

NEW YORK CITY DEPARTMENT OF EDUCATION

DIVISION OF SCHOOL FACILITIES OFFICE OF BUILDING SERVICES

April 11, 2011

OFFICE OF BUILDING SERVICES CIRCULAR NO. 4 – 2010/11

NOTE: All Circulars are to be kept in a permanent file

TO ALL CUSTODIAN ENGINEERS AND BUILDING MANAGERS

T-12 Ballast Inspection Protocol

Polychlorinated biphenyls (PCBs) were utilized in the manufacture of construction and electrical materials before 1979. On April 17th, 2008, the Division of School Facilities issued P. O. Circular No. 5 – 2007/08 which addressed the potential concern of building caulk containing PCBs. As a reminder, Circular No. 5 – 2007/08 remains in effect, as does its required monthly inspection and reporting requirements.

The awareness of the potential presence of PCBs in the work place has now been expanded to include PCBs commonly found in magnetic lighting ballasts manufactured for T-12 fluorescent lighting fixtures up until 1979. A ballast is used primarily to regulate and keep constant the current supplied to the fixture. Ballasts generally consist of a reactor coil assembly, a thermal protection switch (after 1973) and a capacitor. Most PCBs in fluorescent light fixture magnetic ballasts are found in liquid form (as oil) within the capacitor. If the capacitor leaks, some PCBs may be absorbed into the potting compound (which is a brownish/black asphalt-silica mixture) that holds the capacitor in place. The potting compound may also contain PCBs. Additionally, PCBs may leak from the ballast housing and can appear as either a clear to yellowish oily substance, or the leaked potting material can appear as a thicker brownish-black tar like substance on the outside of the housing, or other components of the lighting fixture such as the ballast cover, exposed wiring, bulbs, screws, bolts, or light diffuser. Leaked material may also contaminate the floor or items directly below the fixture.

T-12 ballasts manufactured after 1979, contain a label or similar manufacturer's marking designating that no PCBs were used in the manufacturing process. If there is no label, or the label is illegible, the ballast should be assumed to contain PCBs. Non PCB containing T-12 magnetic ballasts continued to be manufactured for use as replacement ballasts for existing fixtures through July, 2010, after which they could no longer be manufactured. Beginning in the 1980s, electronic ballasts were introduced as an effective alternative to magnetic ballasts, but both magnetic and electronic T-12 ballasts continue to be used today. T-8 fluorescent light fixtures have commonly been used in new construction for decades. T-8 fluorescent lighting fixtures utilize only electronic ballasts, which do not contain PCBs.

In January, DSF directed that all Custodian Engineers and Building Managers conduct a visual inspection of all T-12 (not known T-8) fluorescent lighting fixtures in your facilities. This inspection must include all fixtures in the facility, including fixtures in classrooms, offices, corridors, stairwells, labs, cafeterias, resource rooms, maintenance areas, and storage areas. This inspection is an external inspection only and you are not to open any ballast covers or light diffusers to perform your inspection. Additionally, you are not to replace any T-12 ballasts for any reason (known T-8 ballasts should be handled normally). If visible staining, leakage, or discoloration is observed during your inspection, on either the fixture, including the screw or bolt holes, cover, exposed wiring, bulbs, diffuser, floor or items directly below the fixture, you are directed to report the location to your Deputy Director of Facilities, as well as submit a priority #4 work request for trade #75; requesting an expedited inspection through our Environmental Health and Safety Unit. Be sure to include specific detail regarding location, size (4 foot or 8 foot), type (wrap around, egg crate), number of fixtures, number of bulbs per fixture and type of bulb- i.e. single or bi pin, as well as any clarifying comments including whether the fixtures were replaced during a lighting upgrade post mid to late 1980s. Upon receipt of the priority work request, EHS will dispatch a licensed environmental firm to perform an internal inspection and address the reported issues identified in the work request. Do not submit priority #4 work requests unless visible staining, leakage or discoloration is observed.

Report all visible staining, leakage, or discoloration. Do not attempt to distinguish visible staining, leakage, or discoloration that may have been caused from sources (e.g., food, other liquids, rust) other than ballasts. If there are no visible signs of staining, leakage, or discoloration and you need to submit a work request for replacement of a number of T-12 ballasts, please use priority #71 for trade #2. Include the same level of detail as outlined above. Lastly, if you have magnetic T-12 ballasts that were removed and stored for future proper disposal, please submit a priority #71 work request for trade #75. Include sufficient detail such as electronic or magnetic ballasts as well as labeled Non PCB or assumed PCB and note whether any are leaking or have residue on the exterior surfaces or wiring.

As part of the environmental internal inspection wherein the ballast cover is removed and the ballast, fixture and components are inspected, the following steps are taken by our environmental firm. If the ballast is marked as containing NO PCBs and there are no visible signs of leakage, staining, or discoloration on the fixture or cover, no further action is required. If a PCB ballast is present but not leaking, and there are no visible signs of past leakage on the fixture or components, the ballast will be removed and properly disposed of in accordance with all Federal, State and local requirements at an Environmental Protection Agency (EPA) approved facility. If a PCB ballast is found to be leaking and there are no visible signs of leakage anywhere on the fixture or components, only the ballast will be removed and properly disposed of in accordance with the governing regulatory requirements listed above. If any visible sign of past ballast leakage is observed on an inspected fixture, the fixture is removed by the contractor and disposed of as assumed PCB contaminated material, in accordance with federal Environmental Protection Agency (EPA) regulations known as the Toxic Substance Control Act (TSCA). Replacement fixtures and/or ballasts with T-8 components will be installed by DSF within a few days of the inspection and removal of T-12 lighting components.

The environmental firm's employees inspecting and handling ballasts as an example, should protect the work area by spreading plastic sheeting under the fixture/s. All items being removed including, fixtures and covers that are PCB containing or assumed PCB containing, must be placed in plastic bags, sealed then placed in metal containers, removed from the premises and disposed of at an EPA approved facility. The contractor's employees engaged in this activity must minimally wear disposable protective gloves and eye protection. Additional personal protection may be provided through wearing nitrile gloves, which are required when handling leaking components. Proper hand washing with soap and water is also recommended, as is washing any clothing that comes in contact with PCB residue as soon as practical. Most importantly, anyone engaged in the removal of ballasts and or fixtures must also disconnect the ballast from the main power source by shutting the circuit breaker and employing lock out – tag out procedures.

During the normal discharge of your duties (especially when replacing fluorescent bulbs in T-12 fixtures), Custodian Engineers, Building Managers and custodial employees should continually look for signs of staining, leakage, or discoloration and report them as required by this circular. In addition, we will require an in depth annual inspection of all T-12 fixtures prior to school opening in September.

To view photographs of fluorescent ballast staining, visit the DSF website by holding the control key and clicking on the following link;

<http://www.opt-osfns.org/dsf/Custodian/CustodianResources.aspx>

Please contact your Deputy Director of Facilities (DDF) if you have any questions or concerns regarding this information.

John T. Shea

*Chief Executive Officer
Division of School Facilities*