Subpart S—Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces

Sec.

761.360 Background.
761.363 Applicability.
761.366 Cleanup equipment.
761.369 Pre-cleaning the surface.
761.372 Specific requirements for relatively clean surfaces.
761.375 Specific requirements for surfaces coated or covered with dust, dirt, grime, grease, or another absorbent material.
761.378 Decontamination, reuse, and disposal of solvents, cleaners, and equipment.

Subpart T—Comparison Study for Validating a New Performance-Based Decontamination Solvent under § 761.79(d)(4)

Sec.

761.380 Background.
761.383 Applicability.
761.386 Required experimental conditions for the validation study and subsequent use during decontamination.
761.389 Testing parameter requirements.
761.392 Preparing validation study samples.
761.395 A validation study.
761.398 Reporting and recordkeeping.

Subpart L [Reserved]

Subpart M—Determining a PCB Concentration for Purposes of Abandonment or Disposal of Natural Gas Pipeline: Selecting Sample Sites, Collecting Surface Samples, and Analyzing Standard PCB Wipe Samples

§ 761.240 Scope and definitions.

(a) Use these procedures to select surface sampling sites for natural gas pipe to determine its PCB surface concentration for abandonment-in-place or removal and disposal off-site in accordance with § 761.60(b)(5).

(b) ''Pipe segment'' means a length of natural gas pipe that has been removed from the pipeline system to be disposed of or reused, and that is usually approximately 12.2 meters (40 feet) or shorter in length. Pipe segments are usually linear.

(c) ''Pipeline section'' means a length of natural gas pipe that has been cut or otherwise separated from the active pipeline, usually for purposes of abandonment, and that is usually longer than 12.2 meters in length. Pipeline sections may be branched.

§ 761.243 Standard wipe sample method and size.

(a) Collect a surface sample from a natural gas pipe segment or pipeline

section using a standard wipe test as defined in § 761.123. Detailed guidance for the entire wipe sampling process appears in the document entitled ''Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by the Environmental Protection Agency PCB Spill Cleanup Policy,'' dated June 23, 1987 and revised on April 18, 1991. This document is available from the TSCA Assistance Information Service, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(b) Collect a surface sample from a minimum surface area of 100 cm^2 at each sampling site selected. The EPA Regional Administrator may approve, in writing, requests to collect a sample from smaller surface areas, when <100 cm^2 of surface eligible for sampling is present; e.g., when sampling a small diameter pipe, a small valve, or a small regulator. When smaller surfaces are sampled, convert the measurement to the equivalent measurement for 100 cm^2 for purposes of comparison to standards based on 100 cm^2.

§ 761.247 Sample site selection for pipe segment removal or pipeline section abandonment.

(a) *General.* (1) Select the pipe segments to be sampled by following the directions in paragraph (b) of this section.

(2) Locate the proper position along the length of the pipe segment that you have selected for sampling, by following the directions in paragraph (c) of this section.

(3) Select the proper sampling position around the circumference of the pipe segment or pipeline section that you have selected for sampling, by following the directions in paragraph (d) of this section.

(4) Prior to removing pipe from the ground or lifting the pipe from its location during former operations, mark the top side of the pipe.

(5) Do not sample if there are free-flowing liquids in the pipe segment. Free-flowing liquids must be removed prior to sampling.

(b) *Selecting pipe segments to sample.* Select the pipe segment(s) that you will sample from a length of pipe or group of pipe segments, as follows:

(1) Do not sample a pipe segment that is longer than 12.2 meters (40 feet). If a segment is longer than 12.2 meters in length, cut the segment so that all resulting segments are 12.2 meters or less in length.

(2) Determine which pipe segments to sample as follows:

(i) When a length of pipe having seven or fewer segments is removed for purposes of disposal, sample each pipe segment.

(ii) When removing a length of pipe having multiple contiguous segments less than 3 miles in total length, take samples from a total of seven segments.

(A) Sample the first and last segments removed.

(B) Select the five additional segments according to one of the two following procedures:

(*1*) Assign all segments a unique sequential number. Then select five numbers using a random number table or random number generator. If the random number generator or random number table produces either the first pipe segment, the last pipe segment, or any previously selected segment, select another random number until there are seven different numbers, each corresponding to a different pipe segment.

(*2*) Divide the total number of segments by six. Round the resulting quotient off to the nearest whole number. The resulting number is the interval between the segments you will sample. For example, cut a 2.9 mile section of pipeline into 383 segments of approximately 40 feet each. Sample the first (number 1) and last (number 383) segments. To determine which additional five segments to sample, divide the total number of segments, 383, by 6. Round up the resulting number in this example, 63.8, to the next whole number, 64. Add 64 to the number of each preceding pipe segment five separate times to select five additional pipe segments for sampling. In this example, the first pipe segment has the number 1, add 64 to 1 to select segment 65. Next, add 64 to 65 to select segment 129. Continue in this fashion to select all seven segments: 1, 65, 129, 193, 257, 321, and 383.

(iii) When removing a length of pipe having multiple contiguous segments more than 3 miles in total length for purposes of disposal, take samples of each segment that is ½ mile distant from the segment previously sampled. Sample a minimum of seven segments.

(c) *Selecting the sampling position—length.* Select the sampling position along the length of the pipeline section or pipe segment, as follows:

(1) Take samples at the end upstream of the former gas flow of each segment removed.

(2) If the pipe segment is cut with a torch or other high temperature heat source, take the sample at least 15 cm (6 inches) inside the cut end of the pipe segment.

(3) If the pipe segment is cut with a saw or other mechanical device, take the sample at least 2 cm (1 inch) inside the end of the pipe segment.

(4) If the sample site location selected in the procedure at paragraph (c)(2) or (c)(3) of this section is a porous surface (for example, there is significant corrosion so that the wipe material will be shredded), then move the sample site further inside the pipe segment (away from the end of the pipe or pipe segment) until there is no such porous surface. For purposes of this subpart, natural gas pipe with a thin porous corrosion preventive coating is a non-porous surface.

(5) If there is not a non-porous surface accessible by paragraphs (c)(2) and (c)(3) of this section, use one of the following three options:

(i) Sample the downstream end of the pipe segment using the same sample site location procedure as for the upstream end.

(ii) Select another pipe segment using the random selection procedure described in paragraph (b) of this section.

(iii) If there is no other pipeline section or pipe segment in the population to be sampled and both ends of a pipe segment have porous surfaces at all possible sample collection sites, then assume that the pipe segment contains ≥50 ppm PCB but <500 ppm PCB.

(d) *Selecting the sample position—circumference.* Based on the mark on the top of the pipe segment made prior to removing pipe from the ground or lifting the pipe from its location during former operations, sample the inside center of the bottom of the pipe being sampled. Make sure the sample is centered on the bottom of the pipeline section or pipe segment; that is, sample an equal area on both sides of the middle of the bottom of the pipeline section or pipe segment for the entire length of the sample.

§ 761.250 Sample site selection for pipeline section abandonment.

This procedure is for the sample site selection for a pipeline section to be abandoned, in accordance with § 761.60(b)(5)(i)(B).

(a) *General.* (1) Select sample collection sites in the pipeline section(s) by following the directions in paragraph (b) of this section.

(2) Select the proper sampling position along the pipe by following the directions in § 761.247(d).

(3) Assure, by visual inspection, the absence of free-flowing liquids in the pipe by affirming no liquids at all liquid collection points and all ends of the pipeline section to be abandoned.

(b) *Selection sample collection sites.* At a minimum, sample all ends of all pipeline sections to be abandoned in place.

(1) If the pipeline section to be abandoned is between the pressure side of one compressor station and the suction side of the next compressor station downstream of the former gas flow, at a minimum, sample all ends of the abandoned pipe.

(2) If the pipeline section to be abandoned is longer than the distance between the pressure side of one compressor station and the suction side of the next compressor station downstream of the former gas flow, divide the pipeline section, for purposes of sampling, into smaller pipeline sections no longer than the distance from the pressure side of one compressor station to the suction side of the next compressor station downstream of the former gas flow. Consider each of the smaller sections to be a separate abandonment and sample each one, at a minimum, at all ends.

(3) Use the following procedure to locate representative sample collection sites in pipeline sections at points other than the suction and pressure side of compressor stations, or the ends of the pipeline section to be abandoned.

(i) First, assign a unique identifying sequential number to each kilometer or fraction of a kilometer length of pipe within the entire pipeline section.

(ii) Use a random number table or a random number generator to select each representative sample collection site from a complete list of the sequential identification numbers.

(iii) Samples may be collected by removing any covering soil, cutting the pipe to gain access to the sampling location, and collecting the surface sample with the pipe in place, rather than completely removing the pipeline sections to collect the surface sample.

§ 761.253 Chemical analysis.

(a) Extract PCBs from the standard wipe sample collection medium and clean-up the extracted PCBs in accordance with either Method 3500B/3540C or Method 3500B/3550B from EPA's SW-846, Test Methods for Evaluating Solid Waste, or a method validated under subpart Q of this part. Use Method 8082 from SW-846, or a method validated under subpart Q of this part, to analyze these extracts for PCBs.

(b) Report all PCB sample concentrations in µg/100 cm^2 (16 square inches) of surface sampled. If sampling an area smaller than 100 cm^2, report converted sample concentrations in accordance with § 761.243(b).

§ 761.257 Determining the regulatory status of sampled pipe.

(a) For purposes of removal for disposal of a pipe segment that has been sampled, the sample results for that segment determines its PCB surface concentration. Determine the PCB surface concentration of a segment which was not sampled as follows:

(1) If the unsampled pipe segment is between two pipe segments which have been sampled, assume that the unsampled segment has the same PCB surface concentration as the nearest sampled pipe segment.

(2) If an unsampled pipe segment is equidistant between two pipe segments which have been sampled, assume the PCB surface concentration of the unsampled segment to be the arithmetic mean of the PCB surface concentrations measured in the two equidistant, sampled, pipe segments.

(b) For purposes of abandonment of a pipeline section, assume that the PCB surface concentration for an entire pipeline section is the arithmetic mean of the PCB surface concentrations measured at the ends of the pipeline section. If additional representative samples were taken in a pipeline section, assume that the PCB surface concentration for the entire pipeline section is the arithmetic mean of the concentrations measured in all representative samples taken.

(c) For purposes of removal for disposal under § 761.60(b)(5)(ii)(A)(*1*) or abandonment under § 761.60(b)(5)(i)(B), if the surface PCB concentration of a pipe segment, determined by direct measurement or in accordance with paragraph (a) of this section, or of a pipeline section as determined in accordance with paragraph (b) of this section, is >10 µg/100 cm^2, but <100 µg/100 cm^2, then that segment or section is PCB-Contaminated.

Subpart N—Cleanup Site Characterization Sampling for PCB Remediation Waste in Accordance with § 761.61(a)(2)

§ 761.260 Applicability.

This subpart provides a method for collecting new data for characterizing a PCB remediation waste cleanup site or for assessing the sufficiency of existing site characterization data, as required by § 761.61(a)(2).

§ 761.265 Sampling bulk PCB remediation waste and porous surfaces.

(a) Use a grid interval of 3 meters and the procedures in §§ 761.283 and 761.286 to sample bulk PCB remediation waste that is not in a container and porous surfaces.

(b) Use the following procedures to sample bulk PCB remediation waste that is in a single container.

(1) Use a core sampler to collect a minimum of one core sample for the entire depth of the waste at the center of the container. Collect a minimum of 50 cm^3 of waste for analysis.

(2) If more than one core sample is taken, thoroughly mix all samples into a composite sample. Take a subsample of a minimum of 50 cm^3 from the mixed composite for analysis.

(c) Use the following procedures to sample bulk PCB remediation waste that is in more than one container.

(1) Segregate the containers by type (for example, a 55-gallon drum and a roll-off container are types of containers).

(2) For fewer than three containers of the same type, sample all containers.

(3) For more than three containers of the same type, list the containers and assign each container an unique sequential number. Use a random number generator or table to select a minimum of 10 percent of the containers from the list, or select three containers, whichever is the larger.

(4) Sample the selected container(s) according to paragraph (b) of this section.

§ 761.267 Sampling non-porous surfaces.

(a) Sample large, nearly flat, non-porous surfaces by dividing the surface into roughly square portions approximately 2 meters on each side. Follow the procedures in § 761.302(a).

(b) It is not necessary to sample small or irregularly shaped surfaces.

§ 761.269 Sampling liquid PCB remediation waste.

(a) If the liquid is single phase, collect and analyze one sample. There are no required procedures for collecting a sample.

(b) If the liquid is multi-phasic, separate the phases, and collect and analyze a sample from each liquid phase. There are no required procedures for collecting a sample from each single phase liquid.

(c) If the liquid has a non-liquid phase which is >0.5 percent by total weight of the waste, separate the non-liquid phase from the liquid phase and sample it separately as a non-liquid in accordance with § 761.265.

§ 761.272 Chemical extraction and analysis of samples.

Use either Method 3500B/3540C or Method 3500B/3550B from EPA's SW-846, Test Methods for Evaluating Solid Waste, or a method validated under subpart Q of this part, for chemical

extraction of PCBs from individual and composite samples of PCB remediation waste. Use Method 8082 from SW-846, or a method validated under subpart Q of this part, to analyze these extracts for PCBs.

§ 761.274 Reporting PCB concentrations in samples.

(a) Report all sample concentrations for non-liquid PCBs on a dry weight basis as micrograms of PCBs per gram of sample (ppm by weight). Report surface sampling results as µg/100 cm^2. Divide 100 cm^2 by the surface area and multiply this quotient by the total number of micrograms of PCBs on the surface to obtain the equivalent measurement of micrograms per 100 cm^2.

(b) Report all sample concentrations for liquid PCBs on a wet weight basis as micrograms of PCBs per gram of sample (ppm by weight).

Subpart O—Sampling to Verify Completion of Self-Implementing Cleanup and On-Site Disposal of Bulk PCB Remediation Waste and Porous Surfaces in Accordance with § 761.61(a)(6)

§ 761.280 Application and scope.

Follow the procedures in this subpart when sampling to verify completion of the cleanup for self-implementing, on-site disposal of bulk PCB remediation waste and porous surfaces consistent with the levels of § 761.61(a)(4)(i) and (iii). The objective of this subpart is not to search for new contamination. Confirmation of compliance with the cleanup levels in § 761.61(a)(4) is only verifiable for the area sampled in accordance with this subpart. Do not make conclusions or extrapolations about PCB concentrations outside of the area which has been cleaned up and verified based on the results of this verification sampling.

§ 761.283 Determination of the number of samples to collect and sample collection locations.

This section addresses how to determine the number of samples to collect and sample collection locations for bulk PCB remediation waste and porous surfaces destined to remain at a cleanup site after cleanup.

(a) *Minimum number of samples.* (1) At each separate cleanup site at a PCB remediation waste location, take a minimum of three samples for each type of bulk PCB remediation waste or porous surface at the cleanup site, regardless of the amount of each type of waste that is present. There is no upper limit to the number of samples required or allowed.

(2) This is an example of how to calculate the minimum number of required samples at a PCB remediation waste location. There are three distinct cleanup sites at this example location: a loading dock, a transformer storage lot, and a disposal pit. The minimum number of samples to take appears in parentheses after each type of waste for each cleanup site. The PCB remediation wastes present at the loading dock are concrete (three samples) and clay soil (three samples). The non-liquid PCB remediation wastes present at the transformer storage lot are oily soil (three samples), clay soil (three samples) and gravel (three samples). The PCB remediation wastes present at the disposal pit are sandy soil (three samples), clay soil (three samples), oily soil (three samples), industrial sludge (three samples), and gravel (three samples).

(b) *Selection of sample locations--general.* (1)(i) Use a square-based grid system to overlay the entire area to be sampled. Orient the grid axes on a magnetic north-south line centered in the area and an east-west axis perpendicular to the magnetic north-south axis also centered in the area.

(ii) If the site is recleaned based on the results of cleanup verification conducted in accordance with § 761.61(a)(6), follow the procedures in paragraph (b) of this section for locating sampling points after the recleaning, but reorient the grid axes established in paragraph (b)(1)(i) of this section by moving the origin one meter in the direction of magnetic north and one meter in the direction east of magnetic north.

(2) Mark out a series of sampling points 1.5 meters apart oriented to the grid axes. The sampling points shall proceed in every direction to the extent sufficient to result in a two-dimensional grid completely overlaying the sampling area.

(3) Collect a sample at each point if the grid falls in the cleanup area. Analyze all samples either individually or according to the compositing schemes provided in the procedures at § 761.289. So long as every sample collected at a grid point is analyzed as either an individual sample or as part of a composite sample, there are no other restrictions on how many samples are analyzed.

(c) *Selection of sample locations--small cleanup sites.* When a cleanup site is sufficiently small or irregularly shaped that a square grid with a grid interval of 1.5 meters will not result in a minimum of three sampling points for each type of bulk PCB remediation waste or porous surface at the cleanup site, there are two options.

(1) Use a smaller square grid interval and the procedures in paragraph (b) of this section.

(2) Use the following coordinate-based random sampling scheme. If the site is recleaned based on the results of cleanup verification conducted in accordance with § 761.61(a)(6), follow the procedures in this section for locating sampling points after the recleaning, but select three new pairs of sampling coordinates.

(i) Beginning in the southwest corner (lower left when facing magnetic north) of the area to be sampled, measure in centimeters (or inches) the maximum magnetic north-south dimension of the area to be sampled. Next, beginning in the southwest corner, measure in centimeters (or inches) the maximum magnetic east-west dimension of the area to be sampled. Designate the north-south and east-west dimensions (describing the west and south boundaries, respectively, of the area to be sampled), as the reference axes of a square-based grid system.

(ii) Use a random number table or random number generator to select a pair of coordinates that will locate the sample within the area to be sampled. The first coordinate in the pair is the measurement on the north-south axis. The second coordinate in the pair is the measurement on the east-west axis. Collect the sample at the intersection of an east-west line drawn through the measured spot on the north-south axis, and a north-south line drawn through the measured spot on the east-west axis. If the cleanup site is irregularly shaped and this intersection falls outside the cleanup site, select a new pair of sampling coordinates. Continue to select pairs of sampling coordinates until three are selected for each type of bulk PCB remediation waste or porous surface at the cleanup site.

(d) *Area of inference.* Analytical results for an individual sample point apply to the sample point and to an area of inference extending to four imaginary lines parallel to the grid axes and one half grid interval distant from the sample point in four different directions. The area of inference forms a square around the sample point. The sides of the square are parallel to the grid axes and one grid interval in length. The sample point is in the center of the square area of inference. The area of inference from a composite sample is the total of the areas of the individual samples included in the composite.

§ 761.286 Sample size and procedure for collecting a sample.

At each selected sampling location for bulk PCB remediation waste or porous surfaces, collect at least 20 milliliters of waste, or a portion of sufficient weight for the chemical analyst to measure the concentration of PCBs and still have sufficient analytical detection sensitivity to reproducibly measure PCBs at the levels designated in § 761.61(a)(4). Use a core sampler having a diameter ≥2 cm and ≤3 cm. Collect waste to a maximum depth of 7.5 cms.

§ 761.289 Compositing samples.

Compositing is a method of combining several samples of a specific type of bulk PCB remediation waste or porous surface from nearby locations for a single chemical analysis. There are two procedures for compositing bulk PCB remediation waste samples. These procedures are based on the method for selecting sampling site locations in § 761.283(b) and (c). The single chemical analysis of a composite sample results in an averaging of the concentrations of its component samples. The area of inference of a composite is determined by the area of inference of each of its component samples as described in § 761.283(d). Compositing is not mandatory. However, if compositing is used, it must be performed in accordance with the following procedures.

(a) *Compositing in the field or in a laboratory*. Compositing may occur either in the field or in a laboratory. Prepare composite samples using equal volumes of each constituent or component sample. Composited samples must be from the same type of bulk PCB remediation waste or porous surface (see the example at § 761.283(a)(2)). Mix composite samples thoroughly. From each well-mixed composite sample, take a portion of sufficient weight for the chemical analyst to measure the concentration of PCBs and still have sufficient analytical detection sensitivity to reproducibly measure PCBs at the levels designated in § 761.61(a)(4).

(b)(1) *Compositing from samples collected at grid points in accordance with § 761.283(b).* There are two kinds of composite sampling procedures depending on the original source of contamination of the site.

(i) The first procedure is for sites with multiple point sources of contamination (such as an old electrical equipment storage area, a scrap yard, or repair shop) or for unknown sources of contamination. Under this compositing scheme, composite a maximum of nine samples for each type of bulk PCB remediation waste or porous surface at the cleanup site. The maximum dimensions of the area enclosing a nine grid point composite is two grid intervals bounded by three collinear grid points (3.0 meters or approximately 10 feet long). Take all samples in the composite at the same depth. Assure that composite sample areas and individually analyzed samples completely overlay the cleanup site.

(ii) The second procedure is for a single point source of contamination, such as discharge into a large containment area (e.g., pit, waste lagoon, or evaporation pond), or a leak onto soil from a single drum or tank. Single point source contamination may be from a one-time or continuous contamination. Composites come from two stages: an initial compositing area centered in the area to be sampled, and subsequent compositing areas forming concentric square zones around the initial compositing area. The center of the initial compositing area and each of the subsequent compositing areas is the origin of the grid axes.

(A) *Definition of the initial compositing area.* The initial compositing area is based on a square that contains nine grid points, is centered on the grid origin, and has sides two grid intervals long. The initial compositing area has the same center as this square and sides one half a grid interval more distant from the center than the square. The initial compositing area has sides three grid intervals long.

(B) *Definition of subsequent compositing areas.* Subsequent composite sampling areas are in concentric square zones one grid interval wide around the initial compositing area and around each successive subsequent compositing area. The inner boundary of the first subsequent compositing area is the outer boundary of the initial compositing area. The outer boundary of the first subsequent compositing area is centered on the grid origin, has sides one grid interval more distant from the grid origin than the inner boundary, and is two grid intervals longer on a side than the inner boundary. The inner boundary of each further subsequent compositing area is the outer boundary of the previous subsequent compositing area. The outer boundary of each further subsequent compositing area is centered on the grid origin, has sides one grid interval more distant from the grid origin than the inner boundary, and is two grid intervals longer on a side than the inner boundary.

(C) *Taking composite samples from the initial and subsequent compositing areas.* (*1*) Select composite sampling areas from the initial compositing area and subsequent compositing areas such that all grid points in the initial compositing area and subsequent compositing areas are part of a composite or individual sample.

(*2*) A person may include in a single composite sample a maximum of all nine grid points in the initial compositing area. The maximum number of grid points in a composite sample taken from a subsequent compositing area is eight. These eight grid points must be adjacent to one another in the subsequent compositing area, but need not be collinear.

(2) *Compositing from samples taken at grid points or pairs of coordinates in accordance with § 761.283(c).* Samples collected at small sites are based on selecting pairs of coordinates or using the sample site selection procedure for grid sampling with a smaller grid interval.

(i) *Samples collected from a grid having a smaller grid interval.* Use the procedure in paragraph (b)(1)(i) of this section to composite samples and determine the area of inference for composite samples.

(ii) *Samples collected from pairs of coordinates.* All three samples must be composited. The area of inference for the composite is the entire area sampled.

§ 761.292 Chemical extraction and analysis of individual samples and composite samples.

Use either Method 3500B/3540C or Method 3500B/3550B from EPA's SW-846, Test Methods for Evaluating Solid Waste, or a method validated under subpart Q of this part, for chemical extraction of PCBs from individual and composite samples of PCB remediation waste. Use Method 8082 from SW-846, or a method validated under subpart Q of this part, to analyze these extracts for PCBs.

§ 761.295 Reporting and recordkeeping of the PCB concentrations in samples.

(a) Report all sample concentrations for bulk PCB remediation waste and porous surfaces on a dry weight basis and as micrograms of PCBs per gram of sample (ppm by weight).

(b) Record and keep on file for 3 years the PCB concentration for each sample or composite sample.

§ 761.298 Decisions based on PCB concentration measurements resulting from sampling.

(a) For grid samples which are chemically analyzed individually, the PCB concentration applies to the area of inference as described in § 761.283(d).

(b) For grid samples analyzed as part of a composite sample, the PCB concentration applies to the area of inference of the composite sample as described in § 761.283(d) (i.e., the area of inference is the total of the areas of the individual samples included in the composite).

(c) For coordinate pair samples analyzed as part of a composite sample, in accordance with §§ 761.283(c)(2) and 761.289(b)(2)(ii), the PCB concentration applies to the entire cleanup site.

Subpart P—Sampling Non-Porous Surfaces for Measurement-Based Use, Reuse, and On-Site or Off-Site Disposal under § 761.61(a)(6) and Decontamination under § 761.79(b)(3)

§ 761.300 Applicability.

This subpart provides sample site selection procedures for large, nearly flat non-porous surfaces, and for small or irregularly shaped non-porous surfaces. This subpart also provides procedures for analyzing the samples and interpreting the results of the sampling. Any person verifying completion of self-implementing cleanup and on-site disposal of non-porous surfaces under § 761.61(a)(6), or verifying that decontamination standards under § 761.79(b)(3) are met, must use these procedures.

§ 761.302 Proportion of the total surface area to sample.

(a) *Large nearly flat surfaces.* Divide the entire surface into approximately 1 meter square portions and mark the portions so that they are clearly identified. Determine the sample location in each portion as directed in § 761.304.

(1) For large nearly flat surfaces contaminated by a single source of PCBs with a uniform concentration, assign each 1 meter square surface a unique sequential number.

(i) For three or fewer 1 meter square areas, sample all of the areas.

(ii) For four or more 1 meter square areas, use a random number generator or table to select a minimum of 10 percent of the areas from the list, or to select three areas, whichever is more.

(2) For other large nearly flat surfaces, sample all of the one meter square areas.

(b) *Small or irregularly shaped surfaces.* For small surfaces having irregular contours, such as hand tools, natural gas pipeline valves, and most exterior surfaces of machine tools, sample the entire surface. Any person may select sampling locations for small, nearly flat surfaces in accordance with § 761.308 with the exception that the maximum area in § 761.308(a) is <1 meter square.

(c) *Preparation of surfaces.* Drain all free-flowing liquids from surfaces and brush off dust or loose grit.

§ 761.304 Determining sample location.

(a) For 1 square meter non-porous surface areas having the same size and shape, it is permissible to sample the same 10 cm by 10 cm location or position in each identical 1 square meter area. This location or position is determined in accordance with § 761.306 or § 761.308.

(b) If some 1 square meter surfaces for a larger non-porous surface area have different sizes and shapes, separately select the 10 cm by 10 cm sampling position for each different 1 square meter surface in accordance with § 761.308.

(c) If non-porous surfaces have been cleaned and the cleaned surfaces do not meet the applicable standards or levels, surfaces may be recleaned and resampled. When resampling surfaces previously sampled to verify cleanup levels, use the sampling procedures in §§ 761.306 through 761.316 to resample the surfaces. If any sample site selected coincides with a previous sampling site, restart the sample selection process until all resampling sites are different from any previous sampling sites.

§ 761.306 Sampling 1 meter square surfaces by random selection of halves.

(a) Divide each 1 meter square portion where it is necessary to collect a surface wipe test sample into two equal (or as nearly equal as possible) halves. For example, divide the area into top and bottom halves or left and right halves. Choose the top/bottom or left/right division that produces halves having as close to the shape of a circle as possible. For example, a square is closer to the shape of a circle than is a rectangle and a rectangle having a length to width ratio of 2:1 is closer to the shape of a circle than a rectangle having a length to width ratio of 3:1.

(b) Assign a unique identifier to each half and then select one of the halves for further sampling with a random number generator or other device (i.e., by flipping a coin).

(c) Continue selecting progressively smaller halves by dividing the previously selected half, in accordance with paragraphs (a) and (b) of this section, until the final selected half is larger than or equal to 100 cm^2 and smaller than 200 cm^2.

(d) Perform a standard PCB wipe test on the final selected halves from each 1 meter square portion.

(e) The following is an example of applying sampling by halves. Assume that the area to sample is a 1 meter square surface area (a square that has sides 1 meter long). Assign each half to one face of a coin. After flipping the coin, the half assigned to the face of the coin that is showing is the half selected.

(1) Selecting the first half:

(i) For a square shape the top/bottom halves have the same shape as the left/right halves when compared to a circle, i.e., regardless of which way the surface is divided, each half is 1 half meter wide by 1 meter long. Therefore, divide the area either top/bottom or left/right. For selecting the first half, this example will select from left/right halves.

(ii) A coin flip selects the left half. The dimensions of this selected surface area are 1 meter high and ½ meter wide.

(2) Selecting the second half:

(i) If the next selection of halves was left/right, the halves would be rectangles four times as long as they are wide (¼ meter wide and 1 meter high). Halves selected from top/bottom would be square (½ meter on a side). Therefore, select the next halves top/bottom, because the shape of the top/bottom halves (square) is closer to the shape of a circle than the shape of the left/right halves (long narrow rectangles).

(ii) A coin flip selects the top half. The dimensions of this selected surface area are ½ meter high and ½ meter wide.

(3) Selecting the third half:

(i) Just as for the selection of the first half, which divided the original square area, both the left/right and the top/bottom halves have the same shape when compared to a circle (both are rectangles having the same dimensions). Therefore, choose either left/right or top/bottom halves. This example will select from left/right halves.

(ii) A coin flip selects the right half. The dimensions of this selected surface are ¼ meter by ½ meter.

(4) Selecting the fourth half:

(i) If the next selection of halves was left/right, the halves would be rectangles four times as long as they are wide (⅛ meter wide and ½ meter high. Halves selected from top/bottom would be square (¼ meter on a side). Therefore, select the next halves top/bottom, because the shape of the top/bottom halves (square) are closer to the shape of a circle than the shape of the left/right halves (long narrow rectangles).

(ii) A coin flip selects the bottom half. The dimensions of this selected surface area are ¼ meter high and ¼ meter wide.

(5) Selecting the fifth half:

(i) Just as for the selection of the first and third halves, both the left/right and the top/bottom halves have the same

shape when compared to a circle (both are rectangles having the same dimensions). Therefore, choose either left/right or top/bottom halves. This example will select from left/right halves.

(ii) A coin flip selects the right half. The dimensions of the selected surface are ⅛ meter by ¼ meter.

(6) Selecting the sixth half:

(i) If the next selection of halves was left/right, the halves would be rectangles four times as long as they are wide (1/16 meter wide and ¼ meter high. Halves selected from top/bottom would be square (⅛ meter on a side). Therefore, select the next halves top/bottom, because the shape of the top/bottom halves (square) are closer to the shape of a circle than the shape of the left/right halves (long narrow rectangles).

(ii) A coin flip selects the top half. The dimensions of this selected surface are ⅛ meter high and ⅛ meter wide or 12.5 cm by 12.5 cm.

(7) Collect a standard wipe test sample in the sixth half. Since the dimensions of half of the sixth half would be 12.5 cm by 6.25 cm, the area (approximately 78 cm^2) would be less than the required 100 cm^2 minimum area for the standard wipe test. Therefore, no further sampling by halves is necessary. Take the standard wipe test samples of the entire selected sixth half.

§ 761.308 Sample selection by random number generation on any two-dimensional square grid.

(a) Divide the surface area of the non-porous surface into rectangular or square areas having a maximum area of 1 square meter and a minimum dimension of 10 centimeters.

(b) Measure the length and width, in centimeters, of each area created in paragraph (a) of this section. Round off the number of centimeters in the length and the width measurements to the nearest centimeter.

(c) For each 1 square meter area created in accordance with paragraph (a) of this section, select two random numbers: one each for the length and width borders measured in paragraph (b) of this section. An eligible random number can be from zero up to the total width, minus 10 centimeters.

(d) Locate the 10 centimeter by 10 centimeter sample.

(1) Orient the 1 square meter surface area so that, when you are facing the area, the length is left to right and the width is top to bottom. The origin, or reference point for measuring selected random numbers of centimeters to the sampling area, is on the lower left corner when facing the surface.

(2) Mark the random number selected for the length distance, in centimeters, from the origin to the right (at the bottom of the area away from the origin).

(3) From the marked length distance on the bottom of the area, move perpendicularly up from the bottom of the area into the area for the distance randomly selected for the width.

(4) Use the point determined in paragraph (d)(3) of this section as the lower left corner of the 10 centimeter by 10 centimeter sample.

§ 761.310 Collecting the sample.

Use the standard wipe test as defined in § 761.123 to sample one 10 centimeter by 10 centimeter square (100 cm^2) area to represent surface area PCB concentrations of each square meter or fraction of a square meter of a nearly flat, non-porous surface. For small surfaces, use the same procedure as for the standard wipe test, only sample the entire area, rather than 10 centimeter by 10 centimeter squares.

§ 761.312 Compositing of samples.

For a surface originally contaminated by a single source of PCBs with a uniform concentration, it is permissible to composite surface wipe test samples and to use the composite measurement to represent the PCB concentration of the entire surface. Composite samples consist of more than one sample gauze extracted and chemically analyzed together resulting in a single measurement. The composite measurement represents an arithmetic mean of the composited samples.

(a) *Compositing samples from surfaces to be used or reused.* For small or irregularly shaped surfaces or large nearly flat surfaces, if the surfaces are contaminated by a single source of PCBs with a uniform concentration, composite a maximum of three adjacent samples.

(b) *Compositing samples from surfaces to be disposed of off-site or on-site.* (1) For small or irregularly shaped surfaces, composite a maximum of three adjacent samples.

(2) For large nearly flat surfaces, composite a maximum of 10 adjacent samples.

§ 761.314 Chemical analysis of standard wipe test samples.

Perform the chemical analysis of standard wipe test samples in accordance with § 761.272. Report sample results in micrograms per 100 cm^2.

§ 761.316 Interpreting PCB concentration measurements resulting from this sampling scheme.

(a) For an individual sample taken from an approximately 1 meter square portion of the entire surface area and not composited with other samples, the status of the portion is based on the surface concentration measured in that sample. If the sample surface concentration is not equal to or lower than the cleanup level, by inference the entire 1 meter area, and not just the immediate area where the sample was taken, is not equal to or lower than the cleanup level.

(b) For areas represented by the measurement results from compositing more than one 10 centimeter by 10 centimeter sample, the measurement for the composite is the measurement for the entire area. For example, when there is a composite of 10 standard wipe test samples representing 9.5 square meters of surface area and the result of the analysis of the composite is 20 μg/100 cm^2, then the entire 9.5 square meters has a PCB surface concentration of 20 μg/100 cm^2, not just the area in the 10 cm by 10 cm sampled areas.

(c) For small surfaces having irregular contours, where the entire surface was sampled, measure the surface area. Divide 100 cm^2 by the surface area and multiply this quotient by the total number of micrograms of PCBs on the surface to obtain the equivalent measurement of micrograms per 100 cm^2.

Subpart Q—Self-Implementing Alternative Extraction and Chemical Analysis Procedures for Non-liquid PCB Remediation Waste Samples

§ 761.320 Applicability.

This subpart describes self-implementing comparison testing requirements for chemical extraction and chemical analysis methods used as an alternative to the methods required in §§ 761.272 or 761.292. Any person conducting comparison testing under this subpart must comply with the requirements of § 761.80(i), including notification. Use alternative methods only after successful completion of these comparison testing requirements and after documentation of the results of the testing.

§ 761.323 Sample preparation.

(a) The comparison study requires analysis of a minimum of 10 samples weighing at least 300 grams each. Samples of PCB remediation waste used in the comparison study must meet the following three requirements.

(1) The samples must either be taken from the PCB remediation waste at the

cleanup site, or must be the same kind of material as that waste. For example, if the waste at the cleanup site is sandy soil, you must use the same kind of sandy soil in the comparison study. Do not use unrelated materials such as clay soil or dredged sediments in place of sandy soil.

(2) PCB remediation waste may contain interferences which confound or hamper sample extraction and chemical analysis. These interferences may be from chemicals or other attributes preexisting in the waste material, resulting from the PCB contamination source, or resulting from treatment to remove or destroy PCBs. Comparison study samples must also contain these interfering materials to demonstrate successful analysis in their presence. For example, a PCB remediation waste may have been co-disposed with chlorobenzene solvents or chlorinated pesticides. These chlorinated compounds would have to be present in the comparison study compounds at the same levels found, or at the highest levels expected to be found, in the PCB remediation waste. As another example, for PCB remediation waste which had been solvent washed with liquid amines to remove PCBs, comparison study samples would have to contain concentrations of these amines at the same levels found, or at the highest levels expected to be found, in the PCB remediation waste.

(b) Prior to initiating the comparison study, confirm the following PCB concentrations in the comparison study samples using the methods specified in § 761.292. All samples of non-liquid PCB remediation waste must have PCB concentrations between 0.1 and 150 ppm.

(1) A minimum of three comparison study samples must have PCB concentrations above the cleanup level specified for the site in § 761.61(a)(4) and a minimum of three comparison study samples must have PCB concentrations below the specified cleanup level.

(2) At least one comparison study sample must have a PCB concentration ≥90 percent and ≤100 percent of the cleanup level.

(3) At least one comparison study sample must have a PCB concentration ≥100 percent and ≤110 percent of the cleanup level.

(c) If the comparison study samples do not have the concentrations or concentration ranges required by paragraph (b) of this section, for purposes of use in this chemical extraction and chemical analysis comparison study, a person may adjust PCB concentrations by dilution. Any excess material resulting from the preparation of these samples, which is not used as an analytical sample, is regulated as the PCB concentration in the component having the highest PCB concentration of the component materials in the sample.

§ 761.326 Conducting the comparison study.

Extract or analyze the comparison study samples using the alternative method. For an alternative extraction method or alternative analytical method to be comparable to the methods required in § 761.292, all of the following conditions must be met.

(a) All samples having PCB concentrations greater than or equal to the level of concern, as measured by the methods required in § 761.292, are found to be greater than or equal to the level of concern as measured by the alternative method (no false negatives).

(b) Only one sample which contains PCBs at a level less than the level of concern, as measured by the methods required in § 761.292, is found to have a PCB concentration greater than the level of concern as measured by the alternative method (false positive); and all other samples which contain PCBs at levels less than the level of concern, as measured by the methods required in § 761.292, are found by the alternative method to have PCBs less than the level of concern (there are no additional false positives).

Subpart R—Sampling Non-Liquid, Non-Metal PCB Bulk Product Waste for Purposes of Characterization for PCB Disposal in Accordance With § 761.62, and Sampling PCB Remediation Waste Destined for Off-Site Disposal, in Accordance With § 761.61

§ 761.340 Applicability.

Use the procedures specified in this subpart to sample the following types of waste when it is necessary to analyze the waste to determine PCB concentration or leaching characteristics for storage or disposal.

(a) Existing accumulations of non-liquid, non-metal PCB bulk product waste.

(b) Non-liquid, non-metal PCB bulk product waste from processes that continuously generate new waste.

(c) Non-liquid PCB remediation waste from processes that continuously generate new waste, that will be sent off-site for disposal.

§ 761.345 Form of the waste to be sampled.

PCB bulk product waste and PCB remediation waste destined for off-site disposal must be in the form of either flattened or roughly conical piles. This subpart also contains a procedure for contemporaneous sampling of waste as it is being generated.

§ 761.346 Three levels of sampling.

To select a sample of the waste and prepare it for chemical extraction and analysis, there are three required levels of random sampling.

(a) First, select a single 19-liter (5 gallon) portion from a composite accumulated either contemporaneously with the generation of the waste or by sampling an existing pile of waste. Collection procedures for the first level of sampling from existing piles of waste are in § 761.347. Collection procedures for the first level of sampling from a contemporaneous generation of waste are in § 761.348. Compositing requirements and requirements for the subsampling of composite samples to result in a single 19-liter sample are in § 761.350. Send the 19-liter sample to the laboratory for the second and third levels of sampling, including particle size reduction for leach testing and drying as required by § 761.1(b)(4).

(b) Second, at the laboratory, select one quarter of the 19-liter sample. Procedures the laboratory must use for this second level of sample selection appear in § 761.353.

(c) Third, select a 100 gram subsample from the second level subsample. Procedures the laboratory must use for this third level of sample selection appear in § 761.355.

§ 761.347 First level sampling—waste from existing piles.

(a) *General.* Sample piles that are either specifically configured for sampling (see paragraph (b) of this section) or that are of conical shape (see paragraph (c) of this section). If sampling from either of these shapes is not possible, conduct contemporaneous sampling, in accordance with the procedures in § 761.348, or obtain the approval of the Regional Administrator for an alternate sampling plan in accordance with § 761.62(c).

(b) *Specifically configured piles.* A specifically configured pile is a single flattened pile in the shape of a square or rectangle having no restrictions on length or width but restricted to 30 cm (1 foot) in depth. A square shaped pile facilitates sampling site selection for the first level sample. Select eight 19-liter samples from the pile and composite them into one 19-liter sample as follows:

(1) Divide the pile into quarters.

(2) Divide each of the quarter sections into quarters (i.e., into sixteenths of the original pile).

(3) Select two sixteenths from each of the four quarters, according to one of the two following options:

(i) Randomly select the two sixteenths from one quarter and sample the sixteenths occupying the same positions in each of the other three quarters.

(ii) Randomly select two sixteenths from each of the four quarters (i.e., perform a random selection four different times).

(4) At this point the eight selected sixteenths undergo further division and sample selection. Divide each of the eight selected sixteenths into four equal parts. Using a random number generator or random number table, select one of the four equal parts from each of the eight equal areas. If each of the four equal parts has a volume >76 liters when projected downwards 30 cm, continue to divide each selected area into four equal parts, and select one of the parts, until each selected area has a volume of <76 liters but ≥19 liters. When projected to a depth of 30 cm, a square having a 25 cm side or a circle having a diameter of approximately 28.5 cm equals a volume of approximately 19 liters. The volume of 76 liters is equal to the volume enclosed by a square having a side of 50 cm (or other shape having an area of 250 cm^2) projected to a depth of 30 cm.

(5) Take one sample of approximately 19 unsorted liters of waste from each of the eight selected areas. Place each sample into a separate 19-liter container, allowing only sufficient space at the top of the container to secure the lid.

(6) Composite the eight 19-liter samples in accordance with § 761.350.

(c) *Conical-shaped piles.* If it is necessary to sample a pile which is too large to be spread on the site to a uniform thickness of 1 foot or 30 cm, or if there are too many piles to spread out in the space available, use the following procedure to sample the piles. This procedure assumes that the shape of the piles is analogous to a cone; that is, having a circular base with PCB bulk product waste or PCB remediation waste destined for off-site disposal stacked up uniformly to a peak that is a point centered above the center of the circular base. Collect eight 19-liter samples as follows:

(1) *Collecting samples from more than one pile.* If the PCB bulk product waste or PCB remediation waste consists of more than one pile or container, assign each pile or container an integer number and then generate seven random integer numbers to select the piles from which you will collect samples. It is possible that this random selection procedure will result in selecting the same pile number more than once, even if seven or more piles are present. If so, sample the pile once and restart the sampling collection process to collect additional samples. Do not collect multiple samples from the same location in the pile.

(2) *Collecting samples from a single pile.* If only one pile or container is present, collect all eight samples from the same pile.

(3) *Setting up the sample site selection system from a pile.* Locate a sample in a pile by the use of three parameters: a particular radial direction, ''r,'' from the peak at the center of the pile to the outer edge at the base of the pile; a point, ''s,'' along that radial direction between the peak of the pile and the outer edge of the base of the pile; and a depth, ''t'', beneath point ''s.'' The top of the sample material will be below depth *t*, at point *s*, on radius *r*. Use a rod, dowel, stake, or broom handle as a marker. Nail or otherwise fasten to the top of the marker two pieces of string or cord of sufficient length and strength to reach from the top of the marker at the top of the pile to the farthest peripheral edge at the bottom of the pile, when the marker is positioned at the top or apex of the pile. Pound or push the marker into the top center (apex) of the pile, downward toward the center of the base. Insert the marker for at least 30 cm or one foot until the marker is rigidly standing on its own, even when the cord is pulled tight to the bottom peripheral edge of the pile. Ensure that the marker protrudes from the top of the pile sufficiently to allow the strings to move easily around the pile when they are pulled tight. Select the three parameters and the sampling location as follows:

(i) Determine the radial component (r) of the location for each sample.

(A) Tie to a stake or otherwise fasten one of the strings at ''b,'' the bottom of the pile, as a reference point for finding *r*.

(B) Measure the circumference ''c,'' the distance around the bottom of the pile. Determine *r* from *b* in one of two ways:

(*1*) Multiply *c* by a randomly generated fraction or percentage of one.

(*2*) Select a random number between one and the total number of centimeters in *c*.

(C) Locate *r* by starting at *b*, the place where the fixed string meets the base of the pile, and travel clockwise around the edge of the pile at the base for the distance you selected in paragraph (c)(3)(iii) of this section.

(D) Fasten the second string at the selected distance. The second string marks the first parameter *r*.

(ii) Determine the second parameter s of the location for each sample.

(A) Measure the distance, *l*, along the string, positioned in paragraph (c)(3)(i)(D) of this section, from the top to the bottom of the pile at the selected radial distance *r*. Determine the distance *s* from *l* in one of two ways:

(*1*) Multiply *l* by a randomly generated fraction or percentage of one.

(*2*) Select a random number between one and the total number of centimeters in *l*.

(B) Mark, for example by placing a piece of tape on the string positioned according to paragraph (c)(3)(i)(D) of this section, the distance *s*, up from the bottom of the pile on the string at *r*.

(iii) Determine the third and final parameter *t* of the location for each sample.

(A) Mark and number 1 cm intervals from one end of a rigid device, for example a rod, dowel, stake, or broom handle, for measuring the distance from the top of the pile to the bottom at the point *s* selected in paragraph (c)(3)(ii)(B) of this section. The marked and numbered device shall be of sufficient strength to be forced down through the maximum depth of the pile and sufficient length to measure the depth of the waste in the pile at any point.

(B) Take the measuring device, constructed according to paragraph (c)(3)(iii)(A) of this section, and at position s, push the end of the device marked with zero straight down into the pile until it reaches the bottom of the pile or ground level. The vertical distance ''v'' is the number of centimeters from the surface of the pile at point s on the string to the bottom of the pile or ground level. Read the distance *v* on the measuring device at the surface of the pile. From the distance *v*, determine *t*, in one of two ways:

(*1*) Randomly generate a fraction of one and multiply the fraction times *v*.

(*2*) Select a random number between zero and the total number of centimeters of the vertical distance *v*.

(iv) Dig a hole straight down into the pile for *t* centimeters (inches) from the surface of the pile at *s*.

(v) At depth *t*, directly under the s mark on the string, outline the top of the sample container and collect (shovel) all waste under the outline in the following order of preference in paragraphs (c)(3)(v)(A) through (c)(3)(v)(C) of this section. It is possible that some of the eight sampling locations will not provide 19 liters of sample.

(A) For a depth of 30 cm.

(B) Until the container is full.

(C) Until the ground level is reached.

(d) *Compositing the samples.* Composite the eight 19-liter samples and subsample in accordance with § 761.350. Send the subsample to a laboratory for further sampling as described in §§ 761.353 and 761.355 and for chemical extraction and analysis. If there is insufficient sample for a 19-liter sample from the composite sample composed of the eight iterations of sample site selection, according to the procedures in paragraphs (c)(3)(i) through (c)(3)(v) of this section, select additional sample sites, collect additional samples and composite the additional waste in the samples until a minimum of 19 liters is in the composite.

§ 761.348 Contemporaneous sampling.

Contemporaneous sampling is possible when there is active generation of waste and it is possible to sample the waste stream as it is generated. Collect eight 19-liter samples as follows.

(a) Collect each sample by filling a 19-liter (5 gallon) container at a location where the PCB bulk product waste is released from the waste generator onto a pile or into a receptacle container before the waste reaches the pile or receptacle container.

(b) Determine a sample collection start time using a random number generator or a random number table to select a number between 1 and 60. Collect the first sample at the randomly selected time in minutes after start up of the waste output, or if the waste is currently being generated, after the random time is selected. For example, if the randomly selected time is 35, begin collection 35 minutes after the start up of waste generation. Similarly, if waste output is ongoing and the random start determination occurred at 8:35 a.m., collect the first sample at 9:10 a.m. (35 minutes after the random start determination).

(c) Collect seven more samples, one every 60 minutes after the initial sample is collected. If the waste output process stops, stop the 60–minute interval time clock. When the process restarts, restart the 60–minute interval time clock and complete the incomplete 60–minute interval.

(d) Composite the eight 19-liter samples and subsample in accordance with § 761.350.

§ 761.350 Subsampling from composite samples.

(a) *Preparing the composite.* Composite the samples (eight from a flattened pile; eight or more from a conical pile; eight from waste that is continuously generated) and select a 19-liter subsample for shipment to the chemical extraction and analysis laboratory for further subsampling. There are two options for the preparation of the composite:

(1) *Option one.* Place all of the contents of all 19-liter samples that you collected into a 209 liter (55 gallon) drum or similar sized, cylinder-shaped container. Completely close the container, and roll it 10 or more complete revolutions to mix the contents.

(2) *Option two.* Add the 19-liter samples one at a time to a 209 liter (55 gallon) drum. Between the addition of each 19-liter sample, stir the composite using a broom handle or similar long, narrow, sturdy rod that reaches the bottom of the container. Stir the mixture for a minimum of 10 complete revolutions of the stirring instrument around the container at a distance approximately half way between the outside and center of the container.

(b) *Selecting a 19-liter subsample from the composite.* Once the composite is mixed, pour the mixture of waste out on a plastic sheet and either divide it into 19-liter size piles or make one large pile.

(1) From 19-liter sized piles, use a random number generator or random number table to select one of the piles.

(2) From one large pile, flatten the pile to a depth of 30 cm and divide it into 4 quarters of equal size. Use a random number generator or random number table to select one quarter of the pile. Further divide the selected quarter pile into 19-liter portions and use a random number generator or random number table to select one 19-liter portion. A square having a 25 cm side or a circle having a diameter of approximately 28.5 cm when projected downwards 30 cm equals approximately 19 liters.

(c) *Transferring the sample to the analytical laboratory.* Place the selected 19-liter subsample in a container, approved for shipment of the sample, to the chemical extraction and analysis laboratory, for the next step in sample selection in accordance with § 761.353.

§ 761.353 Second level of sample selection.

The second level of sample selection reduces the size of the 19-liter subsample that was collected according to either § 761.347 or § 761.348 and subsampled according to § 761.350. The purpose of the sample size reduction is to limit the amount of time required to manually cut up larger particles of the waste to pass through a 9.5 millimeter (mm) screen.

(a) *Selecting a portion of the subsample for particle size reduction.* At the chemical extraction and analysis laboratory, pour the 19-liter subsample onto a plastic sheet or into a pan and divide the subsample into quarters. Use a random number generator or random number table to select one of these quarters.

(b) *Reduction of the particle size by the use of a 9.5 mm screen.* Collect the contents of the selected quarter of waste resulting from conducting the procedures in paragraph (a) of this section and shake the waste in a 9.5 mm screen. Separate the waste material which passes through the screen from the waste material which does not pass through the screen. Manually cut or otherwise reduce the size of all parts of the waste portion which did not pass through the 9.5 mm screen, such that each part of the waste shall pass through the 9.5 mm screen by shaking.

(c) Drying the reduced particle size waste. Dry all of the waste portion resulting from conducting the procedures in paragraph (b) of this section, from 10 to 15 hours in a drying oven at 100 °C. Allow the dried waste to cool to room temperature.

(d) *Mixing the dried waste.* Place all of the waste resulting from conducting the procedures in paragraph (c) of this section in a 19-liter pail or similarly sized, cylinder-shaped container. Mix the dried material according to one of the two following options:

(1) *First mixing option.* Completely close the container and roll the container a minimum of 10 complete revolutions to mix the contents.

(2) *Second mixing option.* Use a sturdy stirring rod, such as a broom handle or other device that reaches the bottom of the container, to stir the waste for a minimum of 10 complete revolutions around the container at a distance approximately half way between the outside and the center of the container.

§ 761.355 Third level of sample selection.

The third level of sample selection further reduces the size of the subsample to 100 grams which is suitable for the chemical extraction and analysis procedure.

(a) Divide the subsample resulting from conducting the procedures in § 761.353 of this part into 100 gram portions.

(b) Use a random number generator or random number table to select one 100 gram size portion as a sample for a procedure used to simulate leachate generation.

(c) Dry the 100 gram sample, selected after conducting the procedure in paragraph (b) of this section, for 10 to 15 hours in a drying oven at 100 °C and

cool it to the analytical laboratory room temperature before analysis using a procedure used to simulate leachate generation. This sample was dried previously in the larger quantity sample at the second level of sampling (§ 761.353(c)) and is dried a second time here (in the third level of sample selection). This dried and cooled sample must weigh at least 50 grams.

(d) If the dried and cooled sample weighs <50 grams, select additional 100 gram portions of sample one at a time by repeating the directions in paragraph (b) and (c) of this section, and add each additional 100 gram portion of sample to the first 100 gram portion until at least 50 grams of dried material is in the sample to be analyzed using a procedure used to simulate leachate generation.

§ 761.356 Conducting a leach test.

No method is specified as a procedure used to simulate leachate generation.

§ 761.357 Reporting the results of the procedure used to simulate leachate generation.

Report the results of the procedure used to simulate leachate generation as micrograms PCBs per liter of extract from a 100 gram sample of dry bulk product waste. Divide 100 grams by the grams in the sample and multiply this quotient by the number of micrograms PCBs per liter of extract to obtain the equivalent measurement from a 100 gram sample.

§ 761.358 Determining the PCB concentration of samples of waste.

Use either Method 3500B/3540C or Method 3500B/3550B from EPA's SW-846, Test Methods for Evaluating Solid Waste, or a method validated under subpart Q of this part, for chemical extraction of PCBs from individual and composite samples of PCB bulk product waste. Use Method 8082 from SW-846, or a method validated under subpart Q of this part, to analyze these extracts for PCBs.

§ 761.359 Reporting the PCB concentrations in samples.

Report all sample concentrations as ppm by weight on a dry weight basis.

Subpart S—Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces

§ 761.360 Background.

The double wash/rinse procedure is used to quickly and effectively remove PCBs on surfaces. It is important to select and use the proper cleanup equipment, to conduct the procedure correctly so as not to redistribute PCBs, and to comply with disposal requirements for all cleanup materials.

§ 761.363 Applicability.

The double wash/rinse procedure includes two washing steps and two rinsing steps. The two washing and rinsing steps are slightly different depending on whether a contaminated surface was relatively clean before the spill (see § 761.372), or whether the surface was coated or covered with dust, dirt, grime, grease or another absorbent material (see § 761.375).

§ 761.366 Cleanup equipment.

(a) Use scrubbers and absorbent pads that are not dissolved by the solvents or cleaners used, and that do not shred, crumble, or leave visible fragments on the surface. Scrubbers and absorbent pads used to wash contaminated surfaces must not be reused. Scrubbers and absorbent pads for rinsing must not contain ≥2 ppm PCBs. Scrubbers and absorbent pads used in the second rinse of contaminated surfaces may be reused to wash contaminated surfaces.

(b) Capture and contain all solvents and cleaners for reuse, decontamination, or disposal. Clean organic solvents contain <2 ppm PCBs. Clean water contains <3 ppb PCBs.

§ 761.369 Pre-cleaning the surface.

If visible PCB-containing liquid is present on the surface to be cleaned, thoroughly wipe or mop the entire surface with absorbent paper or cloth until no liquid is visible on the surface.

§ 761.372 Specific requirements for relatively clean surfaces.

For surfaces that do not appear dusty or grimy before a spill, such as glass, automobile surfaces, newly-poured concrete, and desk tops, use the double wash/rinse procedures in this section.

(a) *First wash*. Cover the entire surface with organic solvent in which PCBs are soluble to at least 5 percent by weight. Contain and collect any runoff solvent for disposal. Scrub rough surfaces with a scrub brush or disposable scrubbing pad and solvent such that each 900 cm^2 (1 square foot) of the surface is always very wet for 1 minute. Wipe smooth surfaces with a solvent-soaked, disposable absorbent pad such that each 900 cm^2 (1 square foot) is wiped for 1 minute. Any surface <1 square foot shall also be wiped for 1 minute. Wipe, mop, and/or sorb the solvent onto absorbent material until no visible traces of the solvent remain.

(b) *First rinse*. Wet the surface with clean rinse solvent such that the entire surfaces is very wet for 1 minute. Drain and contain the solvent from the surface. Wipe the residual solvent off the drained surface using a clean, disposable absorbent pad until no liquid is visible on the surface.

(c) *Second wash*. Repeat the procedures in paragraph (a) of this section. The rinse solvent from the first rinse (paragraph (b) of this section) may be used.

(d) *Second rinse*. Repeat the procedures in paragraph (b) of this section.

§ 761.375 Specific requirements for surfaces coated or covered with dust, dirt, grime, grease, or another absorbent material.

(a) *First wash*. Cover the entire surface with concentrated or industrial strength detergent or non-ionic surfactant solution. Contain and collect all cleaning solutions for proper disposal. Scrub rough surfaces with a scrub brush or scrubbing pad, adding cleaning solution such that the surface is always very wet, such that each 900 cm^2 (1 square foot) is washed for 1 minute. Wipe smooth surfaces with a cleaning solution-soaked disposable absorbent pad such that each 900 cm^2 (1 square foot) is wiped for 1 minute. Wash any surface <1 square foot for 1 minute. Mop up or absorb the residual cleaner solution and suds with an clean, disposable, absorbent pad until the surface appears dry. This cleaning should remove any residual dirt, dust, grime, or other absorbent materials left on the surface during the first wash.

(b) *First rinse*. Rinse off the wash solution with 1 gallon of clean water per square foot and capture the rinse water. Mop up the wet surface with a clean, disposable, absorbent pad until the surface appears dry.

(c) *Second wash*. Follow the procedure in § 761.372(a).

(d) *Second rinse*. Follow the procedure in § 761.372(b).

§ 761.378 Decontamination, reuse, and disposal of solvents, cleaners, and equipment.

(a) *Decontamination*. Decontaminate solvents and non-porous surfaces on equipment in accordance with the standards and procedures in § 761.79(b) and (c).

(b) *Reuse*. A solvent may be reused so long as its PCB concentration is <50 ppm. Decontaminated equipment may be reused in accordance with § 761.30(u). Store solvents and equipment for reuse in accordance with § 761.35.

(c) *Disposal*. Dispose of all solvents, cleaners, and absorbent materials in accordance with § 761.79(g). Dispose of equipment in accordance with § 761.61(a)(5)(v)(A), or decontaminate in accordance with § 761.79(b) or (c). Store

for disposal equipment, solvents, cleaners, and absorbent materials in accordance with § 761.65.

Subpart T—Comparison Study for Validating a New Performance-Based Decontamination Solvent under § 761.79(d)(4)

§ 761.380 Background.

This subpart provides self-implementing criteria for validating the conditions for use in performance-based decontamination of solvents other than those listed in § 761.79(c)(3) and (c)(4). Any person may use this subpart for validating either a chemical formulation or a product with a trade name whether or not the constituents of the product are proprietary.

§ 761.383 Applicability.

Use the self-implementing decontamination procedure only on smooth, non-porous surfaces that were once in contact with liquid PCBs. Decontamination procedures under this subpart shall exactly parallel § 761.79(c)(3) and (c)(4), except that the procedures described in § 761.79(c)(3)(iii) and (c)(3)(iv) and (c)(4)(iii), (c)(4)(iv) and (c)(4)(vii) may be revised to contain parameters validated in accordance with this subpart.

§ 761.386 Required experimental conditions for the validation study and subsequent use during decontamination.

The following experimental conditions apply for any solvent:

(a) *Temperature and pressure.* Conduct the validation study and perform decontamination at room temperature (from ≥15 °C to ≤30 °C) and at atmospheric pressure.

(b) *Agitation.* Limit the movement in the solvent to the short-term movement from placing the contaminated surface into the soak solvent and from removing the surface from the soak solvent.

(c) *Time of soak.* Soak the surface for a minimum of 1 hour.

(d) *Surface conditions for the validation study.* Prior to beginning the validation study, ensure that there are no free-flowing liquids on surfaces and that surfaces are dry (i.e., there are no liquids visible without magnification). Also ensure that surfaces are virtually free from non-liquid residues, corrosion, and other defects which would prevent the solvent from freely circulating over the surface.

(e) *Confirmatory sampling for the validation study.* Select surface sample locations using representative sampling or a census. Sample a minimum area of 100 cm^2 on each individual surface in the validation study. Measure surface concentrations using the standard wipe test, as defined in § 761.123, from which a standard wipe sample is generated for chemical analysis. Guidance for wipe sampling appears in the document entitled ''Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by the Environmental Protection Agency PCB Spill Cleanup Policy,'' available from the TSCA Assistance Information Service, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

(f) *Concentration of PCBs.* The method validated may be used only to decontaminate surfaces containing PCBs at concentrations on which the validation study was performed and lower concentrations.

§ 761.389 Testing parameter requirements.

There are no restrictions on the variable testing parameters described in this section which may be used in the validation study. The conditions demonstrated in the validation study for these variables shall become the required conditions for decontamination using the solvent being validated and shall replace the comparable conditions in § 761.79(b)(3) through (b)(6). There are limited potential options for varying a single requirement in this section. If you change one of these variable requirements, change it only in the way listed in this section and do not change any other validated conditions. If you desire to change more than one of the requirements in this section, you must conduct a new study to validate the decontamination under the desired conditions.

(a) The study apparatus is not standardized. Critical components of the study are the PCB material (for example MODEF or some other spiking solution), the volume of the soaking solvent, and the area of the contaminated surface. The EPA study used beakers and shallow dishes as the experimental vessels to contain the surface and solvent during the soaking process. In order to minimize surface-to-volume ratios, it is convenient to utilize flat contaminated surfaces and shallow solvent containers. During the validation study, use the same ratio of contaminated surface area to soak solvent volume as would be used during actual decontamination. It is also permissible to use a smaller surface area to soaking solvent volume than used in the validation study, so long as all other required parameters are used as validated in the confirmation required in § 761.386(a) through (f), and paragraphs (a) through (c) of this section. Do not use a larger surface-area-to-solvent-volumes ratio or different kind of solvent based on the results of the validation study.

(b) Except for the minimum soak time of 1 hour (as required in § 761.386(c)), the length of soak time is not otherwise restricted in the validation study. The soak time used in the validation study, however, is a use requirement for subsequent decontamination using the solvent being validated. It is permissible to use longer soak times for decontamination than the soak time used in the validation study, if all other parameters required in § 761.386, and paragraphs (a) and (c) of this section are used.

(c) There is no restriction on the kind of material containing PCBs to use to create the surface contamination for the validation study. There is also no restriction on the level of starting PCB surface concentration. It is permissible to use lower concentrations of PCB than the concentration used in the validation study, if all other parameters required in § 761.386(a) through (f), and paragraphs (a) through (c) of this section are used.

§ 761.392 Preparing validation study samples.

(a)(1) To validate a procedure to decontaminate a surface contaminated with a spill from liquid of a known concentration, contaminate (spike) the surface to be used in the validation study as follows:

(i) Use a spiking solution made of PCBs mixed with a solvent to contaminate clean surfaces. Clean surfaces are surfaces having PCB surface concentrations <1 μg/100 cm^2 before intentionally contaminating the surface.

(ii) Prior to contaminating a surface for the validation study, mark the surface sampling area to assure that it is completely covered with the spiking solution.

(iii) Deliver the spiking solution onto the surface, covering all of the sampling area. Contain any liquids which spill or flow off the surface. Allow the spiking solution to drip drain off into a container and then evaporate the spiking solution off the contaminated surface prior to beginning the validation study. Contaminate a minimum of eight surfaces for a complete validation study.

(iv) As a quality control step, test at least one contaminated surface to determine the PCB concentration to verify that there are measurable surface levels of PCBs resulting from the contamination before soaking the surface in the decontamination solvent. The surface levels of PCBs on the contaminated surfaces must be ≥20 μg/100 cm^2.

(2) To validate a procedure to decontaminate a specified surface

concentrations of PCBs as measured by a standard wipe sample, contaminate a minimum of 10 surfaces. Contaminate all the surfaces identically following the procedures in paragraph (a)(1) of this section and measure the PCB surface concentrations of at least three of the surfaces using a standard wipe test to establish a surface concentration to be included in the standard operating procedure. The surface levels of PCBs on the contaminated surfaces must be ≥20 µg/100 cm^2.

(b) [Reserved]

§ 761.395 A validation study.

(a) Decontaminate the following prepared sample surfaces using the selected testing parameters and experimental conditions. Take a standard wipe sample of the decontaminated surface.

(1) At least one uncontaminated surface. The surface levels of PCBs on the uncontaminated surface must be <1 µg/100 cm^2.

(2) At least seven contaminated surfaces.

(b)(1) Use SW-846, Test Methods for Evaluating Solid Waste methods for sample extraction and chemical analysis as follows: Use Method 3500B/3540C or Method 3500B/3550B for the extraction and cleanup of the extract and Method 8082 for the chemical analysis, or methods validated under subpart Q of this part.

(2) Report all validation study surface sample concentrations on the basis of micrograms of PCBs per 100 cm^2 of surface sampled.

(c) Following completion of the validation study, measurements from the contaminated surfaces must have an arithmetic mean of ≤10 µg/100 cm^2. If the arithmetic mean is >10 µg/100 cm^2, then the validation study failed and the solvent may not be used for decontamination under § 761.79(d)(4) according to the parameters tested.

§ 761.398 Reporting and recordkeeping.

(a) Submit validation study results to the Director, National Program Chemicals Division (NPCD), (7404), Office of Pollution Prevention and Toxics, 401 M St., SW., Washington, DC, prior to the first use of a new solvent for alternate decontamination under § 761.79(d)(4). The use of a new solvent is not TSCA Confidential Business Information (CBI). From time to time, the Director of NPCD will confirm the use of validated new decontamination solvents and publish the new solvents and validated decontamination procedures in the **Federal Register**.

(b) Any person may begin to use solvent validated in accordance with this subpart at the time results are submitted to EPA.

(c) Record all testing parameters and experimental conditions from the successful validation study into a standard operating procedure (SOP) for reference whenever the decontamination procedure is used. Include in the SOP the identity of the soaking solvent, the length of time of the soak, and the ratio of the soak solvent to contaminated surface area during the soaking process. Also include in the SOP the maximum concentration of PCBs in the spilled material and the identity of the spilled material, and/or the measured maximum surface concentration of the contaminated surface used in the validation study. Record and keep the results of the validation study as an appendix to the SOP. Include in this appendix, the solvent used to make the spiking solution, the PCB concentration of the spiking solution used to contaminate the surfaces in the validation study, and all of the validation study testing parameters and experimental conditions.

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