ENVIRONMENTAL/WASTE COMPLIANCE GUIDANCE No. 25
ENVIRONMENTAL LEADERSHIP TEAM

Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition

In June of 1998, EPA promulgated new PCB regulations under the Toxic Substances Control Act (TSCA) that modified many of the previous PCB management requirements. The purpose of this guidance is to summarize the revised requirements related specifically to non-liquid PCBs contained in manufactured products, and to identify a Site-wide management strategy that can be consistently applied during Facility Disposition to ensure compliance with the new requirements. Facility Disposition includes both Deactivation and Decommissioning as defined in the Rocky Flats Cleanup Agreement (RFCA). EPA defines non-liquid PCBs in manufactured products at concentrations greater than 50 parts per million (ppm) as "PCB bulk product waste". Examples of PCB bulk product waste include, but are not limited to:

- Applied dried paints, varnishes, waxes or other similar coatings or sealants, and caulking
- Fluorescent light ballasts
- Non-liquid building demolition debris
- Plastics, e.g. wire insulation; radio, television and computer casings; vehicle parts, or furniture laminates
- Preformed or molded rubber parts

Fluorescent light ballasts are the only PCB bulk product waste streams that are routinely generated during normal Site operations. Other PCB bulk product wastes, including paint and coatings, demolition debris, and plastics are not routinely generated but will be generated as a result of Facility Disposition. Site personnel are referred to Environmental/Waste Compliance Guidance No. 22 (September, 1998) for the most recent Site management guidance for routinely-generated fluorescent light ballasts.

RFETS Default Management Strategy for Nonradioactive PCB Bulk Product Waste Generated During Facility Disposition

Figure 1 illustrates the disposal options for nonradioactive PCB bulk product waste permissible under the PCB regulations. The highlighted boxes indicate that the RFETS default disposal strategy for PCB bulk product wastes is the solid waste landfilling option. Specifically, the PCB bulk product wastes will be disposed at a facility that is permitted, licensed, or registered by a State to manage municipal solid waste subject to 40 CFR, Part 258, or non-municipal, non-hazardous waste subject to 40 CFR §§257.5 through 257.30. For most bulk product wastes, implementing this strategy precludes the need for PCB characterization prior to or during Facility Disposition. However, notification to the disposal facility by the Site is required at least 15 days in advance of shipping wastes to the facility. Project Managers shall contact the Sanitary and Industrial Waste Program Manager, Mr. David Kidd (ext. 5835) prior to generating nonradioactive PCB bulk product waste to coordinate the off-site disposal of these wastes. Mr. Kidd will provide the required notification to the disposal facility.

RFETS Default Disposal Strategy for Radioactive PCB Bulk Product Waste Generated During During Facility Disposition

The PCB regulations under TSCA describe specific requirements for the disposal of PCB bulk product wastes that are also radioactive. The regulations state that any person storing or disposing of PCB/radioactive waste (including PCB

bulk product waste) SHALL take into account both its PCB concentration and its radioactive properties. If, taking into account only the properties of the PCBs in the waste, the waste meets the requirements for disposal in a facility permitted, licensed, or registered as a municipal; or non-municipal, non-hazardous waste landfill, then the person may dispose of the PCB/radioactive waste without regard to the PCB component of the waste, but in accordance with all applicable requirements for the radioactive components of the waste.

Because PCB bulk product wastes meet the requirement for disposal in a facility permitted, licensed, or registered as a municipal; or non-municipal, non-hazardous waste landfill, the default disposal strategy for radioactive PCB bulk product waste is to dispose of the waste based on its radioactive components without regard to the PCBs. However, because the waste is still classified as a TSCA PCB bulk product waste, the radioactive waste disposal site must be able to accept PCBs for disposal in accordance with its Waste Acceptance Criteria.

Exceptions to the Default Management Strategy

Exceptions to the default disposal strategy are appropriate for potential PCB bulk product wastes that have either a significant recovery value or are easily recycled. Examples of such wastes include salvageable equipment that is painted or coated; wire or cable with plastic insulation, and plastics from computers and other appliances.

Figure 2 presents a decision tree that illustrates the steps necessary to disposition these wastes in accordance with the PCB regulations. The key steps in this process are:

1. Determine the feasibility of decontaminating an item versus disposing of the item via the solid waste disposal option. Refer to the PROPERTY MANAGEMENT MANUAL (1-MAN-009-PMM, PADC-1997-01338) for the procedure. If, based on this evaluation, decontamination is not feasible, dispose of the waste using the default disposal strategy.

2. If the decision is made to decontaminate the PCBs from the recoverable item, characterize the PCB concentration of only the non-liquid PCB components of the item. For example, for a painted metal item, determine the PCB concentration only in the paint by collecting and analyzing paint-chip samples for PCBs. Assistance in developing characterization plans is available by contacting the K-H Environmental Manager.

3. If the PCB concentration does not exceed 50 ppm, the item is not regulated under TSCA and can be distributed in commerce without further restrictions, unless there are restrictions imposed by other regulatory statutes (e.g. RCRA). To distribute in commerce means to sell, or the sale of, the substance, mixture, or article in commerce; to introduce or deliver for introduction into commerce, or the introduction or delivery for introduction into commerce of the substance, mixture, or article; or to hold or the holding of, the substance, mixture or article after its introduction into commerce.

4. If the PCB concentration exceeds 50 ppm, the waste must be decontaminated before being introduced into commerce.

5. There are three decontamination options: **a)** self-implementing thermal decontamination for non-porous surfaces in contact with non-liquid PCBs (including non-porous surfaces covered with a porous surface such as paint or plastic on metal); **b)** measurement-based decontamination using the decontamination processes specified and cleaning to the standards specified on the decision tree, and, **c)** alternate decontamination that requires EPA review and approval for using decontamination methods other than self-implementing or measurement-based.

6. If the self-implementing thermal decontamination option is selected (e.g. metal scrap for smelting) and the PCB concentration equals or exceeds 500 ppm, the waste must be decontaminated to a surface level less than 100 $\mu g/100\ cm^2$ PCBs prior to being subjected to further thermal decontamination. If the PCB concentration is less than 500 ppm, no decontamination is necessary prior to subsequent smelting.

7. If measurement-based decontamination is selected, the standard for unrestricted use is Visual Standard No. 2, Near-White Blast Cleaned Surface Finish as defined by the National Association of Corrosion Engineers (NACE). For disposal in a smelter operation, the standard is the NACE Visual Standard No. 3, Commercial Blast Cleaned Surface Finish.

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Other Management Requirements for PCB Bulk Product Wastes During D&D

Marking

Mark PCB bulk product waste containers and PCB bulk product storage areas with the Large PCB Label.

Storage

1. Package nonradioactive PCB bulk product waste in accordance with WP-1027 and the Waste Generation Instruction.

2. Package radioactive PCB bulk product waste in accordance with WO-1100 and the Waste Generation Instruction.

3. Complete the Waste/Residue Traveler in accordance with WO-1102. Ensure that the "removal from service for disposal date" is recorded on the traveler and on the WEMS Log Sheet *for each PCB bulk product waste item placed in the drum or bulk storage area*. The "removal from service for disposal date" is the date that the generator determines the items to be waste.

4. Nonradioactive PCB bulk product wastes generated as part of a CERCLA D&D Action, may be stored for up to nine months near the point of generation, in other than a designated "PCB Storage Area" provided the following conditions are met:

   - A note is attached to the item or container indicating the date the item was removed from service.

   - Leaking items are placed in a non-leaking container with sufficient sorbent material to absorb any liquid PCBs.

   - If stored outside of a building:
     - The storage site must have a liner and liner foundation (e.g. catch pan) that prevents migration of wastes and prevents failure of the liner.
     - A liner that covers all surrounding earth likely to be in contact with the waste.
     - A cover (e.g., overpack, tarp, roof) that is installed to cover all of the stored waste likely to be contacted with precipitation and secured so as not to be functionally disabled by winds.
     - Stored in a manner to prevent contact of the waste with run-on water.

   - If you elect to store PCB bulk product waste in a temporary storage area, inspect the containers at least once every 30 days, and document the inspections using the PCB Temporary Storage Area Inspection Checklist (found in PCB Management Plan).

   - For nonradioactive bulk product waste, initiate Property/Waste Release Evaluations (P/WRE's) at least 15 working days prior to the expiration of the nine-month period to ensure wastes can be disposed within the TSCA-mandated 1-year time limit.

   - Radioactive PCB bulk product waste that are generated from a CERCLA action are not subject to either the temporary storage time limits or the 1-year time limit for disposal. However, the generator of the waste is required to document continuing attempts to dispose of the waste.

Note: For each container, the "removal from service for disposal date" is the earliest date for the PCB bulk product waste contained in the container.

5. CERCLA-generated PCB bulk product waste may also be stored either in a designated "PCB Storage Area" that meets minimum design requirements under TSCA, or placed in a RCRA-permitted container storage unit. The minimum requirements for a " TSCA PCB Storage Area" are:
   - Roof and walls adequate to prevent rainwater from reaching the PCB Items.

   - Containment with continuous curbing and a minimum 6-inch high curb.

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- Containment volume equal to two times the internal volume of the largest container, or 25% of the total container volume, whichever is greater.

- For radioactive PCB bulk product waste, the 6-inch minimum required curb height is waived; however, the containment volume requirements remain as stated above.

- Floors and curbing constructed of Portland cement, concrete, or a continuous, smooth, non-porous surface.

Building 666 and associated cargo units are designated "TSCA PCB Storage Areas".

- If stored in a RCRA-permitted container storage area, the minimum requirements are:

  ➢ The PCB bulk product waste must be managed in accordance with the RCRA Unit permit requirements (e.g., secondary containment, inspections, segregation of incompatibles, aisle space).

  ➢ Spills must be cleaned-up in accordance with the Subpart G requirements of 40 CFR 761 (PCB spill clean-up requirements).

Note that EPA considers a RCRA-permitted container storage unit to provide a level of protection equivalent to that afforded by a "TSCA PCB Storage Area". Therefore certain design requirements that are more stringent for a TSCA PCB Storage Area (e.g., minimum six-inch high curbing for secondary containment) are not required for a permitted RCRA unit storing TSCA wastes.

6. Mark the PCB Storage Area with the Large PCB Label.

7. Inspect the containers for leaks at least once every 30 days. Document the inspections using the Inspection Form in the TSCA/PCB Management Plan (1-1000-EWQA).

8. Store PCB bulk product waste in DOT-specification containers when storing in containers and keep the containers closed during storage.

9. Radioactive PCB bulk product wastes are not necessarily required to be stored in DOT specification containers, but must be stored in:
   - Containers that are non-leaking; and
   - Containers designed to prevent the buildup of liquids, and
   - Containers meeting the requirements pertaining to nuclear criticality safety.

10. Record, for each drum on the Waste/Residue Traveler and WEMS Log Sheet, the quantity of bulk product waste in each batch, the date each item was removed from service, the date the batch was added to or removed from the container, and the disposition of the batch.

Additional details can be found in the TSCA/PCB Management Plan. If you have any questions, please contact Mark Selman at extension 2930.

ELT Concurrence

\s\	4/14/99	\s\	4/19/99
Karan North, K-H	Date	Bill Wierzbicki, SSOC	Date
\s\	4/19/99	\s\	4/14/99
Ted Hopkins, RMRS	Date	Kevin Nell, CSS	Date

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FIGURE 1- Disposal Options for PCB Bulk Product Waste (40 CFR 761.62)

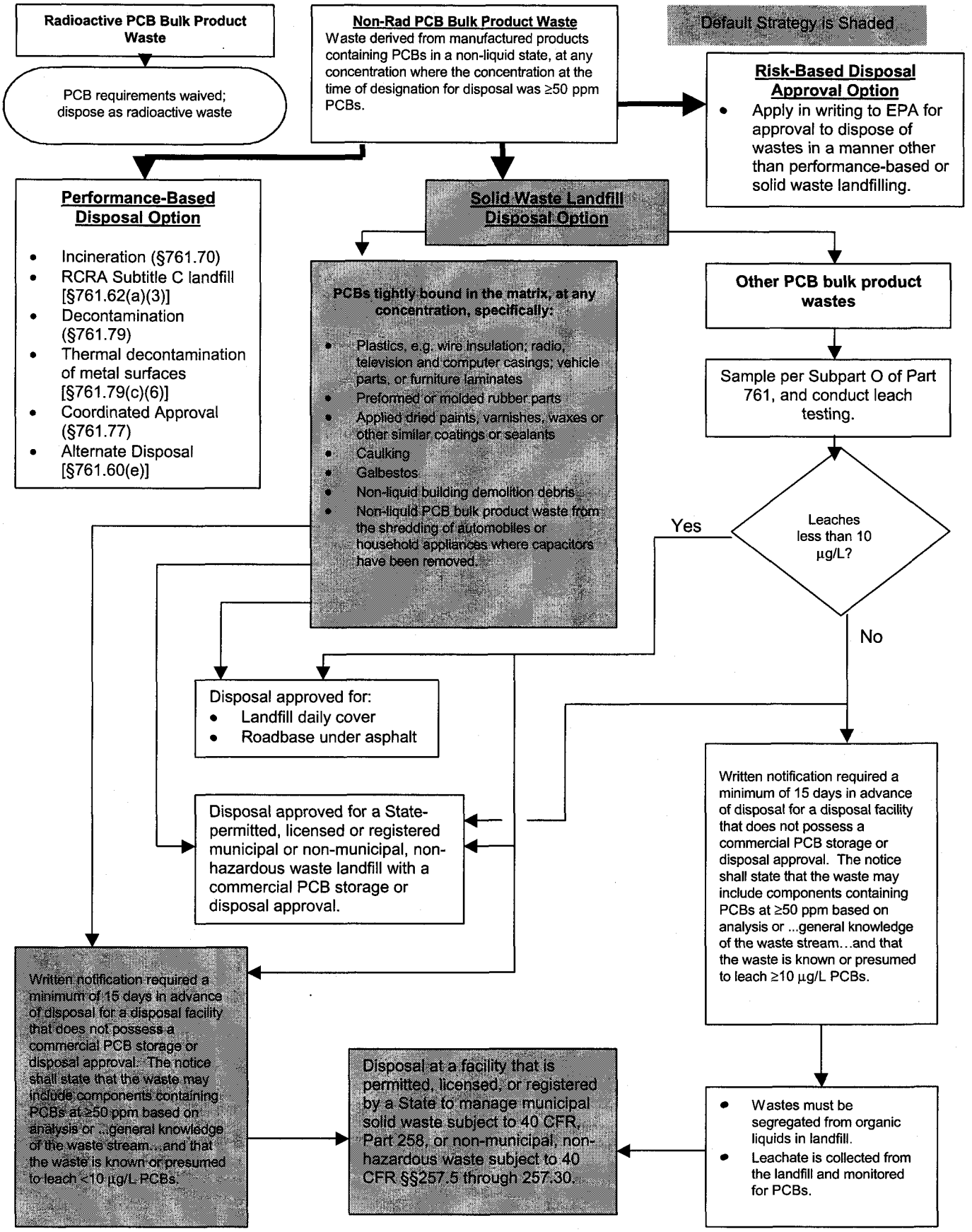
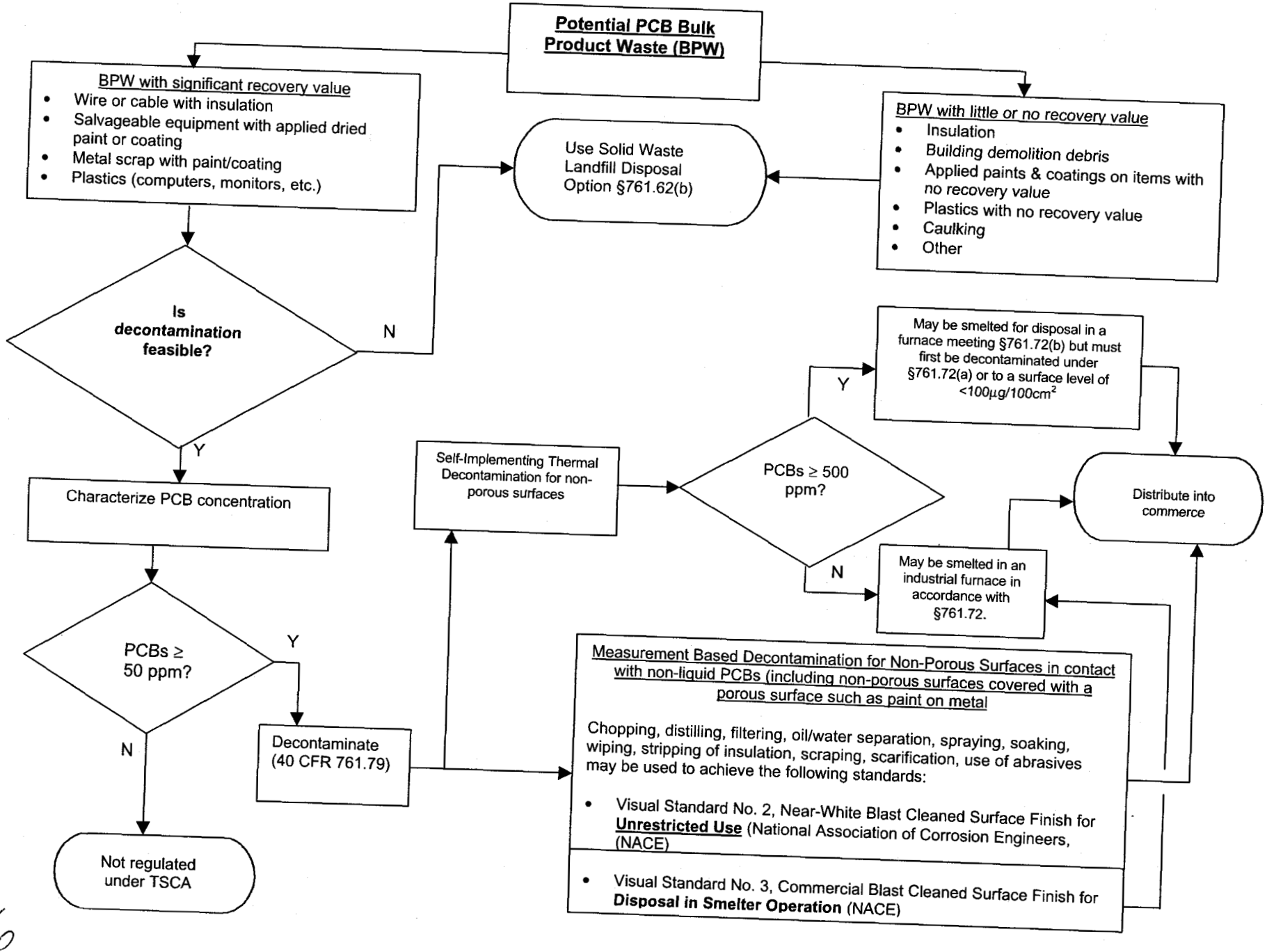


Figure 2 - Decision Flow for Disposition of Non-Radioactive PCB Bulk Product Waste



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