

6 CRR-NY 374-4.2  
NY-CRROFFICIAL COMPILATION OF CODES, RULES AND REGULATIONS OF THE STATE OF NEW YORK  
TITLE 6. DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
CHAPTER IV. QUALITY SERVICES  
SUBCHAPTER B. SOLID WASTES

## PART 374. MANAGEMENT OF SPECIFIC HAZARDOUS WASTE

## SUBPART 374-4. STANDARDS FOR THE MANAGEMENT OF ELEMENTAL MERCURY AND DENTAL AMALGAM WASTES AT DENTAL FACILITIES

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## 374-4.2 Requirements for the management of elemental mercury and dental amalgam waste at dental facilities.

**(a) Amalgam separators.**

- (1) All dental facility waters likely to come into contact with dental amalgam waste must be treated prior to discharge by an amalgam separator which is certified to ISO 11143 Standards (Dental equipment - amalgam separators) as incorporated by reference in section 370.1(e) of this Title. The amalgam separator must achieve a minimum of 99 percent removal efficiency of dental amalgam, by weight, in accordance with ISO 11143 test procedures.
- (2) Amalgam separators in service at dental facilities prior to the effective date of this Subpart, must be certified, but only need to achieve a minimum 95 percent removal efficiency of dental amalgam, by weight, in accordance with ISO 11143 test procedures.
- (3) For large dental facilities, the amalgam separator must meet or exceed the applicable ISO 11143 Standards set forth in paragraph (1) or (2) of this subdivision, but is not required to be ISO certified. If such a separator is not ISO certified, then the minimum removal efficiency certification must be made by a person or firm licensed to practice professional engineering in the State of New York.
- (4) All amalgam separators must be properly sized for the volume and flow of the dental facility amalgam wastewater in accordance with the manufacturer's specifications and recommendations. The maximum allowable flow rate through the amalgam separator at the dental facility may not exceed the maximum flow rate capacity that the separator was tested at and passed in meeting the ISO standards.
- (5) The amalgam separator must be installed, operated, and maintained in accordance with the manufacturer's specifications and recommendations. Amalgam separators must also be installed in accordance with any applicable State and local building code requirements.
- (6) The amalgam separator must be placed in service in accordance with the requirements of this Subpart as follows:
  - (i) for dental facilities that begin operations after the effective date of this Subpart, the amalgam separator must be placed in service prior to beginning operation; or
  - (ii) for dental facilities operating on the effective date of this Subpart, the amalgam separator must be placed in service no later than two years after the effective date of this Subpart.
- (7) Dental facilities where dental amalgam is not placed or removed, including facilities where the specialties of orthodontics, periodontics, prosthodontics and oral and maxillofacial surgery are exclusively performed, are exempt from the requirements to install an amalgam separator.

**(b) Dental amalgam waste storage.**

- (1) All dental amalgam wastes must be collected and stored in air-tight, leak-proof and structurally sound containers.
- (2) The containers holding the dental amalgam waste must have a label that includes, at a minimum, the type of the dental amalgam waste contained therein and the date waste was initially placed in the container.
- (3) The containers holding the dental amalgam waste must be tightly closed except when adding or removing dental amalgam waste.
- (4) Length of storage of dental amalgam waste within the dental facility must not exceed one year from the date waste was initially placed in the container.

**(c) Recycling of dental amalgam waste and elemental mercury.**

- (1) All dental amalgam waste and elemental mercury generated by the dental facility must be sent for mercury recycling.
- (2) Written or electronic certification from the collection service or recycler must be obtained by the dental facility, documenting:
  - (i) the name and address of the collection service;
  - (ii) the amount, by weight, of dental amalgam waste and elemental mercury collected and the date it was collected; and
  - (iii) the name and address of the facility where the dental amalgam waste and elemental mercury will ultimately be recycled, and certification that the mercury contained in the waste was destined for recycling.

**(d) Recordkeeping and inspection.**

- (1) Records must be maintained at the dental facility documenting:
  - (i) the type of amalgam separator(s) installed, manufacturer's model number, unit specifications, date the unit was placed in service and number of chair units serviced by the separator;
  - (ii) a description of all maintenance performed on the amalgam separator(s) and the date of completion of such maintenance;
  - (iii) the amount, by weight, of dental amalgam waste sent for recycling of mercury, on an annual basis; and

(iv) copies of the correspondence required by paragraph (c)(2) of this section.

(2) The records required under subparagraph (1)(i) of this subdivision must be maintained as long as the amalgam separator is in use at the dental facility. The records required under subparagraphs (1)(ii) through (iv) of this subdivision must be maintained for a minimum of three years.

(3) Written notification when an amalgam separator is installed must be provided to the sewage treatment works or sewer authority that the wastewater discharge is tributary to, if applicable. Such notification must be submitted no later than 30 days following the applicable deadline specified under paragraph (a)(6) of this section and must contain the dental facility name; facility location including street address and municipal subdivision, *i.e.*, city, town, or village; telephone number; and the information specified in subparagraph (1)(i) of this subdivision.

(4) The records specified in paragraph (1) of this subdivision, the amalgam separator(s) and any related equipment must be readily available for inspection by the department, or its authorized representative, upon written or verbal request.

**(e) Prohibitions.**

(1) The use or possession of elemental mercury in the practice of dentistry is prohibited in a dental facility unless such elemental mercury is contained in appropriate pre-encapsulated capsules specifically designed for the mixing of dental amalgam.

(2) Elemental mercury must not be rinsed down the drain, disposed with municipal solid waste or disposed as regulated medical waste as defined in section 1389-aa of Public Health Law and section 27-1501 of Environmental Conservation Law.

(3) Chair-side traps, screens, vacuum pump filters or other amalgam collection devices containing dental amalgam must not be rinsed over drains or sinks that are not equipped with an amalgam separator as required under subdivision (a) of this section.

(4) Dental amalgam waste must not be managed as a regulated medical waste as defined in section 1389-aa of Public Health Law and section 27-1501 of Environmental Conservation Law and must not be disposed of in containers destined for treatment or disposal as regulated medical waste.

(5) Dental amalgam waste and collection equipment must not be disinfected by any method that utilizes heat.

(6) Dental amalgam waste must not be disposed of as municipal solid waste.

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## **Information on 6 NYCRR Part 374-4 Regulations**

### **6 NYCRR Part 374-4**

#### **Final Regulations**

#### **Management of Mercury and Dental Amalgam Wastes at Dental Facilities**

#### **and Associated Revisions to**

#### **6 NYCRR Parts 364, 370 and 371**

#### **Effective May 12, 2006**

Pursuant to Environmental Conservation Law (ECL) Section 27-0926, as enacted by Chapter 506, Laws of 2002, the New York State Department of Environmental Conservation (NYSDEC) has adopted new regulations, 6 NYCRR Subpart 374-4 - Standards for the Management of Elemental Mercury and Dental Amalgam Wastes at Dental Facilities.

Section 27-0926, in the ECL, "Use and recycling of elemental mercury and dental amalgam by dentists.", prohibits the use of non-encapsulated elemental mercury in dental offices and requires dentists to recycle any elemental mercury or dental amalgam waste generated in their offices in accordance with regulations that the Department was authorized and directed to promulgate. This rule provides management standards and requirements that must be met as required by statute.

To help maximize the recycling of mercury-containing dental amalgam waste from dental wastewater, the standards require dental facilities to install, properly operate and maintain mercury amalgam separation and collection equipment. The regulation also specifies mercury, amalgam and amalgam capsule waste recycling requirements. Minor technical amendments were also made to other 6 NYCRR Parts. 6 NYCRR Part 364 was amended to clarify that elemental mercury and dental amalgam wastes from dental facilities are exempt from waste transporter permitting requirements if sent for mercury recovery. 6 NYCRR Part 370 was amended to add an "incorporation by reference" in regard to the ISO 11143 standard. 6 NYCRR Part 371 was amended to renumber Part references to reflect the addition of the new Subpart 374-4.

The final regulations are effective May 12, 2006.



## **NY Dental Mercury & Amalgam Recycling Law**

### **New York Dental Mercury & Amalgam Recycling Law**

#### **Chapter 506, Laws of New York, 2002**

#### **(effective March 16, 2003)**

An Act to amend the environmental conservation law, in relation to the use and recycling of elemental mercury and dental amalgam by dentists became a law September 17, 2002, with the approval of the Governor. Passed by a majority vote, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The environmental conservation law is amended by adding a new section 27-0926 to read as follows:

§ 27-0926. Use and recycling of elemental mercury and dental amalgam by dentists.

1. No dentist shall use or possess elemental mercury in the practice of dentistry unless such elemental mercury is contained in appropriate pre-encapsulated capsules specifically designed for the mixing of dental amalgam. All dentists shall recycle any elemental mercury, including any pre-encapsulated mercury capsule waste, and dental amalgam waste generated in their dental practices in accordance with rules and regulations established by the commissioner.

2. The commissioner is hereby authorized and directed to promulgate rules and regulations necessary for the implementation of this section.

§ 2. This act shall take effect on the one hundred eightieth day after it shall have become a law, provided, however, that effective immediately, the addition, amendment and/or repeal of any rules or regulations necessary for the implementation of this act on its effective date is authorized and directed to be made and completed on or before such effective date.



## 6 NYCRR Part 374-4 Express Terms

### Final Amendments

Effective May 12, 2006

### 6 NYCRR Subpart 374-4 and Associated Revisions to 6 NYCRR Parts 364, 370, and 371

### Standards for the Management of Elemental Mercury and Dental Amalgam Wastes at Dental Facilities

(Statutory Authority: Environmental Conservation Law, Title 9 of  
Article 27, Section 27-0926)

### New Subparagraph 364.1(e)(2)(xxi) is adopted to read as follows:

(xxi) Elemental mercury and dental amalgam waste generated at dental facilities, destined for mercury recovery.

### Subparagraph 364.1(e)(3)(i) is amended to read as follows:

(i) Any generator who is exempt from the requirements of Part 372 through Subpart 374-3 and Part 376 of this Title, pursuant to subdivision 371.1(f) of this Title, and who transports less than a total of 220 pounds (100 kilograms) of hazardous waste or less than 2.2 pounds (1 kilogram) of acute hazardous waste, during any calendar month is exempt from the requirements of this Part, provided that the wastes are generated and transported exclusively by the generator.

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### New Paragraph 370.1(e)(9) is adopted to read as follows:

9) International Organization for Standardization (ISO):

(i) "Dental equipment - Amalgam separators," ISO-11143, December 1999.

Available from: American National Standards Institute (ANSI)  
25 West 43rd Street  
New York, NY 10036  
(212) 642-4980  
<http://webstore.ansi.org>

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### Paragraph 371.1(f)(2) is amended to read as follows:

(2) Except as provided in paragraphs (5), (6), (7), and (10) of this subdivision, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Part 372 through Subpart 374-3, and Part 376 of this Title.

### Subparagraph 371.1(g)(1)(iii) is amended to read as follows:

(iii) The following recyclable materials are not subject to regulation under Part 372 through Subpart 374-3, and Part 376 of this Title provided that the waste is transported by a hauler complying with any applicable waste hauler permit requirements in Part 364 of this Title:

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## 374-4.1 General Requirements

### (a) Purpose

This Subpart establishes requirements for dental facilities concerning the use and possession of elemental mercury and for the proper management of dental amalgam waste and elemental mercury waste through recycling.

### (b) Applicability

This Subpart shall apply to any dental facility where dental amalgam is applied, altered, maintained, removed or disposed; where dental amalgam waste is generated; or where elemental mercury has been used or is possessed by dentists licensed or otherwise authorized to practice dentistry under Article 133 of the New York State Education Law.

### (c) Definitions

(1) "Amalgam separator" means a type of dental equipment designed to remove dental amalgam particles from the wastewater of a dental facility and meeting the standards specified in subdivision 374-4.2(a) of this Subpart.

(2) "Dental amalgam" means an alloy which contains mercury and other metals used in the practice of dentistry.

(3) "Dental facility" means any institution, clinic, office or other location where the practice of dentistry is performed.

(4) "Dental amalgam waste" means waste from a dental facility containing:

(i) Dental amalgam that has been in contact with the patient including, but not limited to: extracted teeth with dental amalgam restorations, carving scrap collected at chair-side, dental amalgam captured by chair-side traps, vacuum pump filters, amalgam separators or other dental amalgam capture devices;

(ii) Dental amalgam that has not been in contact with the patient including, but not limited to: excess dental amalgam mix and the used pre-encapsulated dental amalgam capsules remaining at the end of a dental procedure; and

(iii) Dental amalgam that may have accumulated in the plumbing system of a dental facility.

(5) "Elemental mercury" means a heavy, silvery-white metal that is liquid at room temperature and is represented by the chemical symbol "Hg" with an atomic number of 80 and an atomic mass of 200.59.

(6) "Large dental facility" means an institution which houses fifty (50) or more dental chairs.

(7) "Practice of dentistry" means the practice of dentistry as defined in Section 6601 of the New York State Education Law.

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## 374-4.2 Requirements for the Management of Elemental Mercury and Dental Amalgam Waste at Dental Facilities

### (a) Amalgam Separators

- (1) All dental facility waters likely to come into contact with dental amalgam waste must be treated prior to discharge by an amalgam separator which is certified to ISO 11143 Standards (Dental equipment - Amalgam separators) as incorporated by reference in subdivision 370.1(e) of this Title. The amalgam separator must achieve a minimum of 99 percent removal efficiency of dental amalgam, by weight, in accordance with ISO 11143 test procedures.
- (2) Amalgam separators in service at dental facilities prior to the effective date of this Subpart, must be certified, but only need to achieve a minimum 95 percent removal efficiency of dental amalgam, by weight, in accordance with ISO 11143 test procedures.
- (3) For large dental facilities, the amalgam separator must meet or exceed the applicable ISO 11143 Standards set forth in paragraph (1) or (2) above, but is not required to be ISO certified. If such a separator is not ISO certified, then the minimum removal efficiency certification must be made by a person or firm licensed to practice professional engineering in the State of New York.
- (4) All amalgam separators must be properly sized for the volume and flow of the dental facility amalgam wastewater in accordance with the manufacturer's specifications and recommendations. The maximum allowable flow rate through the amalgam separator at the dental facility may not exceed the maximum flow rate capacity that the separator was tested at and passed in meeting the ISO standards.
- (5) The amalgam separator must be installed, operated, and maintained in accordance with the manufacturer's specifications and recommendations. Amalgam separators must also be installed in accordance with any applicable state and local building code requirements.
- (6) The amalgam separator must be placed in service in accordance with the requirements of this Subpart as follows:
  - (i) for dental facilities that begin operations after the effective date of this Subpart, the amalgam separator must be placed in service prior to beginning operation; or
  - (ii) for dental facilities operating on the effective date of this Subpart, the amalgam separator must be placed in service no later than two years after the effective date of this Subpart.
- (7) Dental facilities where dental amalgam is not placed or removed, including facilities where the specialties of orthodontics, periodontics, prosthodontics and oral and maxillofacial surgery are exclusively performed, are exempt from the requirements to install an amalgam separator.

### (b) Dental Amalgam Waste Storage

- (1) All dental amalgam wastes must be collected and stored in air-tight, leak-proof and structurally sound containers.
- (2) The containers holding the dental amalgam waste must have a label that includes, at a minimum, the type of the dental amalgam waste contained therein and the date waste was initially placed in the container.
- (3) The containers holding the dental amalgam waste must be tightly closed except when adding or removing dental amalgam waste.
- (4) Length of storage of dental amalgam waste within the dental facility must not exceed one year from the date waste was initially placed in the container.

### (c) Recycling of Dental Amalgam Waste and Elemental Mercury

- (1) All dental amalgam waste and elemental mercury generated by the dental facility must be sent for mercury recycling.
- (2) Written or electronic certification from the collection service or recycler must be obtained by the dental facility, documenting:
  - (i) the name and address of the collection service;
  - (ii) the amount, by weight, of dental amalgam waste and elemental mercury collected and the date it was collected; and
  - (iii) the name and address of the facility where the dental amalgam waste and elemental mercury will ultimately be recycled, and certification that the mercury contained in the waste was destined for recycling.

### (d) Record Keeping & Inspection

- (1) Records must be maintained at the dental facility documenting:
  - (i) the type of amalgam separator(s) installed, manufacturer's model number, unit specifications, date the unit was placed in service and number of chair units serviced by the separator;
  - (ii) a description of all maintenance performed on the amalgam separator(s) and the date of completion of such maintenance;
  - (iii) the amount, by weight, of dental amalgam waste sent for recycling of mercury, on an annual basis; and
  - (iv) copies of the correspondence required by paragraph 374-4.2(c)(2) of this section.
- (2) The records required under subparagraph 374-4.2(d)(1)(i) of this subdivision must be maintained as long as the amalgam separator is in use at the dental facility. The records required under subparagraphs 374-4.2(d)(1)(ii through iv) of this subdivision must be maintained for a minimum of three years.
- (3) Written notification when an amalgam separator is installed must be provided to the sewage treatment works or sewer authority that the wastewater discharge is tributary to, if applicable. Such notification must be submitted no later than 30 days following the applicable deadline specified under paragraph 374-4.2(a)(6) of this section and must contain the dental facility name; facility location including street address and municipal subdivision, i.e. city, town, or village; telephone number; and the information specified in subparagraph 374-4.2(d)(1)(i) of this subdivision.
- (4) The records specified in paragraph 374-4.2(d)(1) of this subdivision, the amalgam separator(s) and any related equipment must be readily available for inspection by the department, or its authorized representative, upon written or verbal request.

### (e) Prohibitions

- (1) The use or possession of elemental mercury in the practice of dentistry is prohibited in a dental facility unless such elemental mercury is contained in appropriate pre-encapsulated capsules specifically designed for the mixing of dental amalgam.
- (2) Elemental mercury must not be rinsed down the drain, disposed with municipal solid waste or disposed as regulated medical waste as defined in Section 1389-aa of Public Health Law and Section 27-1501 of Environmental Conservation Law.
- (3) Chair-side traps, screens, vacuum pump filters or other amalgam collection devices containing dental amalgam must not be rinsed over drains or sinks that are not equipped with an amalgam separator as required under subdivision 374-4.2(a) of this section.
- (4) Dental amalgam waste must not be managed as a regulated medical waste as defined in Section 1389-aa of Public Health Law and Section 27-1501 of Environmental Conservation Law and must not be disposed of in containers destined for treatment or disposal as regulated medical waste.
- (5) Dental amalgam waste and collection equipment must not be disinfected by any method that utilizes heat.
- (6) Dental amalgam waste must not be disposed of as municipal solid waste.





## Recycling of Mercury By Dentists FAQ

### 1. Why are mercury and mercury wastes of concern?

Mercury is a highly toxic, persistent and bioaccumulative neurotoxin. Mercury is released into the air through the burning of coal at power plants and the burning of mercury-containing wastes. Mercury is also discharged directly into waterbodies by publicly owned treatment works (POTWs are wastewater treatment plants) or remains in the sludge generated by the treatment plant. Typically, this sludge is composted (resulting in land application) or incinerated causing the mercury to vaporize. Once mercury reaches a water body through rain or snow, bacteria convert it to a more toxic form, methylmercury. Methylmercury accumulates in the tissues of plants, insects, fish, and animals. Mercury releases disperse over a wide area and will remain in the environment for years.

Health concerns arise when humans consume fish and wildlife and the associated health effects may be severe. The developing fetus and young children are especially at risk when exposed to methylmercury. Delayed development, impaired motor function, and impacts on cognitive thinking are associated with methylmercury exposure. In adults, symptoms such as memory loss, fatigue, muscle tremors, skin rashes, and brain/kidney damage may occur depending on the degree of mercury exposure.

### 2. What does New York State's law require for dentists?

Chapter 506, Laws of 2002, states, "No dentist shall use or possess elemental mercury in the practice of dentistry unless such elemental mercury is contained in appropriate pre-encapsulated capsules specifically designed for the mixing of dental amalgam. All dentists shall recycle any elemental mercury, including any pre-encapsulated mercury capsule waste and dental amalgam waste generated in their dental practices in accordance with rules and regulations established by the commissioner."

6NYCRR Subpart 374-4, Standards for the Management of Elemental Mercury and Dental Amalgam Wastes at Dental Facilities ([link leaves DEC](#)) (effective May 12, 2006), requires dental facilities to install dental amalgam separators; recycle dental amalgam waste and elemental mercury; and maintain records on the installed separator and recycled dental amalgam wastes.

### 3. Why the legislative concern and requirement?

Historically, dentists mixed elemental mercury with amalgam in the dental office to prepare amalgam for use as cavity filler. During the mixing process, excess mercury could easily be spilled exposing the dentist, dental assistants and patients to mercury. This practice has now been replaced by the process of using pre-measured capsules of dental amalgam that are mixed by the dentist just prior to filling a cavity. This is much more efficient, uses a specified amount of mercury, eliminates the need for storing and using additional elemental mercury by the dentist, and reduces the potential for mercury spills and mercury exposure.

The second aspect of the legislation requires that any elemental mercury and excess dental amalgam waste generated by the dentist must be recycled. This was legislated to reduce the risk of mercury entering the environment through wastewater discharges, landfilling or incineration. Presently, the most environmentally responsible action for the management of this material is to recycle it. Recycling is made possible by collecting elemental mercury and dental amalgam waste in proper containers and installing an amalgam separator.

National and regional efforts are under way to establish long-term storage options for the management of elemental mercury and mercury containing wastes; however, those options are not yet fully developed or available.

### 4. How should dental facilities store and then dispose of leftover encapsulated mercury and mercury amalgam waste?

All elemental mercury, as well as any contact and non-contact amalgam, should be collected and stored in an air-tight, leak-proof and structurally sound container with a label stating the type of the dental amalgam waste contained and the date the waste was initially placed in the container. The containers holding the dental amalgam waste must be tightly closed except when adding or removing dental amalgam waste. A container cannot be stored by the dental facility for more than one year from the date the waste was initially placed in the container.

All dental amalgam waste and elemental mercury generated by the dental facility must be sent for mercury recycling. A few communities in New York State allow dentists to bring mercury waste to their household hazardous waste facilities. Dentists should contact their local solid waste management authority or officials for more information.

Most dentists will hire mercury waste recycling companies to regularly take their waste. These recycling companies will usually provide the proper containers and either pick up the waste or arrange for its shipping. When the waste is picked up by a collection service or recycler, the dental office must obtain written or electronic certification documenting: the name and address of the collection service; the amount, by weight, of dental amalgam waste collected and the date it was collected; the name and address of the facility where the dental amalgam waste will ultimately be recycled; and certification that the mercury contained in the waste was destined for recycling. The dental facility should keep this information on an annual basis for a period of three years.

The intent of the record keeping requirement is to require the dentist to maintain records from the recycler of the amount of dental amalgam waste generated by the dental office and sent for recycling. This waste will inevitably contain various materials such as scrap amalgam and used amalgam capsules to polishing paste, body tissues, wastewater, amalgam particles, and tooth fragments retained by chair-side traps, filters, and amalgam separators. There is no requirement for the dentist to identify or measure the amount of mercury sent for recycling. The actual amount of mercury in dental amalgam waste is unknown when the waste is sent for recycling.

Dentists must enact these mercury managing requirements at their facilities. Mercury is considered a hazardous waste and must be properly managed. It is not legal for dental offices to dispose of mercury or mercury amalgam waste in the regular trash, down a drain, or through incineration. It is also not appropriate to dispose of any mercury capsule or amalgam waste with medical waste. Most medical waste is incinerated or autoclaved which causes mercury to volatilize and enter the atmosphere.

### 5. What is an amalgam separator and what is the purpose of this equipment?

An amalgam separator is equipment placed in-line and designed to capture dental amalgam particles from a dental facility's wastewater. This reduces the amount of amalgam particles entering the sewage system. The equipment accomplishes separation of the amalgam particles by centrifuge, filtration, sedimentation, ion exchange or any combination of these methods.

Chair-side traps, combined with vacuum filters, remove some of the amalgam waste; however, the percentage of amalgam waste removed increases to 99% with the installation of an amalgam separator. An amalgam separator, certified to International Organization for Standardization (ISO 11143), is a reasonable and cost effective means for the dental community to help protect the environment from mercury contamination.

There are a number of manufacturers that produce amalgam separators. Multiple models are available and should be closely reviewed to determine which amalgam separator will work best in your dental facility. Suppliers usually install these systems, and maintenance agreements are common.

### 6. Are chair-side traps and vacuum filters enough to capture dental amalgam?

These traps and filters do capture a portion of the amalgam waste, which is usually "coarse" dental amalgam; however, various studies suggest approximately 40% - 60% of the dental amalgam waste passes through these traps and filters. Amalgam separators ensure the capture of "fine" materials and waste that passed through the traps and filters. In addition, some dental facilities are switching from wet vacuum pump systems to dry vacuum pump systems. Dry vacuum pump systems do not require a vacuum filter.

### 7. Which dental facilities must install an amalgam separator?

All dental facilities must install an amalgam separator(s) where dental amalgam is applied, altered, maintained, removed, or disposed; where dental amalgam waste is generated; or where elemental mercury is used or possessed by licensed dentists.

Dental facilities not required to install an amalgam separator are specialties where orthodontics, periodontics, prosthodontics and oral and maxillofacial surgery are exclusively performed. Exemptions are not granted to other dental facilities.

Although the exempted specialties listed above are not required to install an amalgam separator, they must properly collect, store, and recycle dental amalgam waste. For instance, extracted teeth containing dental amalgam, chair-side traps, and vacuum pump filters must be sent to a [mercury waste recycler](#).

### 8. By what date must the dental facilities have an amalgam separator installed?

Dental facilities operating prior to May 12, 2006 have two years (until May 12, 2008) to install an amalgam separator. If a dental facility begins operations after May 12, 2006, an amalgam separator must be in place prior to the beginning of the facility's operation.

#### **9. What standards must the amalgam separator meet?**

It is important for a dentist to confirm that the amalgam separator meets the ISO 11143 Standard. The Standard is designed to ensure that the equipment removes nearly all dental amalgam from the wastewater discharged through the equipment.

The amalgam separator must be installed, operated, and maintained in strict accordance with the manufacturer's specifications and recommendations. Applicable state and local building code requirements must be followed when an amalgam separator is installed, and the separator must be properly sized for the volume and flow of the dental facility's amalgam wastewater. Typically, a dental facility will produce the most flow when line cleaning is performed at the end of the day. The line cleaning process disinfects the line and also pushes residual amalgam through the line creating the need for a separator to efficiently perform at a higher flow rate. The maximum flow rate capacity, which the separator tested at and met to pass the ISO Standard, must not be exceeded.

The performance requirement (95% or 99%) for the amalgam separator is determined by the date it is placed into service. An amalgam separator in service at dental facilities prior to May 12, 2006 must be ISO 11143 certified and achieve a minimum 95% removal efficiency of dental amalgam. An amalgam separator placed into service after May 12, 2006 must be ISO 11143 certified and achieve 99% removal efficiency.

Large dental facilities (50 or more chairs) must also adhere to either of the above performance standards according to the date that the amalgam separator is placed into service. Because the ISO Standard is not written for large separators, a large separator cannot be certified under the Standard. The appropriate removal efficiency certification must be made by a person or firm licensed to practice professional engineering in the State of New York.

A large dental facility may install multiple amalgam separators of the same model that are capable of processing the facility's large flow rate. Specific separator models do exist that are designed to address the demands of institutional settings and have been appropriately tested and certified by accredited testing laboratories and certification bodies.

#### **10. What is 99% efficiency?**

An amalgam separator will collect dental amalgam waste which consists of a myriad of waste materials such as polishing paste, tissue, tooth fragments, and amalgam particles to name a few. The efficiency of an amalgam separator is determined by measuring the mass percentage of the amalgam retained by the separator. A separator with 99% efficiency means 99% of the dental amalgam is retained by the separator and 1% is passed through the separator with the wastewater. The material, retained in the separator, must be sent for recycling. Water, which is treated by and passes through the amalgam separator, is no longer considered dental amalgam waste.

#### **11. Is flow rate important for an amalgam separator?**

According to law, the flow rate entering the amalgam separator should not exceed the tested flow rate (the flow rate the separator was tested at using the ISO 11143 test procedure and achieving 99% efficiency) during all maintenance or operational procedures performed at the dental office. Dental offices generate different flow rates during both procedures. For instance, a liter or more of line disinfectant may be flushed through the system during routine maintenance procedures. Dental facilities may also perform multiple line cleaner flushings throughout the day or multiple operatories may be flushed with line cleaner at the same time. Line cleaning creates "peak flow" conditions that pushes residual materials through the line. The appropriately sized separator is very important to capture dental amalgam and to prevent untreated wastewater from passing through the system when excessive flow is encountered. Some amalgam separators offer flow restrictors to assure the appropriate flow rate is maintained.

Although operational procedures may not create "peak flow" conditions, dental facilities may perform various procedures by multiple staff at the same time thus creating a substantial flow. Cuspidor use also increases the flow. Every dental facility performs both maintenance and operational procedures so it is very important to consider separators that can accommodate the flow rate generated by your dental facility. A separator vendor can provide information concerning properly sized models that have adequate tanks and flow restrictors appropriate for your office.

#### **12. What factors should a dental facility consider when purchasing an amalgam separator?**

There are many aspects to consider when installing a separator such as peak flow rate and number of operatories, existing wet or dry vacuum system, existing cuspidors, space limitations, maintenance requirements, warranties, post installation service, and cost (including purchase price, installation fees, replacement parts/tanks, and labor). Flow restrictors should also be considered to make sure the separator is operating at its appropriate flow rate. It is wise to request manuals so you can compare separator features and manufacturer recommendations.

After installation, the technician should test the vacuum system performance under typical conditions (chairs in use) as well as closed conditions (no evacuators in use) to make sure that the vacuum suction has not been compromised.

#### **13. What are the costs involved with purchasing an amalgam separator?**

Purchasing an amalgam separator can cost from a few hundred to several thousand dollars depending on the number of dental stations in your dental office and the separator that you select. Lease arrangements are possible and most manufacturers offer maintenance agreements for service, repairs and management of the waste mercury collected.

#### **14. Must hygienist operatories and all cuspidors be treated by an amalgam separator?**

Wastes generated from dedicated hygienist operatories and hygienist cuspidors do not need to be treated by an amalgam separator; however, most dental facilities have hygienist operatories and hygienist cuspidors connected to the same vacuum and drain lines as operatories that remove and replace dental amalgam. Wastes generated from hygienist operatories and hygienist cuspidors that are on the same drain and vacuum lines with an operatory that removes and replaces dental amalgam must be treated by an amalgam separator. In addition, any cuspidor that is on the same vacuum or drain line with an operatory that removes or replaces dental amalgam must have its wastewater treated prior to discharge by an amalgam separator.

Common activities, such as rinsing chair-side traps, screens, vacuum pump filters or other amalgam collection devices, generate mercury waste and should never be done over drains or sinks that are not connected to an amalgam separator. All dental facility waters that come in contact with dental amalgam waste must be treated by an amalgam separator prior to discharge.

#### **15. What documentation does the NYS Department of Environmental Conservation (Department) require from separator manufacturers and distributors to verify that an amalgam separator has been tested and certified according to ISO 11143 Standards?**

According to regulation, the Department requires that amalgam separators sold to NYS dental facilities are certified and tested according to the ISO 11143 Standard. This means that separators should be tested and certified by accredited testing laboratories and certification bodies. The Department is requiring that separator manufacturers provide current and valid certificates and test reports which demonstrate 99% efficiency.

A list of separator manufacturers and distributors that have provided appropriate certificates and test reports to the Department may be obtained from the Department's website.

#### **16. Who must be notified when a separator is installed?**

When a separator is installed at a dental facility, the dental facility provides written notification to the appropriate sewage treatment works or sewer authority where the wastewater is discharged. For dental facilities that begin operations after May 12, 2006, notification must be submitted within 30 days from the date the separator is placed into service. For dental facilities operating prior to May 12, 2006, notification must be submitted no later than June 12, 2008. Dental facilities that are on septic systems should complete a form and keep it in their records.

The notification must include the dental facility name, address, telephone number, type of amalgam separator installed, manufacturer's model number, unit specifications (e.g. ISO 11143 tested flow rate, efficiency), date the unit was placed into service, and the number of chairs serviced by the separator. A copy of *Notice of Dental Mercury Separator Installation form* (PDF, 35 KB) may be obtained from the Department's website.

#### **17. How long must a dental facility keep the amalgam separator's records on file?**

A dental facility keeps the following information on file for as long as the separator is in use at the dental facility: type of amalgam separator installed, manufacturer's model number, unit specifications, date the unit was placed in service, and the number of chairs serviced by the separator.

For a minimum of three years, the dental facility keeps a description and a date of all maintenance performed on a separator. These records and any related equipment records must be available for inspection by the Department or its authorized representative upon written or verbal request.



All dental facilities, including specialties that are exempt from installing a separator, must maintain the following written documentation from the collection service or recycler for a minimum of three years: the name and address of the collection service; the amount, by weight, of dental amalgam waste and elemental mercury collected and the date it was collected; the name and address of the facility where the dental amalgam waste and elemental mercury will ultimately be recycled; and certification that the mercury contained in the waste was destined for recycling.

**18. A dental facility must not store dental amalgam waste for more than one year from the date the waste was initially placed in the container. Does this one-year storage rule also apply to dental amalgam waste retained in the separator?**

The Department views an amalgam separator as a piece of equipment not a collection container. A canister/cartridge that is not removed from the separator equipment system is considered a part of the system and does not fall under the one year storage limitation requirement.

If a dental facility chooses to reuse the canister/cartridge and empties the dental amalgam waste sludge from the canister/cartridge into a collection container, the waste sludge must not be stored at the dental facility for more than one year from the date the sludge was placed in the collection container. If the dental facility replaces a used canister with a new canister, the used canister is no longer considered part of the separator equipment system and is subject to the one year storage limitation requirement.

The one year storage provision also applies to dental amalgam waste, such as but not limited to, extracted teeth with dental amalgam restorations, carving scrap, vacuum pump filters and chair-side traps taken out of service, excess dental amalgam mix, and used dental amalgam capsules. Question 4 provides more storage information on contact and non-contact dental amalgam waste.

**19. Some separator manufacturers have recommended "snaking" the lines prior to separator installation. Is this appropriate?**

No. This procedure may release a high level of residual dental amalgam which contains mercury and has accumulated in the lines over a period of time. It is far better to install the separator prior to snaking the lines.

**20. Will the installation of a separator save me from changing the vacuum pump filter?**

The separator captures more amalgam than the vacuum filter. Ideally, the separator should be placed before the vacuum filter to collect the majority of dental amalgam waste. Dental offices with a wet pump vacuum system should not need to change the vacuum filter as frequently if the separator is installed before the vacuum filter. A vacuum filter may need to be changed more often if the separator is placed after the vacuum filter. Also, the warranty for the vacuum system may become void if the separator is not installed correctly. The clinic may want to keep the vacuum filter in place to protect the vacuum pump.

Dental office staff can readily determine if a separator is performing efficiently by noting the amount of dental amalgam waste in the vacuum filter. If the separator is placed before the vacuum filter but a large amount of dental amalgam waste collects in the vacuum filter, a problem with the separator's ability to collect the waste may exist and vacuum may be compromised.

**21. What pH level of line cleaner should I use in my system?**

An appropriate line cleaner to clean suction lines is also recommended for sanitizing and deodorizing most separators. Separator manufacturers usually inform the dental facility of the appropriate line cleaner to use with the separator. Chlorine-based line cleaners, highly caustic (pH higher than 10) or acidic cleaners (pH lower than 4) can damage a separator and reduce removal efficiency by dissolving amalgam particles which can then pass through the separator. Chlorine bleach must never be used to sanitize and disinfect lines because it mobilizes mercury from amalgam.

**22. How will this regulation be enforced?**

The Department will perform random site inspections at dental facilities. During the inspection, Department staff will verify separator installation and recycling of dental amalgam waste. Dental facility records which may be reviewed by Department staff include separator installation and maintenance records; the amount, by weight, of dental amalgam waste (may be both contact and non-contact amalgam, filters, traps, etc.) sent for recycling on an annual basis; and certification from a collection service or recycler documenting its name/address, date/weight of dental amalgam waste and elemental mercury collected, and the name/address of the facility where the dental amalgam waste and elemental mercury will be recycled.

**23. Where else can mercury and mercury wastes be found in a dental office?**

Besides dental amalgam, mercury is present in some medical equipment such as thermometers and blood pressure reading devices. Certain thermostats contain mercury switches. Dental offices often use fluorescent and high-intensity lamps that contain mercury. There are non-mercury alternatives available for most of these items that a dentist should utilize when starting an office or replacing items. There are also lamps available that contain lower amounts of mercury than others.



## Managing Dental Mercury

Effective March 16, 2003, New York State Law requires that all dentists recycle mercury and mercury amalgam waste generated in their practices. The law also requires that dentists use encapsulated mercury and prohibits, in the practice of dentistry, the use or possession of elemental mercury not in capsules. Effective May 12, 2006, dental facilities are required to install amalgam separators that remove waste amalgam from the dental facilities' wastewater.

A list of amalgam separator manufacturers is available. This is an informational list and is not endorsed by the Department. Specific regulatory requirements are provided under Subpart 374-4 (link leaves DEC). Multiple questions dental facilities may have concerning the installation of amalgam separators are also addressed.

**Elemental Mercury** (also referred to as free, bulk, or raw mercury)

New York State Law forbids the use or possession of elemental mercury in the practice of dentistry. Amalgam capsules must be used.

In the event that elemental mercury is present in your dental office:

- Recycle all elemental mercury. Many hazardous waste haulers and dental amalgam recyclers will accept elemental mercury for recycling.
- **Never** rinse elemental mercury down the drain.
- **Never** dispose of elemental mercury in the trash.
- **Never** dispose of elemental mercury in the sharps container or as medical waste.
- If only a small amount of elemental mercury is to be recycled, it may be possible to initiate a reaction with an amalgam alloy to form scrap amalgam, which must then be recycled through your amalgam recycler.

Some solid waste planning units (such as in Erie, Monroe, Otsego, Rockland, Oneida-Herkimer and Cayuga Counties) offer elemental mercury recycling programs, which allow dentists to safely manage their elemental mercury. Some will charge a fee for this service. Call your local solid waste district to inquire about such programs. A list of New York State recycling coordinators.

If you are concerned about the possible uncontained presence of mercury in your dental office due to historical or recent mercury spills, equipment is available for the detection of mercury vapor and mercury spill locations in the workplace environment. This equipment can be rented from rental test equipment companies.

### Amalgam Capsules

New York State Law requires that all amalgam capsule waste be recycled.

If your dental practice continues to utilize dental amalgam, New York State Law requires the use of single-use amalgam capsules. This minimizes the chance of accidental mercury spills.

Minimize the generation of amalgam waste. Don't mix a double-use capsule if a single-use capsule will do. Less waste means less amalgam that needs to be recycled.

In the event of a mercury spill, put on disposable nitrile gloves and immediately clean up the spill utilizing a mercury spill kit. Do not use latex gloves as mercury can penetrate latex. Mercury spill kits are available from a number of sources including: companies that specialize in Occupational Safety and Health Administration (OSHA) compliance supplies and equipment; amalgam recyclers; and dental product suppliers. Before purchasing a kit, make sure it comes with complete instructions on how to perform a spill clean up. Train several staff members in proper spill clean up procedures.

### Dental Amalgam

- **Never** put scrap amalgam in the sharps container.
- **Never** put scrap amalgam in the red biohazard bag.
- **Never** discard scrap amalgam in the trash.
- **Never** rinse scrap amalgam down the drain.
- **Never** remove excess amalgam from the amalgam well with the high-speed suction vacuum line.
- **Never** clean up a mercury spill using a vacuum cleaner.
- **Never** place extracted teeth with amalgam restorations in the red biohazard bag. They should be placed in a container that is acceptable to your recycler. Precautions, such as glasses, gloves, and mask, should be used when handling extracted teeth.

### Recycling Scrap Amalgam

New York State Law requires you to recycle all amalgam waste. Follow the requirements of your amalgam recycler for the storage, disinfection and shipping of scrap amalgam.

- Collect and store all contact and non-contact scrap amalgam, capsule waste and extracted teeth with amalgam restorations in separate, appropriately labeled, tightly closed containers.
- Recycle scrap amalgam through an amalgam recycler.
- **Do not use heat.** If contact amalgam must be disinfected before shipment to your recycler, do not use any method that utilizes heat. The heat will cause the mercury to volatilize and be released into the environment.
- **Do not decant liquid.** If you store scrap amalgam under used radiographic fixer, water, or other liquid, do not, under any circumstances, decant the liquid down the drain. Contact your dental amalgam recycler or hazardous waste hauler for more information on how to dispose of this material properly.

### Chair-side Traps

The control of waste dental amalgam includes proper management of the traps and filters used in your office vacuum system. Disposable amalgam traps are preferable to reusable traps because of the difficulty in effectively removing amalgam particles from the trap without spilling the particles into the drain or garbage. In addition, consider replacing size 40 mesh traps with size 100 mesh traps if your suction system can function adequately with the smaller mesh. Although finer screens may be more effective at trapping amalgam particles, they may require cleaning and changing more often.

Check with your dental amalgam recycler to determine if disposable amalgam traps are accepted. Disposable amalgam traps should not be placed in the regular garbage or with medical waste and must also be sent for recycling.

### Amalgam Traps

Precautions, such as glasses, gloves and mask, should be used when handling the chair-side trap. These traps should be changed as often as necessary.

The vacuum system should be flushed with disinfecting line solution before changing the chair-side trap. Research has suggested that some types of line cleansers, such as those that contain bleach, may dissolve mercury from amalgam particles. This would increase the release of mercury into the dental wastewater.

According to the American Dental Association, the following line cleansers do not contain bleach or chlorine and do not appear to dissolve mercury from amalgam. This is an informational list and is not endorsed by the Department or the American Dental Association. You should check with your equipment manufacturer to determine the appropriate line cleanser for your

equipment:

- Biocide (Biotrol International)
- BirexSe (Biotrol International)
- DRNA Vac (Dental Recycling North American, Inc.)
- E-Vac (L&R Manufacturing Co.)
- Fresh-Vac (Huntington)
- GC Spray-Cide (GC America Inc.)
- Green and Clean (Metasys)
- Microstat 2 (Septodont USA)
- Patterson Brand Concentrated Ultrasonic Cleaner/Disinfectant Solution (Patterson Dental Supply, Inc.)
- ProE-Vac (Cottrell Ltd.)
- Pure-Vac (Sultan Chemists Inc.)
- Sani-Treet Plus (Enzyme Industries Inc.)
- SRG Evacuation (Icon Labs)
- Stay Clean (Apollo Dental Products)
- Turbo-Vac (Pinnacle Products)
- Vacusol Ultra (Biotrol International)
- Cavicide (Metrex Research Corp.)
- Vacuum Clean (Palmero Health Care)

The best method is to flush the line with an appropriate line cleanser at the end of the day. The trap should be changed the next morning before the suction is used. This method will allow the particles in the trap to dry.

An alternative method is to flush the system with a cleaning solution according to the product's directions. The lid may then be removed from the trap. This allows air to pass through the trap until the contents are dry (usually not more than five minutes).

#### **Replaceable Amalgam Traps**

Steps to clean this type of trap are:

- Open the chair-side dental unit to expose the amalgam trap.
- Remove non-amalgam fragments such as cement from the trap with cotton forceps and discard in the garbage.
- Remove all visible amalgam by tapping the contents into a properly labeled container. Close the cover tightly.
- If the trap is visually clean, it can be reused. A heavily contaminated trap should always be recycled. Store contaminated traps in the properly labeled container.

#### **Disposable Amalgam Traps**

- Remove the amalgam trap and place it in a properly labeled container.
- Do not clean disposable traps under running water or discharge the trapped amalgam into the wastewater system.
- Do not discharge the trapped amalgam into the sharps container, as medical waste, or in the trash.

#### **Vacuum Pump Filters** (by the central suction pump)

- Replace vacuum pump filters regularly as recommended by the equipment manufacturer.
- Remove the filter. While holding it over a tray or other container that can catch spills, decant as much liquid as possible without losing visible amalgam. The decanted, amalgam-free liquid can be rinsed down the drain.
- Put the lid on the filter and place it in the box in which it was originally shipped. When the box is full, the filters must be recycled. Be sure to check with your amalgam recycler to ensure that they will take these filters.
- Do not dispose of used vacuum pump filters in the sharps container, as medical waste, or in the trash.

#### **Amalgam Separators**

New York State regulations now require the installation and use of dental amalgam separators for new dental facilities starting operations after May 12, 2006. Dental facilities operating prior to May 12, 2006 are allowed a two-year phase in period (by May 12, 2008) to install and maintain in operation dental amalgam separators. Other specific requirements apply and are stated in Subpart 374-4.(link leaves DEC)

Dental amalgam separators will remove the maximum amount of amalgam waste and are much more efficient in removing amalgam from the dental wastewater than filters and traps used in chair-side dental units and vacuum lines. Most amalgam separators can attain an efficiency of 99 percent removal of amalgam.

An amalgam separator must be installed in dental facilities where dental amalgam is applied, altered, maintained, removed, disposed, generated or where elemental mercury is used or possessed by licensed dentists. An amalgam separator must treat all dental facility waters likely to come into contact with dental amalgam waste prior to discharge. This includes wastewater from chair-side water collection units as well as sinks and drains.

The only dental facilities not required to install an amalgam separator are specialties where orthodontics, periodontics, prosthodontics and oral and maxillofacial surgery are exclusively performed.

Although the department does not endorse any specific amalgam separators, a list of dental amalgam separator companies is available. The following criteria should help you select the right system for your facility:

- The system must be effective. The manufacturer must be able to prove that the system can remove the amalgam from the wastewater regardless of particle size. An amalgam separator placed into service after May 12, 2006 must achieve 99 percent removal efficiency.
- The separator must be properly sized for the volume and flow of the dental facility amalgam wastewater in accordance with the manufacturer's specifications and recommendations. The maximum allowable flow rate through the amalgam separator may not exceed the maximum flow rate capacity that the separator was tested at and passed in meeting International Standards Organization (ISO-11143).
- Available space for the installation and subsequent access to that space for equipment replacement and maintenance should be considered.
- There should be no compromise in suction power.
- You may want to consider a unit that is hands-off. The dentist or staff should not have to perform a series of manual operations or be required to handle and change filters.
- The captured amalgam must be recycled. Consider a company that both sells the system and arranges for the recycling of the captured amalgam. You should, at minimum, request information from the company that sold you the unit about how to assure that the captured amalgam is recycled.
- Simplicity of design is a plus. There will be fewer chances for something to go wrong.
- The unit should operate quietly.
- The unit should come with a fail-safe mechanism that protects you from a spill or back-up in the event that a blockage occurs.
- The unit should install centrally so that the appropriate wastewater streams pass through it before discharging into the sewer system.

- The unit should be reasonably priced. Obtain information from the companies on both short and long term costs (including maintenance and parts replacement) over a five to ten year period before making a decision.

### **Plumbing Replacement and Repairs**

Mercury from prior dental procedures often settles at low points in the plumbing such as sink traps and sumps. The slow dissolution of the mercury in a sink trap or sump can release mercury into the wastewater for years after past disposal practices have been corrected. When there is a possibility that plumbing repairs or demolition may disturb adhered amalgam waste, dental offices should follow common sense approaches and guidelines to protect the environment and those working in the dental facility. For instance, you should advise your plumber that whenever plumbing parts are removed or cleaned, caution should be taken to avoid spilling the contents in case amalgam or mercury are present. The sludge from the pipes should be poured or brushed out and handled as contact amalgam. The plumbing parts can then be put back in place or recycled.

### **Additional Sources of Mercury in Dental Offices**

Electrical equipment with switches, relays or temperature controls (thermostats) may contain mercury and should be properly recycled when replaced.

Mercury thermometers and blood pressure units are also sources of elemental mercury. The following steps should be followed in the event that one of these items break:

- Put on nitrile gloves. Do not use latex gloves as mercury can penetrate latex.
- Clean up all visible elemental mercury using a mercury spill kit. Mercury spill kits are available from a number of sources including: companies that specialize in Occupational Safety and Health Administration (OSHA) compliance supplies and equipment; amalgam recyclers; and dental product suppliers. Before purchasing a kit, make sure it comes with complete instructions on how to perform a spill clean up. Train several staff members in proper spill clean up procedures.
- Place all contaminated items (materials used during the clean up procedure and broken pieces of glass) in a sealable plastic bag or container. Label the bag or container as "Mercury Waste".
- Dispose of all contaminated materials through a hazardous waste hauler.
- Never dispose of mercury contaminated waste in the sharps container, as medical waste, or in the trash.
- Never dispose of elemental mercury down the drain or in the sharps container, as medical waste, or in the trash.
- Consider replacing mercury-containing equipment with non-mercury containing alternatives. Non-mercury containing products are usually available for many of these products at cost-competitive prices.

### **Office Renovations**

Alert renovators to the possibility of historical mercury spills that may have resulted in the presence of mercury in carpets, floor cracks, behind mouldings and other areas where elemental mercury may have been used or where amalgam capsules may have been spilled.

*The above procedures were adapted for New York State's use from "The Environmentally Responsible Dental Office: a Guide to Proper Waste Management in Dental Offices", prepared by the Northeast Natural Resource Center of the National Wildlife Federation and the Vermont State Dental Society, June 1999.*

Additional information may be obtained by contacting the New York State Department of Environmental Conservation, Bureau of Waste Reduction & Recycling at (518) 402-8706 or by e-mail at: [recycling@dec.ny.gov](mailto:recycling@dec.ny.gov)

## **More about Managing Dental Mercury:**

6 NYCRR Part 374-4 Express Terms - Standards for the Management of Elemental Mercury and Dental Amalgam Wastes at Dental Facilities.

Information on 6 NYCRR Part 374-4 Regulations - Describes the regulations for managing mercury and dental amalgam wastes at dental facilities.

NY Dental Mercury & Amalgam Recycling Law - Recycling of Elemental Mercury and Dental Amalgam -- It's the Law in New York State. Chapter 506, Laws of New York, 2002.

Recycling of Mercury By Dentists FAQ - Frequently Asked Questions From Dentists.

Guide for Dentists for Managing Mercury and Amalgam Wastes - Recycling of Elemental Mercury and Dental Amalgam by Dentists.

List of Mercury and Dental Amalgam Recyclers & Hazardous Waste Haulers - List of companies and hazardous waste haulers that will accept elemental mercury for recycling.

List of Amalgam Separator Manufacturers - A list of manufacturers that have submitted the appropriate certifications/test reports to DEC.

Community Household Hazardous Waste Programs That Accept Mercury From Dentists - List of Communities in NYS that mercury dental waste.



## Guide for Dentists for Managing Mercury and Amalgam Wastes

### Guide for Dentists for Managing Mercury and Amalgam Wastes

#### It's the Law in New York State

On September 17, 2002 New York State enacted Chapter 506, Laws of 2002. This law added a new section 27-0926 to the Environmental Conservation Law (ECL), "Use and recycling of elemental mercury and dental amalgam by dentists." The law bans the use of non-encapsulated elemental mercury in dental offices and requires dentists to recycle any mercury or dental amalgam waste generated in their offices in accordance with regulations established by the New York State Department of Environmental Conservation.

The adoption of ECL 27-0926 and the authorization to develop regulatory standards for dentists places New York State with a growing number of local and state governments, as well as Canada and Western Europe, which have enacted successful regulations for dental offices to curtail the release of mercury. Dentists are required to comply with the law starting March 16, 2003. DEC has adopted 6 NYCRR Part 374-4, effective May 12, 2006, this will assist dentists with implementation.

#### Health Advisories

Mercury is a persistent, bioaccumulative toxin that can cause damage to the human brain and nervous system. It is especially harmful to a developing human child. Significant mercury contamination of the environment has already occurred over the years from the various sources of mercury. Consequently, there are numerous health advisories for fish consumption throughout New York State, due to mercury contamination.

In the past, dental offices have remained largely unmonitored for mercury disposal. Extracted amalgam materials are often rinsed down the drain (usually to a municipal wastewater system or septic system), deposited in biomedical waste containers destined for waste incineration, or placed in trash disposed of in a municipal waste landfill or incinerator. Some recent studies have suggested that a large contributor of mercury to municipal wastewater is dental offices.

Most dentists have already switched to the use of pre-encapsulated mercury instead of elemental mercury when mixing amalgam. Dental offices must now ensure, however, that any bulk elemental mercury they possess, and any pre-encapsulated capsule waste and amalgam waste they generate, be properly managed and recycled.

Waste management procedures, equipment, and collection businesses that can remove most of the mercury generated in dental offices for recycling already exist; however, their use in New York State has previously been voluntary. Dental offices should utilize the technology and management options necessary to reduce the use and release of this toxin into the environment.

Additional information may be obtained by contacting the Bureau of Waste Reduction & Recycling at (518) 402-8706 or by e-mail at: [recycling@dec.ny.gov](mailto:recycling@dec.ny.gov)