



GLOBAL WATER RESOURCES (“GLOBAL WATER”)

DESIGN STANDARD

DENTAL OPERATIONS

APPLICATION

This Design Standard for dental operations defines mandatory requirements for managing non-domestic waste discharged directly or indirectly into a sewer connected to a sewage facility.

This Design Standard applies to dental operations.

DISCHARGE REGULATIONS

An operator of a dental operation must not discharge waste which, at the point of discharge into a sewer, contains:

- a. prohibited waste, special waste, or stormwater ; or
- b. exceeds the limits established in Design Standard, Definitions, for restricted wastes.

An operator of a dental operation that produces liquid waste from photographic imaging containing silver shall also comply with the requirements of Design Standard, Photographic Imaging Operations.

An operator of a dental operation that produces wastewater containing dental amalgam must either:

- a. collect and transport the wastewater from the dental operation for off-site waste management; or
- b. treat the wastewater at the dental operation site prior to discharge to the sewer using a certified amalgam separator.

An operator of a dental operation must install and maintain the amalgam separator according to the manufacturer’s or supplier’s recommendations in order that the amalgam separator functions correctly. Such separator must be certified for use by the manufacturer under the provisions of ISO 11143.

An operator of a dental operation who installs an amalgam separator must ensure that:

- a. all dental operation wastewater that contains dental amalgam is treated using the amalgam separator;
- b. a monitoring point is installed at the outlet of the amalgam separator or downstream of the amalgam separator at a location upstream of any discharge of other waste;
- c. the monitoring point must be installed in such a manner that the total flow from the amalgam separator may be intercepted and sampled; and
- d. the monitoring point shall be readily and easily accessible at all times for inspection.

If the amalgam separator is located downstream of a wet vacuum system, an operator of a dental operation must ensure that:

- a. the wet vacuum system is fitted with an internal flow control fitting; or
- b. a flow control fitting is installed on the water supply line to the wet vacuum system.

The flow control fitting must be sized to limit the flow to a rate that is no more than the maximum inlet flow rate of the amalgam separator as stated by the manufacturer of the amalgam separator.

An operator of a dental operation must locate an amalgam separator in such a manner that an accidental spill, leak or collecting container failure will not result in waste containing amalgam entering any sewer. If a location is not available, an operator of a dental operation must do one of the following:

- a. install spill containment to contain spills or leaks from the amalgam separator; or
- b. cap all floor drains into which liquid spilled from the amalgam separator would normally flow.

An operator of a dental operation must replace the amalgam separator's collecting container when any one of the following occurs:

- a. the manufacturer's or supplier's recommended expiry date, as shown on the amalgam separator, has been reached; or
- b. the warning level specified in the ISO 11143 has been reached; or

- c. analytical data obtained using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, having a method detection limit of 0.1 mg/L or lower, indicates that the total concentration of mercury in the discharge from the amalgam separator is greater than, or equal to, 2 mg/L.

An operator of a dental operation shall not dispose of dental amalgam collected in an amalgam separator, a collecting container, or any other device, into the sewer collection system.

RECORD KEEPING AND RETENTION

An operator of a dental operation that uses an amalgam separator must keep, at the site of installation of the amalgam separator, an operation and maintenance manual containing instructions for installation, operation and maintenance of the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must post, at the site of installation of the amalgam separator, a copy of the ISO Standard test report pertaining to the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must keep a record book at the dental operation site that includes the following information pertaining to the amalgam separator installed:

- a. date of installation of the amalgam separator and name of the installation service provider;
- b. serial number and expiry date of the amalgam separator and/or its components;
- c. maximum recommended flow rate through the amalgam separator, where applicable;
- d. dates of inspection, maintenance, cleaning and replacement of any amalgam separation equipment or components;
- e. dates and descriptions of all operational problems, spills, leaks or collecting container failures associated with the amalgam separator and remedial actions taken;



- f. name, address and telephone number of any person or company who performs any maintenance or disposal services related to the operation of the amalgam separator; and
- g. dates of pick-up of the collecting container for off-site disposal, volume of waste disposed and the location of disposal.

The records must be retained for a period of two years and must be available to Global Water upon request.