



Environmental Compliance Consultation: DOE PCB Questions and Answers — Part II

Office of Pollution Prevention and Resource Conservation (EH-43)

DOE/EH-413-0003a (November 2000)
(Updated September 2005)



Summary

This *Environmental Compliance Consultation* continues with a collection of questions from the U.S. Department of Energy's (DOE) field sites which DOE's Office of Pollution Prevention and Resource Conservation (EH-43) answered with the help of the U.S. Environmental Protection Agency's (EPA's) Office of Pollution Prevention and Toxics. The questions comprising Part II differ from those compiled for the *Environmental Compliance Consultation: DOE PCBs Questions and Answers—Part I* only in that they were submitted after *Part I* was drafted. Almost all of these questions were prompted by EPA's issuance of the Polychlorinated Biphenyls (PCB) Disposal Amendments on June 29, 1998, at 63 FR 35384. The questions comprising Part II are published here for their complex-wide value in order to further the sharing of information among field sites. The questions and answers are categorized as follows: solidification of PCB liquid waste, authorizations and prohibitions, storage, disposal, spill cleanup, recordkeeping, sampling, health and safety, and other.

Solidification of PCB Liquid Waste

If PCB liquid waste was generated and transformed into a non-liquid form before 1978 and it is still non-liquid (i.e., meets the definition at 40 CFR 761.3), is it now regulated as a liquid or non-liquid for purposes of disposal?

The PCB waste may be disposed as a non-liquid. Solidifying PCB liquids was not prohibited before 1978, so once the regulations took effect, the PCB waste became regulated in its state at that time.

May PCB liquid waste be solidified for the purposes of transportation for disposal without an approval from EPA?

Yes. 40 CFR 761.20(c)(2)(i) allows processing of PCBs that facilitates transportation for disposal without an approval. However, the solidified PCB liquid waste must be disposed as a liquid; it may not be disposed as a non-liquid.

May cleanup waste from a remediation site include absorbent pads soaked with liquid PCBs?

No. Absorbent pads are excluded from the definition of cleanup waste [40 CFR 761.61(a)(5)(v)] even if they are somehow used in a self-implemented site remediation. 40 CFR 761.50(a)(2) prohibits the conversion of liquid PCBs into non-liquid PCBs to avoid high-temperature incineration. Absorbent pads soaked with liquid PCBs must be disposed in the same manner as the liquid PCBs.

Authorizations and Prohibitions

Is a PCB disposal approval needed for processing or treating for disposal of a waste containing PCBs \geq 50 ppm in order to remove certain RCRA hazardous constituents even though the treatment process has received a RCRA permit and does not affect the PCBs?

Yes. A PCB disposal approval is required even if the treatment process does nothing to the PCBs. In addition, it is not likely that a PCB disposal approval will be granted for a treatment process that does nothing to destroy or remove the PCBs unless the processed waste containing the untreated PCBs is ultimately going to a place acceptable for those untreated PCBs (e.g., a solid waste landfill accepting PCB bulk product waste).

Is it acceptable to change the inner coil of a PCB Transformer after reclassifying it?

Yes. The prohibition [40 CFR 761.20(a)(2)(ii)] against servicing any PCB Transformer (i.e., containing PCBs ≥ 500 ppm) that requires the removal of the inner coil does not apply to PCB-contaminated transformers (i.e., containing PCBs < 500 ppm and ≥ 50 ppm) or non-PCB transformers (i.e., containing PCBs < 50 ppm). There is no restriction against reclassifying a PCB Transformer for the purpose of replacing or servicing the inner coil.

40 CFR 761.30(p) authorizes the continued use of porous surfaces contaminated with PCBs > 10 $\mu\text{g}/100$ cm^2 provided the surfaces are cleaned, coated, and marked. What do the regulations say about the continued use of concrete surfaces contaminated with PCBs ≤ 10 $\mu\text{g}/100$ cm^2 ?

The decontamination standard for concrete surfaces is < 10 $\mu\text{g}/100$ cm^2 of PCBs [40 CFR 761.79(b)(4)]. Equipment or structures contaminated with PCBs at levels below the decontamination standard may be used or reused [see 40 CFR 761.30(u)(1)(ii)] under the conditions named in 40 CFR 761.30(u)(2), which require that there be no direct contact with food, feed, or drinking water. Cleaning, coating, or marking of the contaminated concrete surfaces is not required.

Storage

The regulations are silent about storage of PCB Containers that do not have PCB waste but have liquid PCBs authorized for use or reuse. Where may they be stored?

Because they are not totally emptied and decontaminated and because they may be filled to capacity with liquid PCBs at any time, PCB Containers may be stored only in 40 CFR 761.65(b)-compliant units: general storage areas or alternate storage areas.

How does the one-year storage limit apply as an Applicable and Relevant and Appropriate Requirement (ARAR) to a Superfund site?

The one-year clock starts when the PCB waste leaves the area of contamination, also known as the AOC.

May the containment requirements for a TSCA general storage area be satisfied by placing a PCB Container or PCB Article into a metal tub, trough, or basin?

Yes. The containment requirements in 40 CFR 761.65(b)(1) call for a six-inch berm and minimum containment volume that is the larger of either (i) twice the internal volume of the largest PCB Container or PCB Article or (ii) 25% of the total internal volume of all PCB Containers or PCB Articles. These requirements may be satisfied by placing a PCB Container or PCB Article into a metal tub, trough, or basin that has walls at least six inches high and containment volume equal to twice the internal volume of the PCB Container or PCB Article.

A 55-gallon drum with waste liquid ≥ 50 ppm of PCBs is stored in a non-TSCA, non-RCRA storage facility for < 30 days. Does this temporary storage facility still require a Spill Prevention, Control, and Countermeasures (SPCC) Plan even though the specified quantity does not exceed the 40 CFR 112 thresholds of 42,000 gallons (underground storage), 1320 gallons (aboveground storage), or 660 gallons (single container) requirements for a SPCC Plan?

Yes. The thresholds of 42,000 gallons (underground storage), 1320 gallons (aboveground storage), or 660 gallons (single container) are Clean Water Act thresholds that trigger the requirement for a SPCC Plan. Any other regulations may trigger the requirements for a SPCC Plan. The TSCA thresholds that trigger the requirement for a SPCC Plan are as follows: (1) any amount of waste liquid with ≥ 50 ppm of PCBs stored for ≤ 30 days [40 CFR 761.65(c)(1)] or (2) waste liquid with ≥ 50 ppm of PCBs in a stationary, larger than DOT-specified container (such as a tank, parked tank car, or parked tank truck) [40 CFR 761.65(c)(7)].

May I apply for approval of a risk-based disposal option under 40 CFR 761.61(c) to store PCB remediation waste?

Yes. The only caveat is that the storage of the waste poses no unreasonable risk.

Disposal

May radioactively contaminated concrete coated with paint containing PCBs <50 ppm be buried in situ?

Yes. The subject waste fits in the category of PCB/radioactive waste. 40 CFR 761.50(b)(7) allows PCB/radioactive waste with < 50 ppm of PCBs to be disposed without taking into account the PCB component of the waste. In such a case, only the radioactive component of the waste needs to be taken into account. However, the burial must comply with any other applicable Federal statutes or state regulations.

Does equipment used to treat PCB waste for research [under 40 CFR 761.60(j)] have to be disposed of at the undiluted PCB concentration of the waste (i.e., prior to treatment of the waste) without regard to decontamination?

No. The preamble to the PCB Disposal Amendments [63 FR 35417 of June 29, 1998] clarifies that decontamination standards and procedures may be used for disposal. That is to say, decontamination is a form of disposal. Decontaminated materials may be distributed in commerce, used, or reused. For example, equipment, such as holding tanks, reaction vessels, and certain pumps, may be decontaminated as PCB Containers under the self-implementing procedures at 40 CFR 761.79(c)(1) and then distributed in commerce, used, or reused. Equipment that is not decontaminated must be disposed of at the highest undiluted (prior to treatment) concentration of PCBs with which the equipment made contact.

What is the maximum limit as to the amount of PCB remediation waste that can be cleaned up and/or disposed under the self-implementing provisions of 40 CFR 761.61(a)?

There is no maximum limit.

The self-implementing provision for PCB remediation waste seems easy to use. What is the most common fallacy in using 40 CFR 761.61(a)?

The most common fallacy in using 40 CFR 761.61(a) is that people tend to pick and choose the particular provisions that they want to use without

regard to the context, that is, the entirety of the regulations in 40 CFR 761.61(a). For example, people want to dispose of PCB bulk remediation waste in a landfill, as allowed by 40 CFR 761.61(a)(5)(i)(B)(2)(iii) and disregard the requirement to notify EPA as required in 40 CFR 761.61(a)(3). Another example is people want to use 40 CFR 761.61(a)(5)(v)(A) to dispose of personal protective equipment from spill cleanups conducted under Subpart G although 761.61(a)(5)(v)(A) applies only to disposal of personal protective equipment from the context of remediation site cleanups. A third example is the disregard of the prohibition of 40 CFR 761.61(a)(1) against use of the self-implementing provisions for remediation in or around environmentally-sensitive areas.

May areas with septic tanks with effluent discharges to drain fields or “dry” outfalls not in contact with surface waters be remediated for PCBs under the self-implementing procedures at 40 CFR 761.61(a)?

Surface waters are not the only exclusion for remediating a site for PCBs under the self-implementing procedures at 40 CFR 761.61(a). The effluent from the septic tanks could have discharged to a grazing area, re-charge area for an aquifer, sensitive environment, critical habitat, or an area that significantly affects the food chain in an ecosystem. The particular EPA Region involved would have to make a judgment call as to whether self-implementing procedures for remediation of the subject area for PCBs under 40 CFR 761.61(a) are applicable. You should contact your EPA Region. In turn, your EPA Region may have to visit the site and/or consult with fish and wildlife officials in order to give an answer.

Does PCB/radioactive remediation waste with < 50 ppm of PCBs have to be disposed in a landfill meeting the requirements of 40 CFR 761.61(a)(5)(v)(A)?

No. Normally, if remediation waste with PCBs < 50 ppm is to be disposed of in a landfill, the landfill must be permitted, licensed, or registered by a State to manage municipal solid waste or non-municipal, non-hazardous waste as would be required by 40 CFR 761.61(a)(5)(i)(B)(2)(ii), which refers to 761.61(a)(5)(v)(A). However,

PCB/radioactive waste with PCBs < 50 ppm, including PCB/radioactive remediation waste, may be disposed in a radioactive waste landfill NOT permitted, licensed, or registered by a State to manage municipal solid waste or non-municipal, non-hazardous waste. The reason is that 40 CFR 761.50(b)(7) allows disposal of PCB/radioactive waste with < 50 ppm of PCBs without taking into account the PCB component of the waste. In such a case, only the radioactive component of the waste needs to be taken into account although the landfill must comply with any State regulations regarding radioactive waste landfills. In fact, EPA has interpreted that 7,000 drums of PCB/radioactive waste with an average of 16 ppm of PCBs stored at DOE-Oak Ridge originating from the Portsmouth Gaseous Diffusion Plant may be disposed at an Envirocare radioactive waste landfill in Utah without requiring a State of Utah approval to manage municipal solid waste or non-municipal, non-hazardous waste.

The disposal site for my PCB waste is located in an EPA Region different from the one where the PCB waste is generated or stored. To which EPA Region do I submit a request for approval of a risk-based disposal option either under 40 CFR 761.61(c) or 761.62(c)?

Submit the request to the EPA Region where the waste is currently located. Note that the EPA Region having jurisdiction over the disposal site has no veto power over the EPA Region having jurisdiction where the waste is currently located. Furthermore, if the waste is located in more than one EPA Region, submit the request to the Director of the National Program Chemicals Division at EPA Headquarters.

How many risk-based disposal options submitted under 40 CFR 761.61(c) have been approved?

While the actual nationwide count is not available, EPA can say that all risk-based disposal options that have been accompanied by a complete and thorough risk assessment have been approved. None of the risk-based disposal options lacking a risk assessment have been approved.

How long does it take to obtain approval of a risk-based disposal option under 40 CFR 761.61(c)?

At least six months.

What is the difference between bulk PCB remediation waste and PCB bulk product waste?

The difference basically lies in the source of the PCBs, the nature of the risk, and the extent to which waste disposal is regulated. Bulk PCB remediation waste is waste that results from a spill or release of PCBs; although this waste is generally non-liquid (e.g., soil), there are some forms of bulk PCB remediation waste that are liquid (e.g., water from dewatered PCB-contaminated soil). PCB bulk product waste is non-liquid waste that is not the result of a PCB spill or release but contains only non-liquid PCBs as the result of a manufacturing process. Because non-liquid PCBs pose less risk than liquid PCBs, disposal of bulk product waste is regulated less stringently than disposal of remediation waste.

May metal coated with PCB-contaminated paint be encapsulated for purposes of disposal?

No. Encapsulation is not a disposal option for PCB bulk project waste whereas landfilling is an option. However, you may apply to your EPA Region for approval of a risk-based disposal option for encapsulation under 40 CFR 761.62(c).

Spill Cleanup

Subpart G is intended for cleanup of liquid PCB spills. Is there an analogous Cleanup Policy for non-liquid PCB spills?

No. However, a number of EPA Regions have adopted a policy of allowing cleanups of non-liquid PCBs to a standard of “no visible trace.” Some EPA Regions require a wipe test. Check with your EPA Region.

If a ballast in a fluorescent light fixture is found with a few drops of oil on the outside surface, does it need to be treated as a PCB spill? Are sampling and a double wash rinse required?

If the fixture bears a “No PCBs” label or is manufactured after 1998, you may assume the absence of PCBs, and you do not have to treat the oil drops as a PCB spill. You need to take action, if tests for the oil show ≥ 50 ppm of PCBs, or you assume PCBs ≥ 50 ppm are present. According to 40 CFR 761.123, the definition of a “spill” includes “...uncontrolled discharges where the release results in any quantity of PCBs running off or about to run off the external surface of the equipment...” Inspect the drops of oil to determine if they are running off or about to run off the outside surface of the ballast. Examine whether there are any visible traces of a spill area on the floor or other surface directly beneath the ballast. If still in doubt, take wipe samples using a statistically based sampling scheme (such as the Midwest Research Institute guidelines) of the area on the floor or other surface directly beneath the ballast. If there is a spill (as evinced by run-off on the ballast outside surface, visible traces on the floor, or a positive wipe test on the floor), cleanup in accordance with the TSCA PCB Spill Cleanup Policy at 40 CFR Part 761 Subpart G. Note that a double wash rinse cleanup is acceptable only if the spill involved < 1 lb of < 500 ppm of PCBs; in such a case, verification sampling is not required following cleanup. In all other cases, verification sampling is required following cleanup.

Recordkeeping

What does DOE Headquarters expect for individual sites in maintaining the written record regarding “continuing attempts to secure disposal” for PCB/radioactive waste as required by 40 CFR 761.65(a)(2)(ii)?

DOE Headquarters does not impose any additional requirements beyond what EPA imposes at 40 CFR 761.65(a)(2)(ii) in maintaining the written record regarding “continuing attempts to secure disposal” for PCB/radioactive waste. During the discussion among various field sites, EH-43, and EM-22 in the rule-making on the PCB Disposal Amendments in 1998 regarding this particular provision, there was a proposal for the sites to report the kinds and amounts of PCB/radioactive waste awaiting disposal to DOE Headquarters, who would in turn make a complex-wide report to EPA Headquarters. In response, there was general con-

sensus among the field sites that this proposal would be an inordinate, unnecessary burden in view of the requirement for the sites to report or make such data available to the EPA Regions. Consequently, the individual sites bear the responsibility for documenting “continuing attempts to secure disposal” for their own PCB/radioactive waste.

However, to assist the individual sites, EH-43, on behalf of DOE Headquarters has documented the lack of capacity to dispose of PCB/radioactive waste throughout the complex (see *Management of Polychlorinated Biphenyls: Questions and Answers*, DOE/EH(TSCA)-001, November 1995, p. 27). Also, EPA acknowledges the fact that DOE lacks the capacity to dispose of PCB/radioactive waste throughout the complex (see *Final Report: Cost Impacts of the Final Regulations Amending the PCB Regulations at 40 CFR Part 761*, Economic and Policy Analysis Branch, Economics, Exposure, and Technology Division, Office of Pollution Prevention and Toxics, U.S. Environmental Protection Agency, April 30, 1998, p. 2-21.

If individual sites are expected to maintain for their own wastes all or any portion of the written record required by 40 CFR 761.65(a)(2)(ii), what does DOE expect for the content of the written record?

Again, DOE Headquarters has not imposed any additional requirements beyond what EPA imposes at 40 CFR 761.65(a)(2)(ii). If a site has 45 kilograms or more of PCB waste in containers (PCB Containers), one or more PCB Transformers (or voltage regulators with >3 lbs of >500 ppm of PCBs), or 50 or more PCB Large Capacitors (High or Low Voltage), the site must maintain an Annual Document Log in accordance with 40 CFR 761.180(a). 40 CFR 180(a)(2)(ii)(C) requires the following information on the contents of each PCB Container storing PCB waste be included in the Annual Document Log: unique identifying number, description of the waste, total weight, and the first date on which the waste was generated (date of removal from service for disposal). If a container has PCB/radioactive waste, such a description must be included in the Annual Document Log.

In the requirement (40 CFR 761.218) stating that the disposer shall prepare a certificate of disposal for each “manifested” PCB waste disposed, clarify what “manifested” means.

PCB waste that does not require an EPA manifest does not require a certificate of disposal when disposed. For example, sites that are self-disposers (i.e., generate and dispose their own PCB waste) do not have to manifest their PCB waste. Therefore, they do not have to produce and keep a certificate of disposal for this PCB waste. Moreover, PCB waste that is not required to have a manifest by EPA but required to have a manifest by a state (or local regulatory authority) is not subject to the EPA requirement to have a certificate of disposal when the waste is disposed.

Sampling

Do I have to use the methods and instrumentation specified in 40 CFR 761.272 or 761.292 to perform chemical extractions and analyses of samples for PCBs?

No. Besides Method 3500B/3540C, Method 3500B/3550B, and Method 8082 from EPA’s SW-846, you may use any method validated under 40 CFR Part 761 Subpart Q. Subpart Q is self-implemented comparison testing. The results of the comparison testing must be documented and made available to your EPA Region for review upon request.

Health and Safety

What are the American Conference of Government and Industrial Hygienists (ACGIH) threshold limit values for PCBs?

The ACGIH first established threshold limit values for PCBs in 1946 and updated them in 1956. In 1961, ACGIH added a skin notation to its threshold limit values. The skin notation is an advisory that PCBs in liquid form can penetrate the skin and can cause certain systemic effects. The skin notation was not intended to apply to non-liquid PCBs. The ACGIH threshold limit values of 1956 were codified by the Occupational Safety and Health Administration (OSHA) into the regulations as permissible exposure limits: 1 mg/m³ for PCBs containing 42% chlorine (namely, Aroclor 1242) and 0.5 mg/m³ for PCBs containing 54% chlorine

(namely, Aroclor 1254). OSHA did not change these permissible exposure limits during its 1989 rulemaking on air contaminants. The OSHA permissible exposure limits—not the ACGIH threshold limit values—are the only quantitative workplace limits on PCB concentrations in the air that are enforceable by Federal law.

Other

May plastics containing PCBs, such as shredder residue, be recycled for beneficial use?

No. TSCA contains no provisions for recycling of this nature. In order for recycling to be authorized, EPA would have to go through the process of rulemaking and make a finding that the processing, use, and distribution in commerce of such PCBs pose no unreasonable risk to human health and the environment.

Questions of policy or questions requiring policy decisions will not be addressed in EH-43 Environmental Compliance Consultations unless that policy has already been established through appropriate documentation. Please refer any questions concerning the material covered herein to John Bascietto, EH-43, (202) 586-7917, john.bascietto@eh.doe.gov.