

SCHEDULE "E"

CODE OF PRACTICE FOR PHOTO IMAGING OPERATIONS

1. PURPOSE

Pursuant to Section 28 of the Bylaw, this Code of Practice for Photo Imaging Operations sets out the requirements for managing Non-Domestic Waste discharged directly or indirectly from a Photo Imaging Operation into the Sanitary Sewer or the Wastewater Treatment System.

2. APPLICATION

- (1) This Code of Practice applies to Photo Imaging Operations that discharge Non-Domestic Waste containing silver directly or indirectly into the Sanitary Sewer or the Wastewater Treatment System.
- (2) The Engineer may require a Wastewater Discharge Permit from the Operator of a Photo Imaging Operation to authorize the Discharge of Non-Domestic Waste.
- (3) If the Engineer requires a Wastewater Discharge Permit from the Operator of a Photo Imaging Operation, this Code of Practice will not apply unless the Wastewater Discharge Permit so provides.
- (4) Nothing in this Code of Practice exempts a Person discharging Waste from complying with the Bylaw or a Wastewater Discharge Permit issued under the Bylaw and all other applicable Enactments.

3. REQUIREMENTS

- (1) An Operator of a Photo Imaging Operation must not Discharge Waste which, at the point of Discharge into a Sanitary Sewer, contains:
 - (a) Prohibited Waste, or Storm Water; or
 - (b) Restricted Waste with the exception of iron and sulphate; or
 - (c) silver in a concentration that is greater than 5 milligrams per litre (mg/L) as analyzed in a Grab Sample.
- (2) An Operator of a Photo Imaging Operation that produces liquid Waste containing silver on or after January 1, 2010 must either:
 - (a) collect and transport the Waste from the Photo Imaging Operation for Off-site Waste Management; or

SCHEDULE "E" (cont'd)

CODE OF PRACTICE FOR PHOTO IMAGING OPERATIONS (cont'd)

- (b) treat the Waste at the Photo Imaging Operation site prior to Discharge to the Sanitary Sewer using one (1) of the following Silver Recovery Technologies:
 - (i) two (2) Chemical Recovery Cartridges connected in a series;
 - (ii) an Electrolytic Recovery unit followed by two (2) Chemical Recovery Cartridges connected in series; or
 - (iii) any other Silver Recovery Technology, or combination of technologies, capable of reducing the concentration of silver in the Waste to 5 mg/L or less where valid analytical test data has been submitted to, and accepted by, the Engineer.
- (3) An Operator of a Photo Imaging Operation must install and maintain the Silver Recovery Technology according to the manufacturer's or supplier's recommendations.
- (4) An Operator of a Photo Imaging Operation must collect all liquid Waste containing silver in a holding tank and must deliver this Waste to the Chemical Recovery Cartridges using a Metering Pump.
- (5) An Operator of a Photo Imaging Operation must calibrate the Metering Pump referred to in Section 3 (4) at least once per year.
- (6) An Operator of a Photo Imaging Operation must locate the Silver Recovery System in such a manner that an accidental spill, leak or container failure will not result in liquid Waste containing silver in concentrations greater than 5 mg/L entering into any Sewer.
- (7) If a location referred to under Section 3 (6) is not available, an Operator of a Photo Imaging Operation must do one (1) of the following:
 - (a) install Spill Containment to contain spills or leaks from the Silver Recovery System; or
 - (b) cap all floor drains into which liquid spilled from the Silver Recovery System would normally flow.
- (8) When using two (2) separate Chemical Recovery Cartridges, an Operator of a Photo Imaging Operation must test the Discharge from the first cartridge for silver content at least once per month using either Silver Test Paper or a portable Silver Test Kit.

SCHEDULE "E" (cont'd)

CODE OF PRACTICE FOR PHOTO IMAGING OPERATIONS (cont'd)

- (9) When the Discharge from the first Chemical Recovery Cartridge referred to in Section 3 (8) cannot be sampled, an Operator of a Photo Imaging Operation must:
- (a) install a Cumulative Flow Meter on the Silver Recovery System; and
 - (b) test the Discharge from the second Chemical Recovery Cartridge once per week using Silver Test Paper or a Silver Test Kit.
- (10) An Operator of a Photo Imaging Operation must replace the Chemical Recovery Cartridges when any of the following occurs:
- (a) the manufacturer's or supplier's recommended expiry date, as shown on each cartridge, has been reached; or
 - (b) eighty percent (80%) of the manufacturer's or supplier's maximum recommended capacity, or total Cumulative Flow, for each cartridge has been reached;
 - (c) test data, using Silver Test Paper or a Silver Test Kit, indicates that the Discharge from the first cartridge is greater than 1000 mg/L; or
 - (d) analytical data using a method of analysis outlined in Standard Methods, or an alternative method of analysis approved by the Engineer, having a method detection limit of 0.5 mg/L silver or lower, indicates that the concentration of silver in the Discharge from the Silver Recovery System is greater than, or equal to, 5 mg/L.
- (11) If treatment of liquid Waste with two (2) Chemical Recovery Cartridges connected in series is the only Silver Recovery Technology being used, the second cartridge may replace the used first cartridge and a new second cartridge may be installed when one (1) of the events referred to in Section 3 (10) occurs.
- (12) Despite Section 3 (11), if treatment of liquid Waste with two (2) Chemical Recovery Cartridges connected in series is used following treatment by an Electrolytic Recovery Unit, the second cartridge may replace the used first cartridge and a new second cartridge may be installed when one (1) of the events referred to in Section 3 (10) occurs.
- (13) Despite Section 3 (12), both Chemical Recovery Cartridges used following an Electrolytic Recovery Unit must be replaced by the Operator of the Photo Imaging Operation when one (1) of the events referred to in Section 3(10) occurs if this is recommended by the manufacturer or supplier of the cartridges.

SCHEDULE "E" (cont'd)

CODE OF PRACTICE FOR PHOTO IMAGING OPERATIONS (cont'd)

- (14) An Operator of a Photo Imaging Operation must allow the Engineer to inspect the Silver Recovery System upon request, at any time during the ordinary business hours of the Photo Imaging Operation.

4. RECORD KEEPING AND RETENTION

- (1) An Operator of a Photo Imaging Operation that uses a Silver Recovery System must keep, at the Photo Imaging Operation site, an operation and maintenance manual pertaining to all equipment used in the Silver Recovery System.
- (2) An Operator of a Photo Imaging Operation that uses two (2) Chemical Recovery Cartridges connected in series must keep a record book, available for inspection on request, at the Photo Imaging Operation site that includes the following information:
- (a) serial number of each Chemical Recovery Cartridge used;
 - (b) installation date of each Chemical Recovery Cartridge used;
 - (c) expiry date of each Chemical Recovery Cartridge used (where provided by manufacturers or suppliers);
 - (d) maximum recommended capacity, or total cumulative flow, of each Chemical Recovery Cartridges used;
 - (e) dates of all Metering Pump calibrations;
 - (f) monthly silver test results on the Discharge from the first Chemical Recovery Cartridge; or where the Discharge from the first cartridges cannot be sampled, weekly silver test results on the Discharge from the second Chemical Recovery Cartridge and weekly Cumulative Flows through the Silver Recovery System; and
 - (g) dates and descriptions of all operational problems associated with the Chemical Recovery Cartridges and remedial actions taken.
- (3) An Operator of a Photo Imaging Operation that uses an Electrolytic Recovery Unit in addition to two (2) Chemical Recovery Cartridges connected in series must keep a record book, available for inspection on request, at the Photo Imaging Operation site that includes the following information:

CITY OF ABBOTSFORD
SEWER REGULATIONS BYLAW, 2017

Bylaw No. 2664-2017

Page 64

SCHEDULE "E" (cont'd)

CODE OF PRACTICE FOR PHOTO IMAGING OPERATIONS (cont'd)

- (a) all information specified under Section 4 (2);
 - (b) date of each removal of silver from the Electrolytic Recovery Unit;
 - (c) date of each maintenance check on the Electrolytic Recovery Unit; and
 - (d) dates and descriptions of all operational problems associated with the Electrolytic Recovery Unit and remedial actions taken.
- (4) An Operator of a Photo Imaging Operation that collects and transports the Waste from the Photo Imaging Operation for Off-site Waste Management must keep a record book, available for inspection on request, at the Photo Imaging Operation site that includes the following:
- (a) name, address and telephone number of any Person or company who performs any disposal services related to the Photo Imaging Operation Waste; and
 - (b) dates of pick-up of the Waste for off-site disposal, volume of Waste disposed and the location of disposal.