

# Student Sheets

## Dental Wastes Recycling and Disposal

### Preventing Pollution by Putting Dental Wastes in Their Proper Place Part II

*A curriculum for use in Kansas dental schools*

Please use these student sheets as a guide for following this portion of the curriculum and for related note taking.

#### **Introduction**

In terms of human health and the environment, mercury is well known as the most problematic and harmful waste stream generated by the dental industry. However, other wastes generated by dental clinics also need to be handled with care. This lesson will address BMPs for handling of silver-related and contaminated wastes, as well as lead foils and shields, and certain cleaners; and the state regulations related to disposal of medical service wastes, often referred to as “red” bag wastes.

#### **What do you think?**

Please take about five minutes to break into groups of two to four, read the following situation, and answer the related questions.

*Dr. Driller’s clinic processes x-rays for several clients each day. When the chemicals for the x-ray processor are changed, the old or waste chemicals are currently dumped down the drain.*

- 1. The staff has heard that some of these chemicals should NOT go down the drain. Which ones are they?**
  
- 2. In part I of this dental waste disposal section, you learned that mercury-amalgam is a dental waste that should be kept out of the drain, trash, and red bag waste. List two other wastes that fall into this “special handling” category.**

**3. Are there any materials or technologies that can be substituted or instituted to prevent the generation of these potentially toxic wastes in the first place?**

**What wastes contain silver?**

*Digital technologies and silverless films such as diazo, vesicular, photopolymer, electrostatic, or selenium-based are viable options to avoid the generation of silver.*

**Why be concerned about silver?**

**Note hazardous waste information:** *Waste fixer usually contains enough silver, five milligrams per liter or more, to be classified as a hazardous waste. For this reason, the silver from the waste fixer should be reclaimed either on or off site, unless the clinic has written permission to dump it down the drain. If quantities of 55 pounds or more of the waste fixer are generated at one time or accumulated, the clinic will be impacted by hazardous waste regulations. It is always best to avoid this added regulatory burden by managing your waste silver and other hazardous wastes in quantities of less than 55 pounds total.*

**Waste fixer**

On-site management vs. off-site management, what are the differences?

Label your waste silver, “silver for recycling” or “hazardous waste.”

**What can be done with old films?**

**What Kansas communities regulate the disposal of wastewaters containing silver?**

**What are medical service wastes?** *(See Medical Service Waste Technical Guidance Document, handout number four.)*

**What are the medical service waste disposal options?**

**What other dental wastes need special handling or can be recycled?**

**What dental wastes are regulated?**

**Where can you get help?**

### **A Time for Review**

- 1. What is the most problematic dental waste in terms of the public health and environment?**
  
- 2. What waste generated at the dental clinic is considered silver-rich?**

**3. What is the definition of medical service wastes?**

**4. Other than mercury-amalgam, waste silver, and medical service wastes, what other dental wastes should be recycled or handled carefully?**

**5. If you need confidential, non-regulatory assistance determining what to do with your wastes, whom can you contact?**