

# Overview of E.P.A.'s Proposed Amalgam Rule; F.I.P.A.'s Comments and Impacts to Your Utility and Business

## **FIPA Spring Workshop**

**West Palm Beach, Florida**

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# Overview

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# Amalgam Composition



Typical dental amalgam is 49% mercury, 35% silver, 9% tin, 6% copper, and 1% zinc (by weight).

# EPA Rule Summary

- EPA is proposing technology-based pretreatment standards under the Clean Water Act (CWA) for discharges of pollutants into publicly owned treatment works (POTWs) from existing and new dental practices that discharge dental amalgam
- 40 CFR 403
- 40 CFR 441
  - Pretreatment Standards for Existing Sources (PSES)
  - Pretreatment Standards for New Sources (PSNS)

# EPA Rule Summary

- The proposal would require dental practices to comply with requirements for controlling the discharge of mercury and other metals in dental amalgam into POTWs based on the best available technology or best available demonstrated control technology. “Specifically, the requirements would be based on the use of amalgam separators and best management practices (BMPs)”
- [Effluent Limitations Guidelines and Standards for the Dental Category](#) (Proposed Rule Posted: 10/22/2014, ID: EPA-HQ-OW-2014-0693-0001, 79 FR 63257)

# EPA Legal Summary

- **Docket ID:** EPA-HQ-OW-2014-0693
- **Impacts and Effects:** Small Entities
- **CFR Citation:** 40 CFR 441, 40 CFR 403
- **Legal Authorities:** 33 USC 1251, 33 USC 1311, 33 USC 1314, 33 USC 1316, 33 USC 1317, 33 USC 1318, 33 USC 1342, 33 USC 1361, 42 USC 13101 et seq, CWA 101 CWA 301 CWA 304 CWA 306 CWA 307 CWA 308 CWA 501

# EPA Timetable

Action	Date	Federal Register Citation
Notice of Proposed Rule Making (NPRM)	10/22/2014	79 FR 63257
NPRM Comment Extension	12/19/2014	2014-29774
NPRM Comment Period End	12/22/2014	
NPRM Comment Period Extension End	02/20/2015	
Final Rule	09/00/2015	

# Proposed Pretreatment Standards Summary

- Removal of at least 99.0% of total mercury from amalgam process wastewater
- 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 be cleaned with non-bleach, non-chlorine containing cleaners that have a pH of 6 to 8. Such cleaning must be conducted at least weekly.

# Proposed Pretreatment Standards Summary

- Must install at least one 2008 ISO 11143 certified amalgam separator that:
  - Is certified to meet removal efficiency 99%
  - Receives all amalgam process wastewater and
  - is INSPECTED at least ONCE per month
  - If not functioning properly, must be repaired or replaced
  - Is regularly MAINTAINED by replacing the amalgam retaining cartridge , canister or unit collection of retained solids reaches the manufacturers stated design capacity or annually, whichever comes first

# Proposed Pretreatment Standards Summary

- Existing Source: If separator is installed PRIOR to the proposed rule signature, the dentist satisfies the requirements for 10 years IF they continue to meet the following requirements:
  - Receives all amalgam process wastewater and
  - Is INSPECTED at least ONCE per month and
  - If not functioning properly, must be repaired or replaced and
  - Is regularly MAINTAINED by replacing the amalgam retaining cartridge , canister or unit collection of retained solids reaches the manufacturers stated design capacity or annually, whichever comes first

# Proposed Pretreatment Standards Summary

- Baseline Monitoring Reports
  - Existing Source – within 180 days
  - New Source – within 90 days
- 90 Day Compliance Report
  - Must contain CERTIFICATION that the design and operation of separators meet the requirements of the rule CERTIFICATION and that the facility is employing best management practices as specified.

# Proposed Changes to 40 CFR 403

- EPA proposes a new classification of CIU specifically tailored to the Dental Office Effluent Limitations Guidelines and Standards rule, “Dental Industrial User” (DIU).
  - “EPA proposes that such Users not be subject to the oversight requirements for SIUs (i.e., control mechanism issuance requirement, annual inspection and sampling requirements).”
  - “EPA proposes to allow Control Authorities to focus their oversight efforts on those dental office facilities that fail to meet the compliance requirements of the DIU. ”

# Proposed Changes to 40 CFR 403

- Under the proposed rule, a dental discharger may comply with monitoring and reporting requirements in 40 CFR 441.60, in lieu of the otherwise applicable monitoring and reporting requirements in 40 CFR part 403.

# Proposed Changes to 40 CFR 403

- Control Authority may treat the dental discharger as a DIU.
  - IF a dental discharger complies with:
    - the special monitoring and reporting requirements in 40 CFR 441.60, and
    - the remaining 40 CFR part 403 requirements,
    - and the applicable pretreatment standards (PSES or PSNS)

# DIU OR SIU?

- When is a dental office not a DIU?
  - If the dental office does not meet the requirements in 40 CFR 441.60 to be treated as a DIU, under this proposal the Control Authority must treat the dental discharger as a Significant Industrial User as defined in 40 CFR 403.3(v).
  - As a Significant Industrial User, the POTW Control Authority would be required to conduct the oversight duties applicable to SIUs as described in 40 CFR 403.
    - Permitting
    - Sampling
    - Inspection

# Proposed Control Authority (CA) Requirements

- Control Authority must evaluate, at least once per year, whether an IU previously determined to be a DIU still meets the criteria for treatment as a DIU under 40 CFR 441.60.
  - EPA anticipates that this evaluation will primarily involve the Control Authority's verification that the certification, i.e. annual report, has been submitted by the dental office documenting continued eligibility for DIU status.

# Proposed Control Authority (CA) Requirements

- Survey and Identification of DIUs
- Application Reviews
- Review of all reports from DIU
  - Self-monitoring Reports (ANNUAL)
  - Baseline Monitoring Reports
  - 90 Day Compliance Reports

# Proposed Control Authority (CA) Requirements

- Enforcement
  - Control Authority must initiate enforcement and return DIU to compliance within 90 days.
    - If the Control Authority inspects, verifies, and finds that the dental discharger has returned to full compliance within 90 days IU remains a DIU.
    - If the dental discharger has not returned to compliance within 90 days of the initial noncompliance:
      - » DIU would become a Significant Industrial User.
        - inspection and sampling annually
        - reviewing the need for a slug control plan
        - issuing a Permit or equivalent control mechanism
        - Review of self-monitoring reports

# FIPA Comments

- FIPA Comment a. i.:
  - “It appears the EPA failed to conduct a formal evaluation of the effectiveness of the MOU elements.”
    - December 2008, a [Memorandum of Understanding](#) (MOU) between EPA, ADA and NACWA to evaluate a Voluntary Dental Amalgam Discharge Reduction Program.

# FIPA Comments

- FIPA Comment a. i.

Request/Recommendation:

- FIPA recommends a complete evaluation based on the MOU before implementation of the new rule.

# FIPA Comments

- FIPA Comment a. ii.:
  - The new rule duplicates point source control efforts for a small amount of mercury:
    - The State of Florida issued a statewide Mercury TMDL on October 24, 2013 (EPA approval, 10/18/2013).
    - TMDL states an existing point source load of approx. 0.5 % (23 kg/yr) of the total mercury loading to the land and waters of the state.
    - City of Largo average removal efficiency of 97.2% in 2013 and 91.4% in 2014, with average pollutant loading to surface water of 0.020 pound per year (lb/yr) in 2013 and 0.065 lb/yr in 2014.
    - BMPs, BMPs as local limits, and general control mechanisms allowed by 40 CFR 403 and Chapter 62-625 F.A.C. are existing tools to control dental amalgam.

# FIPA Comments

- FIPA Comment a. ii.

## Request/Recommendation:

- “FIPA recommends providing for additional exclusions from the requirements based on EPA approved TMDLs, BMPs, general permits, or local conditions at the receiving POTW. The additional exclusions should include a mechanism for relief from the requirement to permit dental facilities as SIUs, if local control mechanisms are in place.”

# FIPA Comments

- FIPA Comment a. iii.:
  - Subsections 441.40 (b)(2) and 441.50 (b)(2) of the proposed rule indicate “Chair-side traps that may drain to a sewer must be cleaned with non-bleach, non-chlorine containing cleaners that have a pH of 6 to 8. Such cleaning must be conducted at least weekly.” There are other oxidizing agents/cleaners that could volatilize mercury from amalgam.

# FIPA Comments

- FIPA Comment A. iii.

## Request/Recommendation:

- “The FIPA recommends the language be revised to account for other oxidizing cleaners will facilitate the release of mercury from amalgam.”

# FIPA Comments

- FIPA Comment a. iv.:
  - “The FIPA agrees with many of the other comments that have already been submitted with regard to the language in 441.40(a) and 441.50(a).”
  - Requires “99% Hg removal”
- FIPA Comment a. iv Request/Recommendation:
  - “Instead of the removal of 99% of total mercury from the amalgam process wastewater, the requirement should be the installation of an amalgam separator that is ISO certified to remove 99% of amalgam solids.”

# FIPA Comments

- FIPA Comment b. i.:
  - “If the revised 403 regulation implementing the DIU designation have not been adopted by the approval authority (FDEP), then once the rule is promulgated, the dental offices would automatically become categorical industrial users (CIU) and therefore significant industrial users (SIU), with local control authorities required to issue permits within 180 days and to inspect each one annually.”

# FIPA Comments

- FIPA Comment b. i. Request/Recommendation:
  - FIPA strongly recommends provisions be made to allow a reasonable but substantial period of time for Approval Authorities to adopt changes to 40 CFR 403 before 40 CFR 441 becomes effective.
  - The FIPA recommends that the EPA evaluate the timing in implementing or promulgating both 40 CFR 403 and 40 CFR 441 to reduce or eliminate the permitting and inspection burden on local CAs.

# FIPA Comments

- FIPA Comment B. ii.:
  - “The EPA appears to greatly underestimate burden on control authorities for initial and ongoing compliance and implementation.”
- FIPA Comment b. ii  
Request/Recommendation:
  - “FIPA recommends the EPA further evaluate the burden on the local control authorities, including the cost to implement and maintain compliance by DIUs. ”

# FIPA Comments

- FIPA Comment b. ii

Request/Recommendation:

- “FIPA recommends the EPA further evaluate the burden on the local control authorities, including the cost to implement and maintain compliance by DIUs. ”

# FIPA Comments

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# FIPA Comments

- The comments were compiled by the following FIPA Dental Amalgam Committee team members:
  - Dave Barnhart – City of Clearwater
  - Sandra Feliciano – City of West Palm Beach
  - Sam Jinkins – Collier County
  - Susanna Littell – Orange County
  - John Palenchar – City of Largo
  - Tom Rauth – Jacksonville Electric Authority
- **THANK YOU** to the Committee and the FIPA Board

# QUESTIONS

