

Dental Amalgam Rule Update

EPA/State National Industrial Pretreatment Coordinator's Meeting

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40 CFR 441

Dental Rule Schedule

- Federal Register Notice Final Rule – June 14, 2017
- Effective Date of Rule – July 14, 2017

What is Amalgam?



Dental amalgam is 49% mercury by weight
35% silver, 9% tin and 6% copper and 1% zinc

Applicability

- DENTISTS, to include institutions, temporary offices, clinics, home offices and dental facilities owned and operated by federal, state or local governments.

Exemptions

- Oral pathology, oral radiology, oral surgery, orthodontics, periodontics or prosthodontics
- Mobile units
- Dental dischargers that do not discharge any amalgam process wastewater to a POTW
- Dentists that transfer waste to a Centralized Waste Treatment Facility

Exemptions (cont'd)

➤ Dentists are exempt from further requirements of the rule ONLY if they:

1) Do NOT place or remove amalgam except in limited emergency or unplanned, unanticipated circumstances AND

2) Certify (responsible corporate officer signature) to the Control Authority to that effect that they do not and will not use or remove amalgam

Applicability of Significant Industrial User (SIU) Status

- Dental dischargers are NOT Significant Industrial Users
- Dental dischargers are NOT Categorical Industrial Users
- Dental dischargers are regulated industrial users

Pretreatment Standards

➤ Incorporation of BMPs:

- Scrap amalgam, including dental amalgam from chair-side traps, screens, vacuum pump filters, dental tools, or collection devices may not be flushed down the drain.
- Chair side traps that may drain to a sewer must not be cleaned with oxidizing cleaners, including, but not limited to: bleach or chlorine containing cleaners that have a pH lower than 6 or greater than 8.

What is an Amalgam Separator?

➤ It is a solids collector!

- Designed to capture solids so that they can be recycled and disposed of properly.
- Captures mercury by default, not by design.
- Commonly designed to capture ~99% of solids by weight not mercury.

➤ EPA estimates that dental offices that do not currently have separators will incur an approximate average annual cost of \$800 per office. Unit price from ~\$400 to ~\$1000

Standards (cont'd)

- Must install at least one American National Standards Institute (ANSI) American National Standard/American Dental Association (ADA) Specification 108 for Amalgam Separators (2009) with Technical Addendum (2011) or 2008 ISO 11143 certified amalgam separator that:
 - Is certified to meet removal efficiency of at least 95%
 - Receives all amalgam process wastewater and is INSPECTED in accordance with the manufacturer's operating manual of the separator. If not functioning properly, must be repaired or replaced within 10 business day after the malfunction is discovered by the dental discharger
 - Is regularly MAINTAINED by replacing the amalgam retaining cartridge, canister or unit collection of retained solids when the manufacturers stated design capacity is reached

Existing vs. New Source

➤ Existing Sources

- If discharge amalgam process wastewater to a POTW prior to July 14, 2017
- Must install a separator by July 14, 2020
- One Time Report is due prior to October 20, 2020 or 90 days after a transfer of ownership.

➤ New sources

- First discharge to a POTW is after July 14, 2017
- Report is due within 90 days following introduction of wastewater into a POTW

Standards (cont'd)

- Existing Source (Grandfather clause): If separator is installed PRIOR to the date of publication in the federal register (June 14, 2017), the dentist satisfies the requirements until the separator is replaced or for 10 years (June 14, 2027), whichever is sooner IF they continue to meet the following requirements:
 - Receives all amalgam process wastewater and
 - Is INSPECTED in accordance with manufacturer's operating manual and
 - If not functioning properly, must be repaired or replaced within 10 business days and
 - Is regularly MAINTAINED by replacing the amalgam retaining cartridge, canister or unit collection of retained solids when the manufacturer's stated design capacity is reached

One Time Monitoring Report

➤ Report to include:

Facility name, physical address, mailing address, contact information, name of the operator(s) and owner(s); and a certification statement that the design and operation of the separator meets the requirements in 441.40 or 441.50 and that the facility is employing the BMP's specified

Recordkeeping

- Dentists must maintain for three years from the date they are created:
 - One Time Compliance Report
 - Documentation and results of any inspections
 - Document specifying the date of amalgam retaining cartridge replacement
 - Records indicating the date of cartridge sent off for proper disposal and the shipping address of the facility to which the cartridge are sent
 - Documentation of repair or replacement of the separator

What Else Do POTWs Have To Do?

Federal Rule

Beyond receiving the One Time Report - Nothing

State and/or Local Level

You have an obligation to regulate all industrial users!

Follow your ERP

Comply with NPDES Permit

Language about identifying all industrial users that have the potential to cause pass through and/or interference

Identify New Users

Compliance (Installation Only) by New England States Within the First 3 Years of Legislation

- Vermont – 100%
- Maine – 100%
- Massachusetts – 98%
- New Hampshire – 95%
- Rhode Island - >90%
- Connecticut – 84%

What is everybody doing?????

You need to identify the
universe of dental dischargers
in your Region/State.

Region 1 Universe Where EPA is the Control Authority

New Hampshire

EPA is the control authority for 416 of 1083 dentists

Massachusetts

EPA is the control authority for ~450 of 2236 dentists

New Hampshire Initiative (EPA is the Approval Authority)

- Collaboration with NH Department of Environmental Services
- Attempted contact with NH Dental Association
- Created a master list of dentists
- Worked with approved programs to identify the control authority
- Develop a One Time Report (with specific data elements)

Initiative (cont'd)

- Developed a cover letter to mail out to all facilities
- Time frame “should submit to EPA by July 1, 2018”
- Mass mailing to 416 dentists on March 20, 2018
- Track and maintain reports
- Notify POTWs when septage contains dental waste
- Respond to multiple email and phone requests from the dentists on how to fill out the form

Be Ready to Answer Questions from Dentists like.....

- Do I have to fill out the report? Example: Orthodontist, Oral Surgeon, Pediatric Practice
- Why are you sending this to me?
- I already filled this form out why do I have to do it again?
- What is amalgam?
- If more than one dentist in the practice do we each have to complete the form? What about multiple practices in one building?
- What does discharge amalgam process wastewater mean?

Results from 416 Dentists within first 20 days of mailing

- 50 or 12% Mailing address was wrong and returned to sender
- Received 70 or 17 % Reports
- Reports coming in daily..... (20+ more in my inbox)
- 14 or 20% of the returns submitted were inaccurate or incomplete
- 21 or 30% Dentists claimed they were exempt
- Of those 21 exemptions - 10 or 14% of Dentists discharged to a septic system (**** All have a separator****)

More Data....

- 27 or 38% Submitted electronically
- 44 or 62% Submitted hard copy
- 6 - Average # of chairs at practice
- 3 - Average # of chairs where amalgam is present
- Largest practice had 18 chairs (ironically on septic)
- Average year of separator installation was 2010
- 100 % were from one manufacturer

Questions?