TWO MINUTE TRAINING

TO: *CH2M HILL PLATEAU REMEDIATION COMPANY*

FROM: *PAUL W. MARTIN, RCRA Subject Matter Expert*
CHPRC Environmental Protection, Hanford, WA

SUBJECT: *DISPOSING OF PCB BALLASTS WITH PCB POTTING MATERIAL*

DATE: *DECEMBER 7, 2017*

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TWO MINUTE TRAINING

SUBJECT: Disposing of PCB Ballasts with PCB Potting Material

Q: A customer has a drum of waste fluorescent lamp ballasts containing intact and non-leaking PCB small capacitors surrounded by an insulating material known as potting material. The PCB concentrations of the potting material vary from <50 ppm to ≥50 ppm PCBs. What are the disposal options for these PCB fluorescent ballasts?

A: Per the USEPA, "PCB Question and Answer Manual, June 2014", page 45, question 1:

"This depends on the concentration of PCBs in the potting material and whether the ballast contains an intact or non-intact PCB small capacitor. If the PCB concentration of the potting material is <50 ppm and the ballast contains either no PCB small capacitor or an intact and non-leaking PCB small capacitor, you can dispose of the ballast as municipal solid waste (see §761.60(b)(2)(ii)). If the PCB concentration of the potting material is ≥ 50 ppm and the ballast contains either no PCB small capacitor or an intact and non-leaking PCB small capacitor, you can dispose of the ballast as PCB bulk product waste in a TSCA incinerator, a TSCA/RCRA landfill, a facility permitted, licensed, or registered by a state as a municipal or non-municipal non-hazardous waste landfill, or by means of an approved destruction method, decontamination, or risk-based disposal method (see §761.62). Regardless of the PCB concentration of the potting material, you must dispose of ballasts containing non-intact or leaking capacitors as PCB bulk product waste in accordance with §761.62(a) or (c)."

In other words:

- If the PCB small capacitor is intact/non-leaking and the potting material is <50 ppm – dispose in municipal landfill.
- If the PCB small capacitor is intact/non-leaking and potting material is ≥50 ppm – dispose in either a TSCA incinerator, a TSCA/RCRA landfill, a state permitted municipal or non-municipal nonhazardous landfill (leach testing per 761.62(b) required), or an approved destruction, decontamination, or a risk-based disposal method.
- If the PCB small capacitor is not intact and is leaking, regardless of PCB concentration in the potting material – dispose in either a TSCA incinerator, a TSCA/RCRA landfill, or by an approved destruction method, or decontamination, or a risk-based disposal method, but NOT in a state permitted municipal or non-municipal nonhazardous landfill.

Since the customer's fluorescent ballasts contain intact/non-leaking PCB small capacitors with PCB concentrations in the potting material that are ≥ 50 PPM, at a minimum all these ballasts can be disposed in a state permitted municipal landfill provided that leach testing per 40 CFR 761.62(b)(1)(ii) is conducted and the ballasts leach <10 µg/L of water.

SUMMARY:

- Intact/non-leaking PCB small capacitors with PCB potting material <50 ppm can be disposed in municipal landfills.
- Intact/non-leaking PCB small capacitors with potting material >50 ppm PCBs can be disposed in a TSCA incinerator, a TSCA/RCRA landfill, a state permitted municipal/non-municipal nonhazardous waste landfill, or via an approved destruction method, or decontamination, or a risk-based disposal method.
- Non-intact and leaking PCB small capacitors, regardless of the PCB concentration in the potting material can be disposed in either a TSCA incinerator, a TSCA/RCRA landfill, or by an approved destruction method, or decontamination, or a risk-based disposal method, but NOT in a state permitted municipal (etc.) landfill.

Voluminous excerpts from 40 CFR 761.3, 761.50, 761.60 and 761.62 are attached. If you have any questions, please contact me at Paul_W_Martin@rl.gov or at (509) 376-6620.

FROM: Paul W. Martin **DATE:** 12/7/17 **FILE:** 2MT\2017\120717.rtf

TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Disposing of PCB Ballasts with PCB Potting Material

40 CFR 761.3 Definitions

Fluorescent light ballast means a device that electrically controls fluorescent light fixtures and that includes a capacitor containing 0.1 kg or less of dielectric.

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

40 CFR 761.50(b)(2)(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).

40 CFR 761.50(b)(2)(ii)

Fluorescent light ballasts containing PCBs in the Potting Material are regulated for disposal as PCB bulk product waste under 761.62.

40 CFR 761.60 Disposal Requirements

(b)(2)(ii) Any person may dispose of PCB Small Capacitors as municipal solid waste, unless that person is subject to the requirements of paragraph (b)(2)(iv) [*capacitor manufacturer*] of this section.

(b)(6)(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.

TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Disposing of PCB Ballasts with PCB Potting Material

40 CFR 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 R 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.

SUBJECT: Disposing of PCB Ballasts with PCB Potting Material

40 CFR 761.62 Disposal of PCB bulk product waste. (Continued)

(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, J, and K of this part do not apply to waste disposed of under paragraph (b) of this section.

(c) *Risk-based disposal 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 Regional Administrator in the Region where the sampling, disposal, or storage site is located, for sampling, disposal, or storage occurring in a single EPA Region; or to the Director, Office of Resource Conservation and Recovery, for sampling, 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 sampling, disposal, or storage methods or locations will not pose an unreasonable risk or injury to health or the environment. EPA may request other information that it believes necessary to evaluate the application. No person may conduct sampling, disposal, or storage activities under this paragraph prior to obtaining written approval by EPA.

(2) EPA will issue a written decision disposal, or storage 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 …

EPA Region III Comment (last paragraph, page 6)

"The small capacitor exemption from the existing disposal requirements for PCB wastes does not apply under two circumstances. Under existing regulations, if a PCB Small Capacitor is leaking, it is regulated for disposal as a PCB Article and must be disposed of as a PCB waste. If the "Potting Material" (the insulating material inside the ballast) contains PCBs at concentrations greater than or equal to 50 ppm, then the PCB ballast is a PCB Article and the entire PCB ballast is regulated for disposal as PCB waste, even if the internal small capacitor remains intact and non-leaking."