

SECTION 02 84 16
HANDLING OF LIGHTING BALLASTS AND LAMPS
CONTAINING PCBS AND MERCURY

PART 1 GENERAL

1.01 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.
1. Arizona Administrative Code (AAC) Title 18, Chapter 8, Hazardous Waste Management
 2. U.S. National Archives and Records Administration (NARA):
 - a. 29 CFR 1910.1000, Air Contaminants.
 - b. 40 CFR 260, Hazardous Waste Management System: General.
 - c. 40 CFR 261, Identification and Listing of Hazardous Waste.
 - d. 40 CFR 262, Standards Applicable to Generators of Hazardous Waste.
 - e. 40 CFR 263, Standards Applicable to Transporters of Hazardous Waste.
 - f. 40 CFR 264, Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.
 - g. 40 CFR 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities.
 - h. 40 CFR 268, Land Disposal Restrictions.
 - i. 40 CFR 270, EPA Administered Permit Programs: The Hazardous Waste Permit Program.
 - j. 40 CFR 273, Standards for Universal Waste Management.
 - k. 40 CFR 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.
 - l. 49 CFR 178, Specifications for Packagings.

1.02 REQUIREMENTS

- A. Removal and disposal of PCB containing lighting ballasts and associated mercury-containing lamps. Contractor may encounter leaking PCB ballasts.

1.03 DEFINITIONS

- A. Certified Industrial Hygienist (CIH): A industrial hygienist hired by the contractor must be certified by the American Board of Industrial Hygiene.

- B. Lamps: Lamp is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.
- C. Leak: Leak or leaking means any instance in which a PCB article, PCB container, or PCB equipment has any PCBs on any portion of its external surface.
- D. Polychlorinated Biphenyls (PCBs): PCBs as used in this specification mean the same as PCBs, and all related items, as defined in 40 CFR 761, Section 3, Definitions.
- E. Spill: Spill means both intentional and unintentional spills, leaks, and other uncontrolled discharges when the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source, as well as the contamination resulting from those releases.
- F. Universal Waste:
 - 1. Universal Waste means any of the following hazardous wastes that are managed under the universal waste requirements 40 CFR 273 and AAC Title 18, Chapter 8:
 - a. Batteries as described in Section 273.2 of this chapter.
 - b. Pesticides as described in Section 273.3 of this chapter.
 - c. Mercury containing equipment as described in Section 273.4 of this chapter.
 - d. Lamps as described in Section 273.5 of this chapter.

1.04 QUALITY ASSURANCE

- A. Regulatory Requirements: Perform PCB related work in accordance with 40 CFR 761. Perform mercury-containing lamps storage and transport in accordance with 40 CFR 261, 40 CFR 264, 40 CFR 265, 40 CFR 273, and AAC Title 18, Chapter 8.
- B. Training:
 - 1. Instruction and certification of training of all persons involved in the removal of PCB containing lighting ballasts and mercury-containing lamps is the responsibility of the Certified Industrial Hygienist (CIH). Include in the instruction: The dangers of PCB and mercury exposure, decontamination, safe work practices, and applicable OSHA and EPA regulations. The CIH must review and approve the PCB and Mercury-Containing Lamp Removal Work Plans.

- C. Regulation Documents: Maintain at all times one copy each at the office and one copy each in view at the Job Site of 29 CFR 1910.1000, 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 265, 40 CFR 268, 40 CFR 270, 40 CFR 273, AAC Title 18, Chapter 8 and of the Contractor removal work plan and disposal plan for PCB and for associated mercury-containing lamps.

1.05 SUBMITTALS

A. Action Submittals:

- 1. Closeout Submittals:
 - a. Transporter Certification of notification to EPA of their PCB waste activities and EPA ID numbers.
 - b. Certification of Decontamination.
 - c. Certificate of Disposal and/or recycling. Submit to the Government before application for payment within 30 days of the date that the disposal of the PCB and mercury-containing lamp waste identified on the manifest was completed.
- 2. PCB and Lamp Removal Work Plan.
- 3. PCB and Lamp Disposal Plan.

B. Information Submittals:

- 1. Certificates:
 - a. Qualifications of CIH.
 - b. Training Certification.
 - c. PCB and Lamp Removal Work Plan.
 - d. PCB and Lamp Disposal Plan

1.06 ENVIRONMENTAL REQUIREMENTS

A. Use special clothing:

- 1. Disposable gloves (polyethylene).
- 2. Eye protection.
- 3. PPE as required by CIH.

1.07 SCHEDULING

- A. Notify the Contracting Officer 20 days prior to the start of PCB and mercury-containing lamp removal work.

1.08 QUALITY ASSURANCE

- A. Qualifications of CIH: Submit the name, address, and telephone number of the Industrial Hygienist selected to perform the duties in Paragraph Certified

Industrial Hygienist. Submit training certification that the Industrial Hygienist is certified, including certification number and date of certification or re certification.

B. PCB and Lamp Removal Work Plan:

1. Submit a job-specific plan within 20 calendar days after award of Contract of the work procedures to be used in the removal, packaging, and storage of PCB-containing lighting ballasts and associated mercury-containing lamps. Include in the plan: Requirements for Personal Protective Equipment (PPE), spill cleanup procedures and equipment, eating, smoking and restroom procedures. The plan must be approved and signed by the Certified Industrial Hygienist. Obtain approval of the plan by the Contracting Officer prior to the start of PCB and/or lamp removal work.

C. PCB and Lamp Disposal Plan:

1. Submit a PCB and lamp Disposal Plan within 45 calendar days after award of Contract, complying with the applicable requirements of federal, state, and local PCB and Universal waste regulations and address:
 - a. Estimated quantities of wastes to be generated, disposed of, and recycled.
 - b. Names and qualifications of each Contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location. Furnish two copies of EPA and state PCB and mercury-containing lamp waste permit applications and EPA identification numbers, as required.
 - c. Names and qualifications (experience and training) of personnel who will be working onsite with PCB and mercury-containing lamp wastes.
 - d. Spill prevention, containment, and cleanup contingency measures to be implemented.
 - e. Work plan and schedule for PCB and mercury-containing lamp waste removal, containment, storage, transportation, disposal and or recycling. Clean up and containerize wastes daily.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 WORK PROCEDURE

- A. Furnish labor, materials, services, and equipment necessary for the removal of PCB containing lighting ballasts, associated mercury-containing fluorescent lamps, and high intensity discharge (HID) lamps in accordance with local,

state, or federal regulations. Do not expose PCBs to open flames or other high temperature sources since toxic decomposition by-products may be produced. Do not break mercury containing fluorescent lamps or high intensity discharge lamps.

B. Work Operations:

1. Ensure that work operations or processes involving PCB or PCB-contaminated materials are conducted in accordance with 40 CFR 761, 40 CFR 262 40 CFR 263, and the applicable requirements of this section, including but not limited to:
 - a. Obtaining suitable PCB and mercury-containing lamp storage sites.
 - b. Notifying Contracting Officer prior to commencing the operation.
 - c. Reporting leaks and spills to the Contracting Officer.
 - d. Cleaning up spills.
 - e. Inspecting PCB and PCB-contaminated items and waste containers for leaks and forwarding copies of inspection reports to the Contracting Officer.
 - f. Maintaining inspection, inventory, and spill records.

3.02 PCB SPILL CLEANUP REQUIREMENTS

- A. PCB Spills: Immediately report to the Contracting Officer any PCB spills.
- B. PCB Spill Control Area: Rope off an area around the edges of a PCB leak or spill and post a “PCB Spill Authorized Personnel Only” caution sign. Immediately transfer leaking items to a drip pan or other container.
- C. PCB Spill Cleanup: 40 CFR 761, Subpart G. Initiate cleanup of spills as soon as possible, but no later than 24 hours of its discovery. Mop up the liquid with rags or other conventional absorbent. Properly contain and dispose of spent absorbent as solid PCB waste.
- D. Records and Certification: Document the cleanup with records of decontamination in accordance with 40 CFR 761, Section 125, Requirements for PCB Spill Cleanup. Provide test results of cleanup and certification of decontamination.

3.03 REMOVAL

- A. Ballasts: As ballast are removed from the lighting fixture, inspect label on ballast. Ballasts without a “No PCB” label must be assumed to contain PCBs and containerized and disposed of as required under Article Storage for Disposal and Article Disposal. If there are less than 1,600 “No PCB” labeled lighting ballasts, dispose of them as normal demolition debris.

- B. Lighting Lamps: Remove lighting tubes/lamps from the lighting fixture and carefully place (unbroken) into appropriate containers (original transport boxes or equivalent). In the event of a lighting tube/lamp breaking, sweep and place waste in double plastic taped bags and dispose of as universal waste as specified herein.

3.04 STORAGE FOR DISPOSAL

- A. Storage Containers for PCBs: 49 CFR 178. Store PCB in containers approved by DOT for PCB.
- B. Storage Containers for Lamps: Store mercury containing lamps in appropriate DOT containers. Store and label boxes for transport in accordance with 40 CFR 273.
- C. Labeling of Waste Containers:
 - 1. Label with the following:
 - a. Date the item was placed in storage and the name of the cognizant activity/building.
 - b. "Caution Contains PCB," conforming to 40 CFR 761, CFR Subpart C. Affix labels to PCB waste containers.
 - c. Label mercury-containing lamp waste in accordance with 40 CFR 273. Affix labels to all lighting waste containers.

3.05 DISPOSAL

- A. Dispose of off Government property in accordance with EPA, DOT, and local regulations at a permitted site.
- B. Identification Number: Federal regulations 40 CFR 761, and 40 CFR 263 require that generators, transporters, commercial storers, and disposers of PCB waste possess U.S. EPA identification numbers. Verify that the activity has a U.S. EPA generator identification number for use on the Uniform Hazardous Waste manifest. If not, advise the activity that it must file and obtain an I.D. number with EPA prior to commencement of removal work. For mercury containing lamp removal, Federal regulations 40 CFR 273 require that large quantity handlers of Universal waste (LQHUW) must provide notification of universal waste management to the appropriate EPA Region (or state director in authorized states), obtain an EPA identification number, and retain for 3 years records of offsite shipments of universal waste. Verify that the activity has a U.S. EPA generator identification number for use on the Universal Waste manifest. If not, advise the activity that it must file and obtain an I.D. number with EPA prior to commencement of removal work.

- C. Transporter Certification: Comply with disposal and transportation requirements outlined in 40 CFR 761 and 40 CFR 263. Before transporting the PCB waste, sign and date the manifest acknowledging acceptance of the PCB waste from the Government. Return a signed copy to the Government before leaving the Job Site. Ensure that the manifest accompanies the PCB waste at all times. Submit transporter certification of notification to EPA of their PCB waste activities (EPA Form 7710-53).
1. Certificate of Disposal and/or Recycling:
- a. 40 CFR 761. Include in the certificate for the PCBs and PCB items disposed:
- 1) The identity of the disposal and or recycling facility, by name, address, and EPA identification number.
 - 2) The identity of the PCB waste affected by the Certificate of Disposal including reference to the manifest number for the shipment.
 - 3) A statement certifying the fact of disposal and or recycling of the identified PCB waste, including the date(s) of disposal, and identifying the disposal process used.
 - 4) A certification as defined in 40 CFR 761.

END OF SECTION

