SECTION 02 84 16

HANDLING OF LIGHTING BALLASTS AND LAMPS CONTAINING PCBS AND MERCURY

01/24

PART 1 GENERAL

1.1 REFERENCES

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.

MINISTRY OF THE ENVIRONMENT GOVERNMENT OF JAPAN (MOE)

Act No. 137	(1970, Amended 1991 and 2006) Waste Management and Public Cleansing Law

U.S. DEPARTMENT OF DEFENSE (DOD)

JEGS	(Apr 2024) Japan Environmental Governing Standards

1.2 REQUIREMENTS

Removal and disposal of PCB containing lighting ballasts and associated mercury-containing lamps. Contractor may encounter leaking PCB ballasts. PCB ballasts and/or mercury containing lighting fixtures or other equipment may be encountered in additional locations not listed in the drawings or the project Hazardous Materials Inspection Report(s). Inspect, confirm, and identify all PCB-containing ballasts and any other PCB-containing, mercury-containing, or otherwise hazardous material as part of project work.

1.3 DEFINITIONS

1.3.1 IH/PQP

Industrial Hygienist/Private Qualified Person required by the Contractor.

1.3.2 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.

1.3.3 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 universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

1.3.4 Polychlorinated Biphenyls (PCBs)

PCBs as used in this specification shall mean the same as PCBs, PCB containing lighting ballast, and PCB container, as defined in JEGS, Chapter 7, Polychlorinated Biphenyls

1.3.5 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.

1.4 QUALITY ASSURANCE

1.4.1 Regulatory Requirements

Perform PCB related work in accordance with JEGS, Act No. 137, and other applicable US Federal, GOJ, and local laws and regulations. Perform mercury-containing lamps storage and transport in accordance with JEGS, Act No. 137, and other applicable US Federal, GOJ, and local laws and regulations.

1.4.1.1 PCB and Lamp Management and Disposal Plan

Prior to handling any PCB items, the Contractor shall submit a PCB and Lamp Management and Disposal Plan. The submitted plan shall include the PCB and Lamp Removal and Disposal Work Plan, [PCB and Lamp Disposal Plan], Qualifications of the IH/PQP, and Japan Industrial Waste Collection and Transport Permit.

1.4.2 Training

Industrial Hygienist/Private Qualified Person (IH/PQP) shall instruct and certify the training of all persons involved in the removal of PCB containing lighting ballasts and mercury-containing lamps. The instruction shall include: The dangers of PCB and mercury exposure, decontamination, safe work practices, and applicable OSHA and EPA, JEGS, GOJ, and prefectural regulations.

The IH/PQP shall review and approve the PCB and Mercury-Containing Lamp Removal Work Plans and temporary on-site Storage Plans.

1.4.3 Regulation Documents

Maintain at all times one copy each at the office and one copy each in view at the job site of pertinent JEGS Chapter 16, Hazardous Waste and Chapter 7, Polychlorinated Biphenyls, JEGS Appendix 1, and a copy of the Contractor PCB and Lamp Removal and Disposal Work Plan.

1.4.4 Qualifications of IH/PQP

An industrial hygienist/private qualified person (IH/PQP) hired by the Contractor shall be a registered Architect, Professional Engineer (licensed), or US Certified Industrial Hygienist and having demonstrable experience in hazardous materials management (i.e. lighting ballasts and lamps containing PCBs or mercury), who is trained in the recognition and control of hazardous chemical related hazards, and has the authority to

take prompt corrective actions to control the hazard. An IH/PQP must have working knowledge of applicable GOJ, Federal, local prefecture, and JEGS regulations as well as occupational safety and health regulations and shall be capable of recognizing chemical hazards associated with lighting ballasts, lamps, and other similar building equipment or materials.

[Submit, as an attachment to the PCB and Lamp Management and Disposal Plan, the name, address, and telephone number of the Industrial Hygienist/Private Qualified Person selected to perform the duties in paragraph entitled "Industrial Hygienist/Private Qualified Person (IH/PQP)." Submit training certification that the Industrial Hygienist/Private Qualified Person is qualified, including certification number and date of certification or re certification.][The IH/PQP shall have at least 2 years of on the job experience in hazardous materials and hazardous waste management and have working knowledge of the JEGS, GOJ, as well as US and Japanese occupational safety and health regulations. The IH/PQP shall have knowledge in detecting, identifying, and evaluating existing or potential hazardous conditions related to PCB-containing light ballasts and mercury-containing lamps and other similar building equipment or materials. The IH/PQP may be considered qualified if he/she is either a certified Industrial Hygienist or is a Private Qualified Person with adequate prerequisite experience and knowledge as listed in this section.]

1.4.5 PCB and Lamp Removal and Disposal Work Plan

Submit a job-specific plan to be incorporated within the PCB and Lamp Management and Disposal Plan within [20] [14][_____] calendar days after [receipt of Notice to Proceed][prior to removal work] explaining 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 shall comply with applicable requirements of Federal, JEGS, GOJ and prefectural PCB and mercury-related regulations. The plan shall be approved and signed by the IH/PQP. Obtain approval of the plan by the Contracting Officer prior to the start of PCB and/or lamp removal work.

All US-made ballasts, even those marked “NO-PCB” shall be turned in to the 718 CES/CEIE PCB Storage section. Call DSN 634-2600 5-days prior to delivery to schedule a drop off.

The plan shall address:

a. Estimate the quantity of ballasts to be delivered to Bldg 3625.

b. Estimate the quantity of mercury-containing lamps to be disposed or recycled at a certified commercial facility.

c. List the names and qualifications of each Contractor that will be transporting, storing, recycling and disposing of the toxic wastes.

d. Furnish a copy of current prefecture-issued waste permit showing that each company is certified by the prefecture to transport and dispose/recycle mercury-containing lamps or other waste.

e. Names and qualifications (experience and training) of personnel who

will be working on-site with PCB and mercury-containing lamp wastes.

f. Spill prevention, containment, and cleanup contingency measures to be implemented.

g. Schedule for PCB and mercury-containing lamp waste removal, containment, storage, transportation, disposal and or recycling. Wastes shall be cleaned up and containerized daily.

h. When submitting the Environmental Protection Plan (EPP) in accordance with Section 01 57 19.01 TEMPORARY ENVIRONMENTAL CONTROLS, under the paragraphs pertaining to PCBs, state that the PCB and Lamp Removal and Disposal Work Plan will be submitted separately.

[1.4.6 PCB and Lamp Disposal Plan

Submit a PCB and lamp Disposal Plan to be incorporated within the PCB and Lamp Management and Disposal Plan, within [45] [_____] calendar days after [receipt of Notice to Proceed][prior to removal work]. The PCB and Lamp Disposal Plan shall comply with applicable requirements of the JEGS and applicable U.S. federal, GOJ, and local prefecture and JEGS PCB 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 PCB and mercury-containing lamp waste permit applications and pertinent identification numbers, as required.

c. Names and qualifications (experience and training) of personnel who will be working on-site 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. Wastes shall be cleaned up and containerized daily.

]1.4.7 Notification

Notify the Contracting Officer 20 days prior to the start of PCB removal work.

1.5 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Notification

PCB and Lamp Management and Disposal Plan; G

SD-11 Closeout Submittals

[Transporter certification ; G[, [_____]]

Certification of Decontamination]

Copy E of the Japan Hazardous Waste Manifest; G. 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.

[Disposal Request Form]
[
Signed Ballast Turn-in (at Bldg 3625) Sheet

]1.6 ENVIRONMENTAL REQUIREMENTS

Use special clothing:

a. Disposable gloves (polyethylene)

b. Eye protection

c. PPE as required by IH/PQP

1.7 SCHEDULING

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

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 WORK PROCEDURE

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 the JEGS, applicable GOJ and local, prefectural 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.

3.1.1 Work Operations

Ensure that work operations or processes involving PCB or PCB-contaminated materials are conducted in accordance with the JEGS, applicable U.S. Federal, GOJ, and local laws and regulations, 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.

3.2 PCB SPILL CLEANUP REQUIREMENTS

3.2.1 PCB Spills

The Contractor shall respond to spills of PCB-containing materials by following Attachment 02 84 16-A. Immediately report to the Contracting Officer any PCB spills. The Contractor is responsible to keep emergency spill kits kept within walking distance from the job site in accordance to requirements in Attachment 02 84 16-B.

3.2.2 PCB Spill Control Area

Rope off an area around the edges of a PCB leak or spill and post a bilingual "PCB Spill Authorized Personnel Only" caution sign in English and Japanese. Immediately transfer leaking items to a drip pan or other container.

3.2.3 PCB Spill Cleanup

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. The cleanup materials such as absorbents shall be properly contained and turned over as PCB waste with the ballasts.][Mop up the liquid with rags or other conventional absorbent. The spent absorbent shall be properly contained and turned over to the MCB Butler Environmental Support Team (EST) as solid PCB waste. Follow all requirements in Attachment 02 84 16-B.]

[3.2.4 Records and Certification

Document the cleanup with records of decontamination in accordance with the JEGS Chapter 7, Polychlorinated Biphenyls and applicable US Federal, GOJ, and prefectural requirements for PCB Spill Cleanup. Provide test results of cleanup and certification of decontamination.]

3.3 REMOVAL

3.3.1 Ballasts

For removed ballasts that are not leaking, up to 300 ballasts may be stored on wooden or plastic pallets on-site for up to 30 days prior to delivery.

Ballasts that are leaking must be immediately stored in leak-proof drip pans, buckets, or double bagged in nitrile bags and stored in a secure area that is not exposed to rainfall. Mark the storage area in English and Japanese in accordance with JEGS and Japan national and prefectural

regulation.

Any PCB oil that has contaminated the ballast mount or other fixtures must be cleaned or removed and turned in with the ballasts. Prior to transport for disposal, the contractor shall segregate Japanese ballasts from US ballasts.

All non-Japanese ballasts, including those with a "NO PCB" label shall be assumed to contain as high as 49 ppm and shall be handled, stored, transported, and disposed of as PCB ballasts. The contractor shall segregate by country of manufacture/origin and deliver all non-Japanese ballasts to the 718 CES/CEIE Environmental Office at Bldg 3625. Ballasts may be delivered between 0800 and 1200 on any Friday except for federal holidays. Call DSN 634-2600 a minimum of 5-days prior to delivery to request forklift unloading assistance.

For Japanese-made ballasts, the Contractor shall segregate regulated PCB ballasts from non-regulated ballasts according to GOJ and prefectural regulations. Information to discriminate between regulated and non-regulated ballasts can be obtained from:
https://www.env.go.jp/recycle/poly/
https://www.env.go.jp/recycle/poly/law/no_14091618.pdf

Regulated PCB ballasts shall be delivered to the 718 CES/CEIE Environmental Office at Bldg 3625. Non-regulated Japanese ballasts become property of the contractor and shall be disposed of in accordance with GOJ and prefectural regulations. In the submitted PCB and Lamp Removal & Disposal Work Plan, clearly state how non-regulated Japanese ballasts will be disposed.

A copy of the Signed Ballast Turn-in (at Bldg 3625) Sheet shall be submitted to the COR.

Light ballasts may still contain PCBs even where a "No PCB" label exists on the ballast due to regulatory differences between U.S. and GOJ definitions for "PCB Free". [Regardless of PCB concentration, manufacturer, country of origin, all light ballasts shall be segregated by country of manufacture/origin, removed, containerized, and turned into the Installation Environmental Division, in accordance with Attachment 02 84 16-B.] PCB abatement or handling shall be in accordance with JEGS Chapter 7 and Attachment 02 84 16-B.

The Contractor shall identify all project ballasts that contain and do not contain PCBs or are suspect to contain PCBs. The Contractor shall submit the PCB ballast list (to include suspect PCB ballasts) to the Contracting Officer Representative (COR). PCB containing ballasts and suspect PCB containing ballasts shall be segregated by country of manufacture.

The following procedures for US manufactured and Japan manufactured ballasts shall be used in the identification of PCB ballasts and described in this section.

3.3.1.1 For US Manufactured Ballasts

US manufactured ballasts shall not be mixed with Japan manufactured ballasts. The Contractor shall segregate and palletize US manufactured ballasts separately from Japan manufactured ballasts at the point of generation for subsequent turn in to the MCB Butler EST (HW/PCB Program Manager, 098-970-3139 or 098-970-5790). All ballasts, including "No PCB"

labeled ballasts and non-PCB containing ballasts, shall be containerized and turned into the MCB Butler EST.

3.3.1.2 For Japan Manufactured Ballasts

The Contractor shall carefully examine the ballast to identify the manufacturer name and year made. Consult with the manufacturer to identify any presence of PCBs. If absence of PCB cannot be confirmed, assume and treat the ballast as a PCB item.

[Japan manufactured ballasts shall not be mixed with US manufactured ballasts. The Contractor shall segregate and palletize Japan manufactured ballasts separately from US manufactured ballasts at the point of generation for subsequent turn in to the MCB Butler EST (HW/PCB Program Manager, 098-970-3139 or 098-970-5790)].

3.3.1.3 For Unmarked/Unlabeled Ballasts

The Contractor shall treat all unmarked/unlabeled ballasts as suspect PCB-containing materials and deliver to Bldg 3625. Segregate unmarked/unlabeled ballasts from other US or Japanese manufactured items. The Contractor shall contact the MCB Butler EST (HW/PCB Program Manager, 098-970-3139 or 098-970-5790) to establish proper procedures for the management of unmarked/unlabeled ballasts.

3.3.2 [Fluorescent Light Tubes (Bulbs)][Fluorescent Lamps]

[The Contractor shall carefully remove and store fluorescent light bulbs in a manner such that they remain intact. Fluorescent light tubes suspect for containing mercury shall be handled and disposed of by the Contractor in accordance to all GOJ, Federal, local prefectural laws and regulations and the JEGS. In the event of a lighting tube/lamp breaking, sweep and place waste in double plastic taped bags and dispose of as appropriate to GOJ, Federal, local prefecture laws and regulations and the JEGS.]

[Remove lighting lamps from the lighting fixture and carefully place into appropriate containers in accordance with JEGS, GOJ, and prefecture regulations. In the event of a lighting lamp breakage, sweep and place waste in double plastic taped bags, place in appropriate containers, and dispose together with the lamps.]

3.4 STORAGE FOR DISPOSAL

3.4.1 Storage Containers for PCBs

[Store PCB in containers as required by JEGS and applicable US Federal, GOJ, and local requirements for PCBs and/or PCB related materials][Store ballasts in accordance with JEGS and this section. Ballasts must be in secondary containment that is not exposed to rainfall].

3.4.2 Storage Containers for Lamps

[Store mercury containing lamps in appropriate containers. The boxes shall be stored and labeled for transport in accordance with JEGS, Act No. 137, the MOE Waste Management, and Public Cleansing Law, and applicable US Federal, GOJ, and local requirements.][Store and mark containers for lamps in accordance with JEGS, GOJ, and prefecture regulation.]

3.4.3 Labeling of Waste Containers

In accordance with JEGS, Chapter 7, prominently label in both English and Japanese with the following:

a. Date the item was placed in storage and the name of the cognizant activity/building.

b. Identification of items, warning against improper disposal and handling, and phone number in case of spills, conforming to JEGS. Affix labels to PCB waste containers.

c. Label mercury-containing lamp waste in accordance with JEGS and Act No. 137, the MOE Waste Management and Public Cleansing Law. Affix labels to all lighting waste containers.

3.5 DISPOSAL [PERMITS][/TURNOVER]

3.5.1 Japan Specially Controlled Hazardous Waste Disposal Permit

In the submitted PCB and Lamp Management and Disposal plan, include a copy of the Japan Specially Controlled Industrial Waste (SCIW) Permit (“Tokubetsu Kanri Haikibutsu Shobungyou Kyoka”) for the disposal or recycling facility where the mercury-containing lamps will be disposed. The permit must specifically say that the firm is authorized to accept mercury.

3.5.2 Japan Industrial Waste Collection and Transport Permit

In the submitted PCB and Lamp Management and Disposal plan, include a copy of the Japan Industrial Waste Collection and Transport Permit (“Sangyou Haikibutsu Shuushuu Unpangyou Kyoka”) for the transportation of mercury-contaminated wastes from the installation.

3.5.3 Japan Hazardous Waste Manifest (JHWM)

A minimum of 5-days prior to the scheduled transportation of mercury containing lamps or other PCB containing ballasts from the installation, contact the [718 CES/CEIE Environmental Section 634-2600] to schedule a pre-transportation inspection. A government representative will inspect, annotate the (JHWM), and authorize the shipment. No toxic wastes shall be transported off the installation without the approval of a US government representative.

Within 60-days after the date of transportation of hazardous waste from the installation, submit Copy E of the Japan Hazardous Waste Manifest bearing the signature/stamp of the final mercury waste disposal/recycling facility as an SD-11 closeout submittal.

For SCIW shipments to disposal facilities outside the prefecture, the manifest must be the "tsumikae" type manifest to allow multiple Chain of Custody entries.

Contract final payment will not be approved by the COR until the Copy E is submitted.

Contractors failing to submit Copy E of the JHWM may be reported to United States Forces Japan (USFJ) and the Ministry of the Environment.]

[Turn in mercury-containing lamps, ballasts, and other PCB or mercury-containing materials to the Installation Environmental Division. Contact Installation Environmental Division at [phone number] at least [5] working days in advance to make arrangements for delivery of these materials to the storage site.

Do not dispose of mercury or PCB related materials at an off Government facility. Do not consider US manufactured light ballasts with "No PCBs" labeling to contain PCBs less than Japan regulatory limits and always acquire PCB content related information from the manufacturer. All ballasts, regardless of PCB or non-PCB containing types, shall be turned into the Installation Environmental Division per the turnover procedures stated in paragraph TURNOVER PROCEDURES.

3.5.4 Turnover Procedures

a. Segregate ballasts by manufacturer.

b. Visit the websites of the manufacturers to verify if the ballasts contain PCB or not by product model number, product color, etc. Certificates shall be obtained stating that the ballast does not contain PCB. If the ballast does not contain PCB in accordance with the certificate, then the ballast should not be turned over to the installation.

c. Sort the ballast in cardboard cases by Non-PCB, PCB containing, unknown for each manufacturer and country of origin.

d. Bring ballasts to the Installation Environmental Division with certificates and supporting documents.

[3.5.5 Transporter Certification

Comply with disposal and transportation requirements outlined in the JEGS. Before transporting the PCB waste, prepare a Disposal Request Form for acknowledgement of acceptance of the PCB waste from the Government. Return a duly signed copy to the Government before leaving the Installation Environmental Division. Ensure that the Disposal Request Form accompanies the PCB or mercury-containing waste at all times.

]3.5.6 Disposal by the Government

Comply with disposal and transportation requirements outlined in the JEGS Chapter 16 and Chapter 7. Load and haul PCBs to the Installation Environmental Division.

3.5.6.1 Delivery

Contact Installation Environmental Division at [phone number]at least [5] working days in advance to make arrangements for delivery of PCB or mercury-containing items to the storage site.

[3.5.6.2 Disposal Request Form

Prepare Disposal Request Form , which will accompany the PCB to the storage site. Contact Installation Environmental Division for a copy of the latest Disposal Request Form version. Ensure that a responsible person from the activity that owns the PCB signs the Disposal Request Form.]

] -- End of Section --