



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

SEP 7 2001

Mr. Alan Wilds
8135 Donna Place
Williamsville, NY 14221

Ref. No: 01-0217

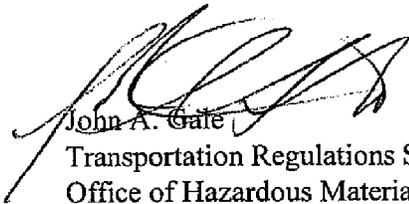
Dear Mr. Wilds:

This responds to your August 8, 2001, letter regarding the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to the transportation of dental amalgam. You state that the dental amalgam consists of 50% mercury, 25% silver and small quantities of tin, copper and zinc. You also state that the material is not subject to the Environmental Protection Agency's manifest requirements and none of the materials exceed their reportable quantities.

Based on the information you have provided we agree that the dental amalgam described above is not subject to the HMR.

I hope this information is helpful.

Sincerely,



John A. Gate
Transportation Regulations Specialist
Office of Hazardous Materials Standards



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173.22



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§ 173.22 LaValle
§ 172.101 App. A
~~Hazardous Substance~~
01-0217

08 August 2001

Mr. Delmer F. Billings
Chief, Standards Development
Office of Hazardous Materials Standards
U. S. Department of Transportation
400 Seventh Street, S.W.
Washington, District of Columbia 20590

Dear Mr. Billings:

Re: Dental Amalgam Recycling Program

This letter is to confirm the conclusion that a program to recycle dental amalgam (described more fully below) is not regulated pursuant to the Hazardous Materials Regulations (HMR; 49CFR Parts 171 - 180).

SolmeteX, United Parcel Service of America (UPS) and recycling facilities [including, but not limited to Mercury Waste Solutions, Inc. (MWSI)] wish to undertake a national recycling program in which dentists will be asked to participate by recycling dental amalgam. The amalgam will be from at least two sources:

- a. unused excess amalgam prepared for restoration work (referred to as non-contact amalgam)
- b. amalgam removed from a patient's teeth during repair work (referred to as contact amalgam)

The amalgam consists of mercury (50%), silver (25%), and smaller quantities of tin, copper and zinc. These percentages are approximate and the amalgam is a solid.

The excess unused amalgam has not been in contact with human body fluids. It may be packaged in any small container with effective closure. This amalgam is collected, as created, and accumulated until the dentist is ready to send it to the recycler.

The contact amalgam will be contained within a hard plastic trap (in common terminology these traps may be referred to as Traps or Separators) that has been used to screen and collect the solids (consisting of small pieces of tooth, gum and primarily amalgam resulting from the dental rinsing process). There are several varieties of traps on the market and the one in particular is as follows:

a totally enclosed cylinder approximately 11" high x 5" diameter, weighing about 7 pounds when full and containing less than 2 pounds of amalgam (and therefore less than one pound of mercury)

The protocol requires that these devices be removed and sent for recycling periodically (usually every six to nine months). A technician arranges with the dentist for a replacement and the removed Separator is prepared for transportation via UPS to the recycler.

The contact amalgam has been in contact with body fluids and while the Separator has been installed, based on the published Best Management Practices (BMP), is routinely disinfected (usually daily) using either proprietary preparations or sodium hypochlorite solution (bleach).

The Separator full of amalgam and solution has been designed to be watertight. It is used as the primary package for transportation to the recycler. In addition, the dentist is provided with a Ziploc bag and cardboard outer to complete the packaging. When the Separator is suitably ready, the dentist will arrange for pick-up by UPS in exactly the same way as any other package. UPS will transport the Separators, through its normal system, to the designated recycling facility. UPS will not open the packages or process the contents in any way other than as normal mail.

The devices upon receipt by the recycler will be properly processed in accordance with their permits and approved procedures. By a retorting process, the mercury will be recovered and refined and then sold into normal commerce. The residual material, after further processing, will be sent to a precious metals refiner for silver and other precious materials recovery.

By removing the amalgam from the waste water systems, this program will provide a valuable alternative to disposal, since it is both protective of the environment and extends natural resources.

During discussions with the Environmental Protection Agency Region VII it was determined that this program would not be subject to regulation under the USEPA solid waste or recycling handling regulations because the specific exemption 40CFR261.5 will apply to dentists and the quantities being transported are small. Dentists would therefore be allowed to ship the devices to the recycler, using a common carrier such as UPS and on a Bill of Lading. However, USEPA Region VII did state that their response was only in relation to EPA requirements and that transportation would need to be clarified by USDOT (copy of letter attached).

I appreciate your consultation and representation that you are authorized to provide the regulatory interpretation. Please let me know if this dental amalgam recycling program will be regulated under 49CFR Parts 171 – 180? Thank you in advance for your attention to this matter.

If you have any questions, please contact me at the address below.

Yours sincerely,

Alan Wilds

Alan Wilds
Consultant to SolmeteX

Enc: SolmeteX Hg5 Mercury Removal System Leaflet
09 July 2001 letter from USEPA Region VII to Alan Wilds

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

JUL 09 2001

Mr. Alan Wilds
Consultant to SolmeteX
8135 Donna Place
Williamsville, New York 14221

Dear Mr. Wilds:

I have reviewed your letter dated June 28, 2001. In it you referenced a telephone conversation that we had regarding the recycling of dental amalgam. If a dentist wishing to recycle dental amalgam does not generate more than 100 kilograms of hazardous waste per month nor accumulate more than 1000 kilograms of hazardous waste, then such dentist and recycling of dental amalgam would fall under the regulatory requirements of Title 40 Code of Federal Regulations (40 C.F.R.) 261.5. Your letter also asks if this would be the same for all 4 states in EPA Region VII. This interpretation is correct for Nebraska and Iowa. For Kansas, the generation and storage amounts are 25 kilograms and 1000 kilograms respectively. For Missouri, the generation and storage amounts are 100 kilograms.

Please be aware that transportation of dental amalgam is covered by the Department of Transportation regulations and this letter is only for EPA requirements.

I encourage you to contact the following state agencies in Region VII and obtain a copy of their hazardous waste regulations or to ask any questions that you may have regarding this issue:

Kansas Department of Health and Environment (KDHE) at (785) 296-1600
Missouri Department of Natural Resources (MDNR) at (573) 751-3176
Nebraska Department of Environmental Quality (NDEQ) at (402) 471-7217

If you have any questions regarding this letter, please feel free to contact me at (913) 551-7633 or by Email at mitchell.brian@epa.gov.

Sincerely,

Brian Mitchell
RCRA Compliance Officer
RCRA Enforcement and State Programs Branch
Air, RCRA, and Toxics Division

cc: Mary Bitney, KDHE
Kathy Flippin, MDNR
Bill Gidley, NDEQ