

**CODE OF PRACTICE FOR PRINTING OPERATIONS
BYLAW NO. 2922**

1.0 APPLICATION

- 1.1 This code of practice prescribes conditions governing the discharge of waste from printing operations directly or indirectly into a sewer connected to a sewage facility. *(Bylaw 3105)*
- 1.2 An operator of a printing operation that produces liquid waste from photographic imaging containing silver must comply with the requirements of Schedule "K" of this bylaw.
- 1.3 The term "treatment works" in this code of practice means the works referred to in Sections 2.3, 2.4, 2.6, 2.7 and 2.10.

2.0 DISCHARGE REGULATIONS

- 2.1 An operator of a printing operation must not discharge waste which, at the point of discharge into a sewer, contains: *(Bylaw 3105)*
 - (a) prohibited waste;
 - (b) special waste;
 - (c) restricted waste other than chemical oxygen demand (COD) and biochemical oxygen demand (BOD);
 - (d) rinse water from equipment that has been washed in solvent;
 - (e) inks and fountain solutions;
 - (f) flexography plate acid bath solutions, etching solutions and wash-out solutions;
 - (g) cleaning solvents; or
 - (h) uncontaminated water, in quantities greater than two cubic meters per day.
- 2.2 An operator of a printing operation must not discharge stormwater into a sewer without a valid waste discharge permit or authorization.
- 2.3 An operator of a printing operation who commences operation on or after January 1, 2003, and who discharges waste from a printing process into a sewer must install and maintain one or more trade waste interceptors to treat the waste prior to discharge.
- 2.4 In addition to the trade waste interceptor required under Section 2.3, an operator of a printing operation who discharges waste from a printing process into a sewer, and that commences operation on or after January 1, 2003, must install and maintain:
 - (a) one or more oil-adsorbing filters; and
 - (b) one or more activated carbon cartridges.

- 2.5 An operator of a printing operation referred to in Section 2.4 must install the oil-adsorbing filter downstream of the trade waste interceptor and upstream of the activated carbon cartridge.
- 2.6 An operator of a printing operation must deliver the waste from the trade waste interceptor to the oil-adsorbing filter and activated carbon cartridge using a metering pump that is calibrated at least once per year.
- 2.7 An operator of a printing operation who discharges waste from a printing process to a sewer connected to a sewage facility may use an alternate treatment works, or a combination of treatment works, other than described in this code of practice, if the alternate treatment works produces effluent that complies with Section 2.1 where valid analytical test data has been submitted to, and accepted by, the manager.
- 2.8 An operator of a printing operation must replace the oil-adsorbing filter and activated carbon cartridge when any one of the following occurs:
- (a) the manufacturer's or supplier's recommended expiry date, as shown on each filter or cartridge has been reached; *(Bylaw 3105)*
 - (b) eighty per cent (80%) of the manufacturer's or supplier's maximum recommended capacity, or total cumulative flow, for each filter or cartridge has been reached; *(Bylaw 3105)*
 - (c) analytical data using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, that has a method detection limit of 2 mg/L oil and grease or lower, indicates that the concentration of oil and grease in the effluent from the activated carbon cartridge is greater than, or equal to, 100 mg/L; or *(Bylaw 3105)*
 - (d) analytical data using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, that has a method detection limit of 2 mg/L oil and grease (hydrocarbons) or lower, indicates that the concentration of oil and grease (hydrocarbons) in the effluent from the activated carbon cartridge is greater than, or equal to 15 mg/L. *(Bylaw 3105)*
- 2.9 An oil-adsorbing filter or activated carbon cartridge installed in accordance with Sections 2.4 or 2.5, must be designed to ensure that the effluent from the activated carbon cartridge does not contain restricted waste other than COD and BOD.
- 2.10 An operator of a printing operation who commenced operation prior to January 1, 2003, and who continues to operate after January 1, 2003, and who does not have the treatment works referred to in Sections 2.3, 2.4 and 2.6 or an alternate treatment works referred to in Section 2.7, must, as a condition of the continued discharge of waste from a printing process to a sewer, install the treatment works in accordance with this code of practice not later than January 1, 2005 or when any of following occur:
- (a) the operator of a printing operation makes an improvement with a value of \$1,000 or more within the printing operation that will increase the discharge flow or amount of any contaminant in the waste; or
 - (b) the operator of a printing operation discharges waste from a printing process into a sewer that does not comply with Section 2.1.

- 2.11 An operator of a printing operation who installs a trade waste interceptor in accordance with Sections 2.3 or 2.10 must ensure that the trade waste interceptor has a minimum liquid capacity of 75 litres, and is designed to provide a minimum retention time of 4 hours based on the maximum expected flow of all non-domestic waste that may be discharged in accordance with this code of practice.
- 2.12 An operator of a printing operation who operates in accordance with Sections 2.3, 2.4, 2.6 or 2.10 must ensure that all waste from a printing process is directed into the treatment works before being discharged into a sewer.
- 2.13 After January 1, 2003, an operator of a printing operation must ensure that all sanitary waste and grey water bypasses the treatment works.
- 2.14 An operator of a printing operation must not dispose any floating material or solids accumulated in the treatment works into a sewer.
- 2.15 An operator of a printing operation must not use or permit the use of chemical agents, solvents, hot water or other agents with the intention to facilitate the passage of oil and grease and oil and grease (hydrocarbons) through the treatment works.
- 2.16 On or after January 1, 2003, an operator of a printing operation who installs treatment works must ensure that:
- (a) the discharge line from the activated carbon cartridge is equipped with a monitoring point located either at the outlet of the activated carbon cartridge or downstream of the activated carbon cartridge at a location upstream of the point of discharge of other waste; and
 - (b) the monitoring point must be readily and easily accessible at all times for inspection.
- 2.17 On or after January 1, 2003, an operator of a printing operation who installs treatment works must locate the treatment works so that they are readily and easily accessible for inspection and maintenance.
- 2.18 An operator of a printing operation who operates a trade waste interceptor must not permit the floating material to accumulate in any chamber of the trade waste interceptor in excess of the lesser of 2.5 cm (1 inch) or 5% of the wetted height of the trade waste interceptor.
- 2.19 An operator of a printing operation who operates a trade waste interceptor must not permit the settled solids to accumulate in any chamber of the trade waste interceptor in excess of the lesser of 7.5 cm (3 inches) or 25% of the wetted height of the trade waste interceptor.
- 2.20 An operator of a printing operation who operates a trade waste interceptor must inspect the trade waste interceptor and measure the accumulated solids and floating material at least once every six months to check the levels specified under Sections 2.18 and 2.19.
- 2.21 An operator of a printing operation must ensure that the trade waste interceptor is cleaned out within seven days of determining that the levels referred to in Sections 2.18 or 2.19 have been exceeded.
- 2.22 An operator of a printing operation must ensure that the trade waste interceptor is cleaned out at least once every 24 months.

3.0 STORAGE AND CONTAINMENT

- 3.1 An operator of a printing operation must ensure that the following materials are stored using spill containment that will prevent any spilled material from entering a sewer:
- (a) solvents, dyes, paints and inks; and
 - (b) waste solvents, waste paint, waste dyes and any other waste from a printing process.

4.0 SPILL RESPONSE PLANS

- 4.1 An operator of a printing operation operating before January 1, 2003 must prepare a spill response plan by July 1, 2003.
- 4.2 An operator of a printing operation commencing operation on or after January 1, 2003 must prepare a spill response plan within 60 days of commencing operation.
- 4.3 In the event of a spill, an operator of a printing operation must immediately carry out the spill response plan, when safe to do so, to prevent or discontinue the discharge of spilled material into a sewer. *(Bylaw 3105)*
- 4.4 As part of a spill response plan, an operator of a printing operation who operates a trade waste interceptor must inspect the trade waste interceptor for spilled material within 24 hours of having knowledge of the spill.
- 4.5 An operator of a printing operation who observes spilled material in the trade waste interceptor during an inspection under Section 4.4, must remove the spilled material before resuming the wastewater discharge from the operation.
- 4.6 An operator of a printing operation must ensure that spill prevention and clean-up equipment and supplies are kept in stock at all times and are readily available for use.

5.0 RECORD KEEPING AND RETENTION

- 5.1 An operator of a printing operation must keep a record at the printing operation of all trade waste interceptor inspection and maintenance activities including:
- (a) date of inspection or maintenance;
 - (b) description of maintenance conducted;
 - (c) quantity of material removed from the trade waste interceptor; and
 - (d) name of each disposal or recycling company or facility receiving any material removed from the trade waste interceptor.
- 5.2 An operator of a printing operation must keep a record at the printing operation of all oil-adsorbing filter and activated carbon cartridge inspection and maintenance activities including:
- (a) installation date of each oil-adsorbing filter and activated carbon cartridge;

- (b) serial number of each oil-adsorbing filter and activated carbon cartridge (where provided by manufacturers or suppliers);
 - (c) expiry date of each oil-adsorbing filter and activated carbon cartridge used (where provided by manufacturers or suppliers);
 - (d) maximum recommended capacity, or total cumulative flow, of each oil-adsorbing filter and activated carbon cartridge used;
 - (e) dates of all metering pump calibrations; and
 - (f) dates and descriptions of all operational problems associated with the oil-adsorbing filter and activated carbon cartridge and remedial actions taken.
- 5.3 An operator of a printing operation who installs treatment works on or after January 1, 2003 must retain records of the design calculations and drawings and ensure that they are available for inspection at the request of an officer.
- 5.4 An operator of a printing operation must keep the spill response plans required under Sections 4.1 and 4.2 and ensure that they are available for inspection by an officer.
- 5.5 An operator of a printing operation must keep a record at the printing operation of all disposal or recycling services for spent fountain wash solution, waste solvents, dyes, paints, inks and other waste from a printing process, including:
- (a) name of each disposal or recycling company or facility used by the printing operation;
 - (b) type of material transferred to each company or facility;
 - (c) quantity of material transferred to each company or facility; and
 - (d) date of material transferred to each company or facility.
- 5.6 The records required under Sections 5.1, 5.2, 5.4 and 5.5 must be retained for a period of two years and must be available for inspection on request by an officer.
- 5.7 The records required under Section 5.3 must be retained for the time that the printing operation is in business.