



2007 Waste Management Guidelines

The logo features a central, stylized graphic composed of thick, black, curved lines that form a circular, swirling shape. This central element is set within a triangular frame. The text "2007 Waste" is positioned along the top-left edge of the triangle, and "Management" is along the top-right edge. Below the entire graphic, the word "Guidelines" is written in a large, bold, black sans-serif font.



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PDA is pleased to provide to members the 2007 edition of the Waste Management Guidelines.

The purpose of this document is to provide waste management guidelines for use by Pennsylvania dental offices.

Steps were taken to assure that the document is current to the date of printing. It is meant to be a guide, as many situations are case specific. Regulations governing the identification of an item as a hazardous or infectious waste, and its proper disposal, are subject to change. When in doubt, it is the dentist's obligation to seek appropriate advice.

The PDA gratefully acknowledges the valuable assistance of Mr. Ronald Hassinger and Mr. Brad Vanderhoof of the PA Department of Environmental Protection, Mr. Tim Tuominen of the Western Lake Superior Sanitary District, Minnesota, and Mr. Matthew L. Wolford, Esq., in developing the 2001 edition of the Guidelines. PDA also acknowledges Mr. Wolford for his assistance in producing the current edition of the Guidelines.

Camille Kostelac-Cherry

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Chief Executive Officer*

INTRODUCTION

The practice of dentistry may involve the generation of both hazardous and infectious wastes. Some wastewater discharges may also be of concern. Therefore, dental office personnel should be aware of products that contain hazardous materials and how to properly handle the wastes generated during office procedures.

These guidelines address wastes that may be generated in the typical dental office and provide recommendations for handling these wastes. The Pennsylvania Dental Association (PDA) recommends reduction and/or recycling of wastes, both of which are addressed in this guide. PDA strongly encourages source reduction or recycling as preferred waste management practices. Proper disposal is appropriate when recycling is unavailable or impractical.

These guidelines describe the types of dental office waste generated and possibly applicable regulations. Procedures for handling amalgam are also outlined. A list of information sources to assist in answering your questions is included. The PDA and government agencies are more than willing to assist you in complying with applicable regulations.

THE DENTAL OFFICE AS A WASTE GENERATOR

See Appendix A, page 12, for information on state and federal regulations.

The quantity and type of the wastes generated by a dental office will vary depending upon the type of dental practice and types of procedures performed in the office. Dental office waste, like waste generated by any other business, is referred to generally as “solid waste.” As with all solid waste, dental office waste is regulated at the federal, state, and local levels in Pennsylvania. At the federal level, dental office waste is regulated by the United States Environmental Protection Agency (US EPA). However, under an agreement with the Commonwealth of Pennsylvania, the US EPA has delegated responsibility for administering and enforcing most aspects of the federal solid waste program to the Pennsylvania Department of Environmental Protection (PA DEP), which has developed its own regulations. In addition, wastewater discharges to public sewer systems are often regulated at the local level through municipal ordinances. The most stringent regulations, whether federal, state, or local, must be followed.

Under Pennsylvania’s Solid Waste Management Act (SWMA), solid waste is regulated by the PA DEP under three categories: municipal waste, residual waste, and hazardous waste. Municipal waste is waste generated by households and commercial or institutional establishments (such as dental offices), and includes such waste as office waste, lunchroom waste, and other ordinary garbage. Residual waste, by contrast, is waste generated from industrial, mining, or agricultural operations, provided the waste is

not hazardous. Generally speaking, waste is considered hazardous if it may cause injury or death and/or pose a threat to the environment (land, air, or water).

Dental office waste falls typically within the categories of municipal waste and possibly hazardous waste. Dental offices also generate “infectious” waste, which is a type of municipal waste regulated as a “special handling” waste. In addition, dental offices may discharge chemicals or metals in wastewater. Because of the possible regulatory burdens and liability issues associated with these various types of wastes, it is advisable to (a) reduce the quantity of waste that you generate; (b) recycle materials to the extent possible; and (c) properly dispose of your waste only at licensed facilities.

HAZARDOUS WASTE, INFECTIOUS WASTE, AND WASTEWATER

Federal, state, and local regulations govern the handling, storage, transportation, recycling, and disposal of all solid wastes. By their nature, hazardous waste, infectious waste, and certain wastewater discharges pose special concerns for regulatory agencies. For this and other reasons, care should be taken by dental offices generating these wastes to reduce, recycle, and/or properly dispose of these wastes.

In Pennsylvania, federal and state hazardous waste regulations are usually enforced at the state level. A waste is considered hazardous if it is either listed as a hazardous waste under federal regulations (promulgated under the Resource Conservation and Recovery Act, or RCRA), or if it has any one of the following four hazardous waste characteristics (as determined by testing, referred to as a “hazardous waste determination”):

- Ignitability—easily combustible or flammable;
- Corrosivity—high or low pH, dissolves metals or other materials, or burns the skin;
- Reactivity—undergoes a violent chemical reaction with water or other materials;
- Toxicity—harmful when ingested, inhaled or absorbed; includes heavy metals and certain organic compounds.

Ordinarily, a waste is hazardous based on one or more of the above criteria and it is to be sent for disposal, it must be transported by a licensed transporter and disposed of at an approved facility. However, conditionally exempt small quantity hazardous waste generators (see next page) are currently deemed by regulation to have a license for the transportation of conditionally exempt wastes that they generate.

Dental office waste may include:

1. Hazardous waste
2. Infectious waste
3. Wastewater discharges

Hazardous Waste

See Appendix B, page 13, for a synopsis of the hazardous chemicals most commonly found in the dental office.

*For further explanation as to what constitutes hazardous waste, see the following website:
<http://www.depweb.state.pa.us>,
DEP Keyword “Hazardous Waste”*

See Appendix C, page 14, for a listing of waste handlers.

A dental office is considered a *conditionally exempt small quantity hazardous waste generator* if it generates less than 220 pounds (100 kilograms) or 25 gallons (95 liters) of hazardous waste in any calendar month. Conditionally exempt small quantity generators must comply with the following federal regulations:

- identify all hazardous wastes generated; and
- recycle or dispose of all hazardous waste at state-approved facilities. (Note that current state regulations provide that conditionally exempt generators may not dispose of hazardous waste in a municipal or residual waste landfill in Pennsylvania.)

If your office ever generates more than 220 pounds (100 kilograms) of hazardous waste in a month, then it must comply with federal hazardous waste regulations for managing (i.e., accumulating, recording, manifesting, etc.) hazardous waste. For this and other reasons, waste reduction and recycling are strongly advised.

If you generate hazardous waste, you may be held responsible for such waste even after it has been taken to a recycling or disposal facility. Therefore, especially with hazardous waste, it is advisable to reduce the quantity of hazardous waste you generate, if possible.

Hazardous *materials* used in dental offices have the potential to become hazardous wastes. Typically, the types of hazardous materials in dental offices include the following:

- mercury and silver used in making amalgam;
- lead found in lead-foil packets and lead shields;
- silver found in X-ray fixer solutions;
- formaldehyde, acetones, and ketones in Chemiclave chemicals.

Hazardous materials that are recycled are not considered hazardous waste. Depending on how you choose to handle hazardous materials and/or hazardous waste, always contact the selected recycling, transportation, or disposal facility to obtain packaging, handling, and shipping requirements.

Infectious Waste

Infectious waste is regulated at the state level in Pennsylvania as either municipal or residual waste and includes waste generated in the treatment of humans, including the following:

- cultures and stocks;
- pathological wastes (including tissues, body parts, and body fluids—but not extracted teeth—that are removed during medical or laboratory procedures);

- human blood and body fluid waste (including items saturated or dripping with blood or that are caked with dried blood, or items contaminated by body fluids from persons during medical and laboratory procedures); and
- used sharps (including sharps that have been used in patient care or treatment, such as hypodermic needles, syringes, and suture needles).

Infectious waste must be handled and stored separately from other wastes. Appropriate containers such as double bags or rigid containers must be used to store infectious waste. With the exception of used sharps, infectious waste may only be stored for up to 30 days either at room temperature or in a refrigerator (provided no problems are encountered with odors or organisms such as insects or mice), or for up to 90 days in a freezer. Used sharps may be stored in appropriate containers until the containers are full.

Infectious waste regulations also specify transportation requirements. Infectious waste must be transported in containers that are rigid, leak-proof, impervious to moisture, and sufficient in strength to prevent puncturing, tearing, or bursting during transportation. Ordinarily, infectious waste may only be transported by licensed infectious waste haulers. However, most dental offices are conditionally exempt small quantity generators (less than 220 pounds, or 100 kilograms, per month) and may transport infectious waste if

- only the infectious waste generated by their own dental office is transported;
- a log or shipping paper is recorded and maintained by the dental office listing the quantity of waste transported and the date delivered and accepted by the processing or disposal facility; and
- the dental office carries and delivers a copy of the transportation record with the waste shipment to the processing or disposal facility.

Sewage and other liquid wastes that are placed into sewer systems are referred to as “discharges.” Federal, state, and local regulations govern wastewater discharges into public sewer systems. In addition to ordinary sewage, wastewater discharges from dental offices may include chemicals or metals that are subject to regulation. Chemical wastewater discharges may include such wastes as straight alcohol, ether, peroxide, solvents, and X-ray fixer solution. Metals contained in wastewater discharges may include such wastes as silver from X-ray fixer solution, amalgam, and metals from patient rinse waters.

For a current listing of permitted infectious waste processing facilities, contact the Pennsylvania Department of Environmental Protection at (717) 787-7381.

Wastewater Discharges

Wastewater discharges containing chemicals and/or metals are a concern for regulatory agencies because they may interfere with sewage treatment plant operations or pass through the treatment plant and be deposited in Pennsylvania waterways and soils. Metals are known to pass through sewage treatment plants, and sewage treatment plants have established limits of metals permissible in their effluent and sludge.

Local requirements vary. Contact your local sewage treatment plant (also referred to as a Publicly Owned Treatment Works, or POTW) to determine what materials may be poured down the drain. If the POTW has a pretreatment program, some potentially hazardous materials may be accepted by the POTW, but prior approval is always necessary.

Your local sewage treatment plant or municipality may send questionnaires to commercial and industrial businesses within its system to identify potential chemical and/or metal wastewater discharge sources. If you receive a questionnaire, it is best to contact the PDA for assistance. Other dentists in your area also may have received a questionnaire, and the PDA can coordinate responses to these questions to provide consistent and accurate answers.

Dental offices that use a private sewage or septic system should not discharge wastewaters containing potentially hazardous materials to their system. Discharge of such wastes to the environment may harm Pennsylvania's soil, groundwater, and other bodies of water.

HOW TO HANDLE DENTAL OFFICE WASTE

Amalgam

The PDA recommends the following methods of handling dental office wastes. Because of the various forms of amalgam, this waste is discussed separately beginning on **page 9**.

Blood/Body Fluids

Blood in rinse waters or other flowable quantities may be discharged to the public sewer system. Blood-soaked (saturated) gauze, cloth, etc., must be handled and disposed of as infectious waste. Materials caked with dried blood must be handled and disposed of as infectious waste.

Chemiclave Waste

Used Chemiclave chemicals can often be diluted and poured down the drain to the public sewer system.¹ Where this method of disposal is unavailable, dental offices must properly handle the waste chemicals. Never discharge potentially hazardous chemicals to an on-lot septic system. They

¹Contact your local sewage treatment plant or municipality. Larger systems will have a pretreatment coordinator to specifically address your situation. Be ready to provide volume estimates and a Material Safety Data Sheet.

could be detrimental to the system and contaminate groundwater. If waste chemicals cannot be poured down the drain, recycled, or reused, a representative sample of the waste will need to be tested to determine if it constitutes hazardous waste (i.e., a “hazardous waste determination”). Virgin Chemiclave chemicals generally contain high levels of formaldehyde and alcohols that may exhibit the hazardous characteristics of ignitability (flashpoint of less than 140 degrees F, or 60 degrees C). As a result, unused and off-specification Chemiclave chemicals may need to be disposed of as hazardous waste, which will require a hazardous waste disposal service. Check the Material Safety Data Sheet (MSDS) from the manufacturer for helpful information concerning properties of the product.

Many cleaners for X-ray developer systems contain chromium. Check the manufacturer’s Material Safety Data Sheet (MSDS) to determine if the cleaner you use contains chromium. If your cleaner does contain chromium, the wastes from cleaning may need to be handled as hazardous waste, which will require a hazardous waste disposal service. It is easier and less expensive to use a system cleaner that does not contain chromium. According to photo industry representatives, the environmentally safe cleaners are as effective as the chromium-based cleaners.

Ordinarily, office disinfectants may be discharged to the public sewer system. Questions or concerns about a particular disinfectant should be directed to the local sewage treatment plant or municipality. If disinfectants are poured down the drain, the drain should then be flushed well with water.

It is advised that lead-foil and/or lead shields waste be recycled as scrap metal using a metal recycler. Scrap metal facilities can be found in the Yellow Pages. Under current state regulations, conditionally exempt hazardous waste generators are not permitted to dispose of hazardous waste in a municipal or residual landfill. Accordingly, if you choose to dispose of lead-foil and/or lead shield waste instead of recycling, which is not recommended, a representative sample of the waste will need to be tested to determine if it constitutes hazardous waste (i.e., a “hazardous waste determination”). If it is determined to be hazardous waste, a hazardous waste disposal service should be contacted to arrange for proper disposal.

Used sharps, including needles, reamers, broaches, syringes and scalpels, must be stored in rigid, tightly lidded and puncture-resistant containers, clearly marked as biohazardous. Used sharps should be sorted and separated from other infectious waste items. Unlike other infectious waste items, used sharps are not subject to the 30-day storage rule and may be stored until the storage container is full. Sharps must be rendered unusable prior to disposal. Under current state regulations, sharps and other infectious waste may not be disposed of at a municipal waste landfill unless

Chromium-Containing X-ray System Cleaners

Disinfectants

Lead-Foil and Lead Shield Waste

*See Appendix C, page 15,
for a list of metal recyclers.*

Used Sharps and Other Infectious Waste

they meet certain requirements, including disinfection by a permitted processing facility. As conditionally exempt generators, most dental offices may transport their own infectious waste to facilities permitted to accept such waste. Various technologies currently exist for the disinfection of infectious waste by permitted facilities that allow the waste to be ultimately disposed of as municipal waste.

X-ray Developer

Ordinarily, X-ray developer solution may be poured down the drain to the public sewer system if it is *not mixed* with fixer solutions. Some POTWs require pH testing of developer. Always check with the local POTW to determine the requirements of your municipality.

X-ray Fixer Waste

X-ray fixer waste contains high silver content and probably constitutes hazardous waste. However, fixer is readily recyclable. Recycling is the management method recommended by regulatory agencies and the PDA.

There are two suitable methods of recycling fixer waste: (1) you may use a silver recovery unit for your developing system; or (2) you may give away, sell, or pay a silver recovery unit operator to handle your fixer. If you use your own recovery unit, the liquid that has run through the unit ordinarily can be disposed of down the drain into the public sewer system. This should be confirmed with your local sewage treatment plant or municipality. If you dispose of fixer off-site, care should be taken to deal directly with a licensed recycling facility. The used fixer should be collected and stored in a closed plastic container clearly labeled "Used Fixer."

If you do not recycle your fixer waste, a representative sample of the waste will need to be tested to determine if it constitutes hazardous waste (referred to as a "hazardous waste determination"). Fixer waste will likely need to be handled as hazardous waste, which will require a hazardous waste disposal service.

X-ray Developer/ Fixer Mixtures

See Appendix C, page 16, for a list of silver recyclers.

If your X-ray processing unit mixes the developer and fixer solutions, you may either use an adapter kit for your unit to keep the solutions separate, or handle this mixed waste as other potentially hazardous wastes. To recycle, clearly label the container "Used Fixer and Developer" and recycle the waste at a silver recovery facility.

AMALGAM WASTE HANDLING PROCEDURES

Dental amalgam contains a mixture of mercury and an alloy powder consisting of silver, tin, copper, and zinc. When other metal alloys are added to mercury, it is considered to be a mercury compound with different chemical properties. Mercury in the form of dental amalgam is not free mercury. Consequently, amalgam waste may not exhibit hazardous waste characteristics. Proper handling and disposal of amalgam waste is, nevertheless, very important.

Mercury/Alloy Powder Mixture

Free elemental mercury is referred to as liquid, raw, or bulk mercury. Its use is no longer recommended by the PDA or the ADA. The PDA and the ADA recommend the use of precapsulated amalgam alloy. If your office does have elemental mercury, it should be recycled using a metals recycler. Elemental mercury that is disposed of must be handled as a hazardous waste.

Mercury in the form of dental amalgam is very stable. However, if amalgam waste is disposed of as municipal waste, or as infectious waste, or if it is discharged into the public sewer system, the mercury in the amalgam waste can be released into the environment. Municipal wastes, infectious wastes, and sludge from wastewater treatment plants are all commonly incinerated, and mercury will volatilize at high temperatures. Emissions from incinerators are known to contain mercury. Accordingly, if amalgam wastes are segregated from wastes to be incinerated, mercury emissions can be reduced.

*Red infectious waste bags should
NOT be used to dispose of amalgam.*

Typically, dental offices generate two types of amalgam waste: “non-contact amalgam waste” and “contact amalgam waste.” Non-contact amalgam waste consists of leftover, excess mix that is not used. Contact amalgam waste consists of amalgam that has been in contact with a patient. Examples include extracted teeth with amalgam fillings, or amalgam captured by chairside traps, filters, or screens.

Amalgam Waste

The PDA recommends handling amalgam waste as follows:

Particularly because of the concern about free mercury’s toxicity, *recycling amalgam is strongly recommended*. Because of the mercury content, recycling should be handled by a US EPA-licensed recycling facility. Contact the recycling facility for packaging and shipping requirements. Some recyclers may provide shipping containers to transport the amalgam via carrier (e.g., UPS). Most recycling facilities prefer non-contact amalgam waste to be kept separate from contact amalgam waste. For this and other reasons, care should be taken to segregate non-contact and contact amalgam wastes, and accurately label containers accordingly. Some recycling facilities may require amalgam to be dry prior to shipping.

If you choose to dispose of amalgam waste instead of recycling, which is not recommended, a representative sample of the waste will need to be tested to determine if it constitutes hazardous waste (i.e., a “hazardous waste determination”). If it is determined to be hazardous waste, a hazardous waste disposal service should be contacted to arrange for proper disposal.

Amalgam Capsules

The PDA recommends handling amalgam capsules as follows:

- Store amalgam capsules in the manufacturer’s container until ready to use.
- Excess amalgam remaining from a procedure should be collected immediately and stored in a sealed container. The container should be labeled “non-contact amalgam waste” and handled as amalgam waste (see p. 9).
- Return unused or expired amalgam capsules to the manufacturer, or triturate and handle as non-contact amalgam waste.
- Recycle empty amalgam capsules with non-contact amalgam waste.

Amalgam Chairside Traps

The PDA recommends handling amalgam waste captured in amalgam traps as follows:

Chairside traps dedicated strictly to hygiene may be placed in the trash for disposal as municipal waste. Chairside traps not dedicated strictly to hygiene, however, contain amalgam waste and should be handled accordingly. If part or all of the amalgam waste has been in contact with patients, handle all of the trapped amalgam waste as contact amalgam waste (see p. 9).

Disposable Traps—Some recyclers will accept whole disposable traps. In this case, remove the trap and place it in your contact amalgam recycling container. If your recycler does not accept whole traps, follow the directions for handling amalgam from reusable chairside traps, below. Once amalgam waste has been removed from the traps, the traps themselves may be handled as municipal waste. However, PDA recommends recycling disposable chairside traps with contact amalgam whenever possible.

Reusable Traps—Remove the trap. **Collect amalgam waste from reusable traps over a suitable container, never over a drain or sink, to minimize the risk of release of amalgam to the environment.** Place the amalgam in your contact amalgam recycling container. Replace the trap in the chairside unit. Do NOT rinse the trap under running water because this could introduce dental amalgam into the environment.

Refer to OSHA requirements for additional considerations in removing amalgam waste from traps.

The PDA recommends handling extracted teeth containing amalgam as follows:

- Confirm that your recycler accepts extracted teeth containing amalgam.
- Ask your recycler for specific disinfection requirements for extracted teeth containing amalgam.
- If acceptable to your recycler, disinfect extracted teeth with amalgam in glutaraldehyde or 10% formalin.
- Place in contact amalgam recycling container.

When handling extracted teeth containing amalgam, make sure you:

- DO NOT place extracted teeth containing amalgam in a medical waste container (red bag waste) that uses incineration for final disposal.
- DO NOT heat sterilize extracted teeth containing amalgam.
- DO NOT use a bleach or chlorine solution to sterilize extracted teeth containing amalgam.

The PDA recommends handling amalgam waste captured in vacuum pump filters as follows:

Disposable Filters—Some recyclers will accept whole filters. In this case, remove the filter. **While holding the filter over a tray or other container that can catch any spills, decant as much of the liquid as possible without losing any visible amalgam.** Put the lid on the filter and place it in your contact amalgam recycling container. If your recycler does not accept whole filters, follow the directions for handling amalgam from reusable filters, below. Once amalgam waste has been removed from the filters, the filters themselves may be handled as infectious waste. However, PDA recommends recycling disposable vacuum pump filters with contact amalgam whenever possible.

Reusable Filters—Remove the filter. **While holding the filter over a tray or other container that can catch any spills, decant as much of the liquid as possible without losing any visible amalgam.** Collect and place the amalgam in your contact amalgam recycling container. Replace the filter in the vacuum pump. Do NOT rinse the filter under running water because this could introduce dental amalgam into the environment.

Some vendors make plastic, disposable filters that can replace the metal, reusable filters. PDA encourages you to switch to disposable filters if your recycler accepts whole filters.

Refer to OSHA requirements for additional considerations in removing amalgam waste from vacuum pump filters.

Extracted Teeth Containing Amalgam

Vacuum Pump Filters

Appendix A

REGULATIONS

Commonwealth of Pennsylvania
PENNSYLVANIA CODE
Title 25. Environmental Protection
Department of Environmental Protection
Chapters 271-285. Municipal Waste
Chapters 260a - 270a. Hazardous Waste
Access at www.pacode.com

Code of Federal Regulations
40 CFR 260-270. Hazardous Waste
Access at www.access.gpo.gov/cgi-bin/cfrassemble.cgi?title=199940
(select parts 260-265 and 266-299)

Appendix B

HAZARDOUS CHEMICALS MOST COMMONLY FOUND IN THE DENTAL OFFICE

Acetic Acid
Acetone
Acrylic Monomers
Agar
Alcohol
 Denatured Alcohol
 Denatured Ethanol
 Ethanol
 Ethyl Alcohol
Isobutanol
 Isobutyl Alcohol
 Isopropanol
 Isopropyl Alcohol
 Methanol
 Methyl Alcohol
Alginate
Alumina
Aluminum Oxide
Benzoyl Peroxide
Beryllium
Bis-GMA
Bisphenol A Glycidal Methacrylate
Butyl Acetate
sec-Butyl Acetate
Calcium Sulfate Hemihydrate
Chlorhexidine Gluconate
Chromium
Citric Acid
Cyclohexane
Dibutyl Phthalate
Diethyl Ether
N, N-Dimethyl, P-Toluidine
Ether
Ethyl Acetate
Ethyl Ether
Eugenol
Flammable Liquids
Formaldehyde
Glutaraldehyde
Guaiacol
Gypsum
HEMA
Hexachlorophene
Hydrochloric Acid
Hydrofluoric Acid
Hydroquinone
2-Hydroxyethyl Methacrylate
Isobutyl Methacrylate
Magnesium Oxide
Maleic Acid
Mercury
Methacrylates
3-Methacryloyloxypropyltrimethoxysilane
Methylene Chloride
Methyl Ethyl Ketone
Methyl Guaiacol
Methyl Methacrylate
Mineral Acid
Muriatic Acid
Naphtha
Nickel
Nitric Acid, Dilute
Nitromethane
Petroleum Naphtha
2-Phenylphenol
Phosphoric Acid
Polyacrylic Acid
Polymethyl Methacrylate
Potassium Alginate
sec-Butyl Acetate
Silica
Sodium Alginate
Sodium Hydroxide (Solution)
Sodium Phenoxide
Sodium Pyrophosphate
Sulfuric Acid
TEG-DMA (Triethylene glycol dimethacrylate)
Tetraethoxysilane
Tetrasodium Pyrophosphate
Titanium Dioxide
Toluene
Triethylene Glycol Dimethacrylate
3-(Trimethoxysilyl)Propyl Methacrylate
Urethane Dimethacrylate
Vinyl Polysiloxane
Xylene
Zinc Oxide

From:
*Handling Hazardous
Chemicals – General
Guidelines*, pages 37-96.
Supplement to
*ADA Regulatory
Compliance Manual*
(American Dental
Association, 1999).

Appendix C

WASTE HANDLER CONTACT INFORMATION BY CATEGORY

Amalgam Recyclers

AERC Recycling Solutions
2591 Mitchell Avenue
Allentown, PA 18103
(610) 797-7608
www.aercrecycling.com

Amalgaway
3672 E. Raymond Street
Indianapolis, IN 46203
(800) 267-1467
(317) 784-2719
www.amalgaway.com

Bethlehem Apparatus Company, Inc.
890 Front Street
Hellertown, PA 18055
(610) 838-7034
www.bethlehemapparatus.com

Doral Refining Corp.
533 Atlantic Avenue
Freeport, NY 11520
(800) 645-2794
www.doralcorp.com

PDA has endorsed DRNA Waste Management as its preferred waste management vendor.

DRNA Waste Management
145 West 58th Street
New York, NY 10019
(800) 360-1001
www.DRNA.com

Contact PDA or PA DEP to obtain a current list of licensed hazardous waste and infectious waste transporters.

Garfield Refining Company
810 East Cayuga Street
Philadelphia, PA 19124
(800) 523-0968
(only non-contact amalgam)

Healthcare Compliance Service
P.O. Box 111238
Palm Bay, FL 32911-1238
(888) 726-8505
www.hcstoday.com

Maguire and Strickland Refining, Inc.
1290 81st Avenue NE
Minneapolis, MN 55432
(800) 486-2858

Safety-Kleen Services, Inc.
P.O. Box 279
10 Eleanor Drive
New Kingston, PA 17072
(717) 697-9783
www.safety-kleen.com

AERC Recycling Solutions
2591 Mitchell Avenue
Allentown, PA 18103
(610) 797-7608
www.aercrecycling.com

***Metal Recyclers
(Lead Foil)***

Amalgaway
3672 E. Raymond Street
Indianapolis, IN 46203
(800) 267-1467
(317) 784-2719
www.amalgaway.com

Doral Refining Corp.
533 Atlantic Avenue
Freeport, NY 11520
(800) 645-2794
www.doralcorp.com

DRNA Waste Management
145 West 58th Street
New York, NY 10019
(800) 360-1001
www.DRNA.com

Healthcare Compliance Service
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Palm Bay, FL 32911-1238
(888) 726-8505
www.hcstoday.com

Maguire and Strickland Refining, Inc.
1290 81st Avenue NE
Minneapolis, MN 55432
(800) 486-2858

Safety-Kleen Services, Inc.
P.O. Box 279
10 Eleanor Drive
New Kingston, PA 17072
(717) 697-9783
www.safety-kleen.com

Silver Recovery Equipment and Systems

*Check local Yellow Pages under
"Recycling Centers"*

*The hazardous waste transporter list
can be accessed on line at: [http://
www.depweb.state.pa.us](http://www.depweb.state.pa.us), DEP
Keyword "Hazardous Waste"*

DRNA Waste Management
145 West 58th Street
New York, NY 10019
(800) 360-1001
www.DRNA.com

Healthcare Compliance Service
P.O. Box 111238
Palm Bay, FL 32911-1238
(888) 726-8505
www.hcstoday.com

Pyromet, Inc.
5 Commerce Drive
Aston, PA 19014
(610) 497-1743
www.pyromet999.com

Safety-Kleen Services, Inc.
P.O. Box 279
10 Eleanor Drive
New Kingston, PA 17072
(717) 697-9783
www.safety-kleen.com

Silver Recyclers

Garfield Refining Company
810 East Cayuga Street
Philadelphia, PA 19124
(800) 523-0968

Pyromet, Inc.
5 Commerce Drive
Aston, PA 19014
(610) 497-1743
www.pyromet999.com
(X-ray Solution Recycling - Not Amalgam Recycling)

Safety-Kleen Services, Inc.
P.O. Box 279
10 Eleanor Drive
New Kingston, PA 17072
(717) 697-9783

American Waste Industries, Inc.
508 E. Indian River Rd.
Norfolk, VA 23523
(800) 872-2876
www.americanwaste.cc

Asepsis, Inc.
424 W. Lincoln Hwy, Suite 204
Pennel, PA 19047
(215) 752-9889

Bio-Haz Solutions, Inc.
P.O. Box 152
805 Blakeslee Blvd. East
Lehighton, PA 18235
(888) 794-7894
(610) 377-0992
www.bio-haz.com

The Cardinal Group, Inc.
828 N. Hanover St.
Pottstown, PA 19464
(484) 945-0575
www.thecardinalgroupinc.com

Environmental Options Group, Inc.
18 Water St./Tuckerton
Reading, PA 19605
(610) 929-2883
www.eognet.com

Hazardous and Infectious Waste Transporters

*The infectious waste transporter
list can be accessed on line at:
[http://www.depweb.state.
pa.us/landrecwaste/lib/
landrecwaste/municipal_waste/
lcwtransporterlist.pdf](http://www.depweb.state.pa.us/landrecwaste/lib/landrecwaste/municipal_waste/lcwtransporterlist.pdf)*

Healthcare Compliance Service
P.O. Box 111238
Palm Bay, FL 32911-1238
(888) 726-8505
www.hcstoday.com

Med-Flex, Inc.
105 High St.
Mt. Holly, NJ 08060
(877) 4-MEDFLEX
(609) 518-9900

Orchard Hill Special Waste Management, Inc.
75 Stirling Rd.
Warren, NJ 07059
(888) 317-5860

Safety-Kleen Services, Inc.
P.O. Box 279
10 Eleanor Drive
New Kingston, PA 17072
(717) 697-9783
www.safety-kleen.com

Stericycle
1307 S. Pennsylvania Ave.
Morrisville, PA 19067
(215) 295-7203

Appendix D

CONTACTS

Infectious Waste

Mr. Ronald Hassinger, Chief
General Permits/Beneficial Use Section
Bureau of Waste Management
PA Department of Environmental Protection
Rachel Carson State Office Building
14th Floor
400 Market Street
P.O. Box 8472
Harrisburg, PA 17105-8472
(717) 787-7381

U.S. Environmental Protection Agency
Region III
Waste and Chemicals Management Division
1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-3110

The Resource Conservation and Recovery Act Hotline
(RCRA)
(800) 424-9346

Hazardous Waste Questions

Bureau of Waste Management
PA Department of Environmental Protection
Rachel Carson State Office Building
14th Floor
400 Market Street
P.O. Box 8472
Harrisburg, PA 17105-8472
(717) 787-6239

Technical & Financial Assistance

Envirohelp Hotline
(confidential small business environmental assistance)
(800) 722-4743
<http://www.pa-envirohelp.org/>

Small Business Ombudsman
Department of Environmental Protection
Office of Energy & Technology Deployment
P.O. Box 8772, 15th Floor, RCSOB
Harrisburg, PA 17105-8772
(717) 783-9981
<http://www.depweb.state.pa.us>, DEP Keyword “Small Business Assistance”

**Wastewater Discharge
Pretreatment**

Mr. John Lovell
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-5790

**Department of
Environmental Protection
Regional Offices**

If additional information is needed, contact the regional office serving your area.

- ***Southeast Regional Office*** – Counties: Bucks, Chester, Delaware, Montgomery and Philadelphia
Information: (610) 832-6000
- ***Northeast Regional Office*** – Counties: Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne and Wyoming
Information: (570) 826-2511
- ***Southcentral Regional Office*** – Counties: Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York
Information: (717) 705-4700
- ***Northcentral Regional Office*** – Counties: Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union
Information: (570) 327-3636
- ***Southwest Regional Office*** – Counties: Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland
Information: (412) 442-4000
- ***Northwest Regional Office*** – Counties: Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango and Warren
Information: (814) 332-6945

Appendix E

TYPES OF DENTAL OFFICE WASTE

Note: Remember that chemical wastewaters should never be discharged to an on-lot septic system.

Waste Type	Source	Handling
<i>Amalgam Particles</i> (See pp. 9-10)	Traps, screens, excess mix, capsules	<ul style="list-style-type: none"> • Separate contact and non-contact amalgam and label properly • Send to a recycler • Return expired amalgam capsules to the manufacturer, or triturate and handle as amalgam waste.
<i>Blood</i> (See p. 6)	<ul style="list-style-type: none"> • Liquid: in rinse water or flowable quantities • Blood saturated items and items caked with dried blood 	<ul style="list-style-type: none"> • Discharge to public sewer system • Dispose of as infectious waste
<i>Chemiclave chemicals, Used</i> (See pp. 6-7)	Chemiclave	<ul style="list-style-type: none"> • Check with local POTW. • If allowed in your locale, dilute and pour into public sewer system • Test waste sample to determine if it constitutes hazardous waste • If hazardous, must be disposed of as hazardous chemical waste • Never discharge to an on-lot septic system
<i>Chemiclave chemicals, New</i> (See p. 7)		<ul style="list-style-type: none"> • Manufacturer may allow a return. Otherwise, may require disposal as hazardous waste • Never discharge to an on-lot septic system
<i>Chromium</i> (See p. 7)	Used X-ray system cleaner	<ul style="list-style-type: none"> • May require disposal as hazardous waste
<i>Combined fixer and developer</i> (See p. 8)	X-ray processing	<ul style="list-style-type: none"> • Purchase kit to separate fixer and developer. Otherwise, send to a recycler or dispose of as hazardous waste

Waste Type	Source	Handling
<i>Developer</i> (See p. 8)	X-ray processing	<ul style="list-style-type: none"> • Check with local POTW. • Discharge to public sewer • Never discharge to an on-lot septic system
<i>Disinfectants</i> (See p. 7)	Used	<ul style="list-style-type: none"> • Check with local POTW • Discharge to public sewer • Never discharge to an on-lot septic system
<i>Empty Amalgam Capsules</i> (See p. 10)		<ul style="list-style-type: none"> • Recycle
<i>Extractions Containing Amalgam Restorations</i> (See p. 11)		<ul style="list-style-type: none"> • Confirm that recycler accepts extracted teeth containing amalgam • Ask recycler for specific disinfection requirements • If acceptable to recycler, disinfect in glutaraldehyde or 10% formalin
<i>Fixer</i> (See p. 8)	X-ray processing	<ul style="list-style-type: none"> • Recycle • Sell, give away or pay to have silver reclaimed • Buy silver recovery system • May require disposal as a hazardous waste
<i>Lead Foils and Shields</i> (See p. 7)	X-ray protective shields	<ul style="list-style-type: none"> • Send to metal recycler • May require disposal as a hazardous waste
<i>Mercury, Elemental</i> (See p. 9)	Spills, spill cleanup	<ul style="list-style-type: none"> • Manage as hazardous waste by sending to a recycler
<i>Sharps</i> (See p. 7)		<ul style="list-style-type: none"> • Separate used sharps from other infectious waste • Clearly label as biohazardous/infectious waste • Dispose of as infectious waste through a licensed service provider

Appendix F

Waste Handler Quick Reference Guide



Waste Handler Quick Reference Guide-Mercury, Silver and Lead

Business Name/Phone	Materials Accepted													Transport				
	Mercury						Silver		Lead		Pick up	Mail in	Packaging provided					
	Non-contact amalgam	Contact amalgam	Whole chairside traps	Amalgam collected from chair-side traps	Empty amalgam capsules	Amalgam sludge	Spill cleanup materials	Whole vacuum pump filters	Fixer	Fixer mixed w/ developer				Foils	Shields			
AERC Recycling Solutions (610) 797-7608	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Amalgaway (800) 267-1467	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bethlehem Apparatus Co. (610) 838-7034	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Doral Refining Corp. (800) 645-2794	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DRNA Waste Management (PDA Endorsed Vendor) (800) 360-1001	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Healthcare Compliance Service (888) 726-8505	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Maguire & Strickland Refining, Inc. (800) 486-2858	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pyromet, Inc. (610) 497-1743	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Safety-Kleen Systems, Inc. (717) 697-9783	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

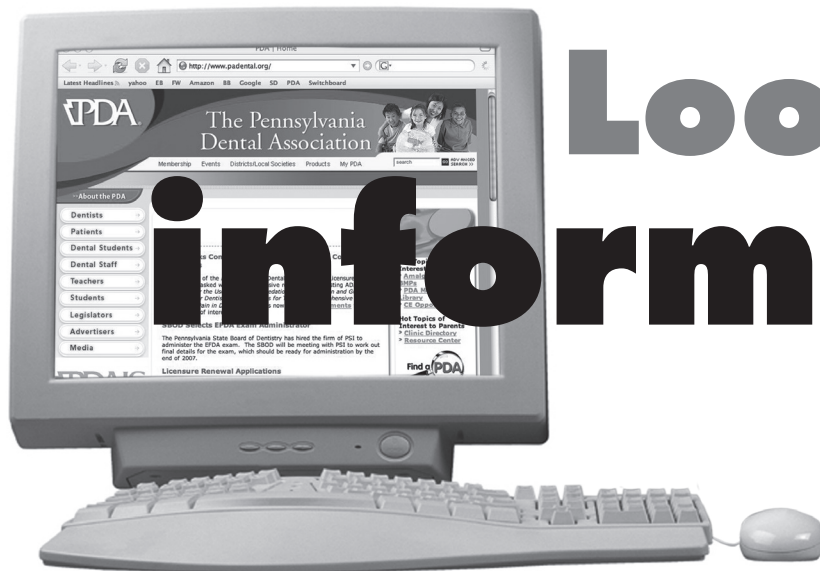
Rev. December 2006

Please see next page for Infectious and Hazardous Waste.

Waste Handler Quick Reference Guide-Infectious and Hazardous Waste



Business Name/Phone	Materials Accepted							Transport				Coverage Area		Comments
	Infectious Waste			Hazardous Waste				Pick up	Mail in	Packaging provided	Entire State	Selected Counties		
	Items contaminated w/ body fluids or blood	Used sharps	Medical waste	Metals	Chemicals	Infectious waste								
American Waste Industries, Inc. (800) 872-2876	✓	✓	✓				✓	✓	✓		✓	✓	Services all of PA	
Asepsis, Inc. (215) 752-9889	✓	✓	✓				✓	✓	✓		✓	✓	Services Bucks, Chester, Delaware, Lehigh, Montgomery and Philadelphia counties	
Bio-Haz Solutions, Inc. (888) 794-7894	✓	✓	✓	✓			✓	✓	✓		✓			
The Cardinal Group, Inc. (484) 945-0575	✓	✓	✓	✓	✓		✓	✓	✓		✓			
DRNA Waste Management (PDA Endorsed Vendor) (800) 360-1001	✓	✓	✓				✓	✓	✓		✓		Pre-paid shipping is included in the cost of mail kit	
Environmental Options Group, Inc. (610) 929-2883	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	Services 23 counties surrounding Berks County (hopes to expand to cover entire state)	
Healthcare Compliance Service (888) 726-8505	✓	✓	✓	✓	✓		✓	✓	✓		✓			
Med-Flex, Inc. (877) 4-MEDFLEX	✓	✓	✓				✓	✓	✓		✓	✓	Services eastern PA	
Onyx Waste Services, Inc. (800) 338-8971	✓	✓	✓				✓	✓	✓		✓	✓	Mail in sharps only. Services West Central PA	
Orchard Hill Special Waste Management, Inc. (888) 317-5860	✓	✓	✓				✓	✓	✓		✓	✓	Services Bucks, Lehigh, Montgomery and Philadelphia counties	
Safety-Kleen Systems, Inc. (717) 697-9783				✓	✓		✓	✓	✓		✓	✓	Visit www.safety-kleen.com to locate a branch near you	
Stericycle (888) 756-3003	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	Services northeastern PA	
SHS Williamsport Hospital (717) 321-1000	✓	✓	✓									✓	Waste must be transported to facility by dental office. Can drop off Tuesdays from 10 to 11 a.m. or Thursdays 1 to 2 p.m. Fee is \$1 per pound and must pay cash. Services Bucks, Berks, Lehigh, Lycoming, Montgomery, Chester and Philadelphia counties and Bloomsburg area.	



Looking for information?

Use the following website shortcuts, and it's just a click away on the PDA website!

Amalgam Waste BMPs

Annual Session, PDA

Classified Ads

Continuing Education

Dental Clinic Directory

Find a Colleague Search

Government Relations

Halloween Resources

Information, Request for

Insurance Resources

Members' Lending Library

Mentoring Program

National Children's Dental

Health Month Resources

PADIT

Pennsylvania Dental Association

Insurance Services (PDAIS)

Pennsylvania Dental Journal

Placement Service

Publications, Member

Senior Dental Care Program

Waste Handler Quick Reference Card

www.padental.org/amalgam

www.padental.org/as

www.padental.org/classifieds

www.padental.org/ce

www.padental.org/clinicdirectory

www.padental.org/colleague

www.padental.org/gr

www.padental.org/halloween

www.padental.org/inforequest

www.padental.org/insuranceresources

www.padental.org/library

www.padental.org/mentoring

www.padental.org/ncdhm

www.padental.org/padit

www.padental.org/pdais

www.padental.org/journal

www.padental.org/placementservice

www.padental.org/pubs

www.padental.org/sdcp

www.padental.org/qrc



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