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Effluent Limitations Guidelines and Standards for the Dental Category/Clean Water Act: U.S. Environmental Protection Agency Issues Final Rule

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The United States Environmental Protection Agency (“EPA”) promulgated Clean Water Act pretreatment standards whose purpose is to reduce discharge of mercury from dental offices into Publicly Owned Treatment Works (“POTWs”).

This final rule is effective on July 14th and existing sources subject to the rule must comply with the standards by July 14th, 2020.

The Clean Water Act provides EPA the ability to promulgate national categorical standards or limits to restrict discharges of specific pollutants on an industry-by-industry basis. The effluent limits are derived from research regarding the pollution control technology used in the industry. This analysis will include the degree of reduction of a pollutant that can be achieved through the use of various levels of technology. The applicable standard may be dictated by the kind of pollutant discharged and whether a new or existing point source is involved.

Categorical standards may be established for both direct and indirect discharges. They include standards for facilities discharging directly into a jurisdictional waterbody and those whose effluent is routed to a POTW (i.e., “indirect discharges” discharging effluent into a POTW). EPA is required to establish pretreatment standards that an indirect discharger’s wastewater must meet prior to introduction into a POTW. Pretreatment standards are designed to ensure that wastewater from direct and indirect dischargers are subject to similar levels of treatment.

EPA’s development of categorical effluent limits has been an ongoing process since the original enactment of the Clean Water Act. The federal agency has continued to promulgate categorical standards for facilities that have not been addressed. The development of the categorical pretreatment standards for discharge of mercury – containing dental amalgam to POTWs is an example.

EPA concluded that dental offices discharge mercury that is present in amalgam used for fillings. Mercury is a neurotoxin that bioaccumulates in fish and shellfish. The federal agency concluded that dental clinics are the main source of mercury discharges to POTWs. It further estimated that:

- 103,000 dental offices use or remove amalgam in the United States
- Almost all of the dental offices wastewater is routed to POTWs

- Dental offices discharge approximately 5.1 tons of mercury each year to POTWs

The final rule specifies that dental offices remove mercury through what the agency characterizes as relatively low-cost and readily available amalgam separators and certain best management practices. The agency further notes that the final rule:

. . . controls mercury discharges to POTWs by establishing a performance standard for amalgam process wastewater based on the use of amalgam separator technology. The rule also requires dental dischargers to adopt two BMPs, one which prohibits the discharge of waste (“or scrape”), and the other which prohibits the use of lime cleaners that may lead to the dissolution of solid mercury when cleaning chair-side traps and vacuum lines.

EPA believes that the impact of the rule will be mitigated because the American Dental Association developed best management practices which it shared with the dental community. This organization’s amalgam waste handling and disposal practices are stated to include the use of amalgam separators. Further, the federal agency states that some states and localities have already implemented mandatory programs to reduce dental mercury discharges that include the use of amalgam separators.

The rule exempts dental offices from certain general pretreatment regulations’ oversight and reporting requirements that are traditionally associated with categorical pretreatment standards. The rationale for this exemption is the agency’s belief that the otherwise-applicable regulatory framework for categorical dischargers would be “unlikely to have a significant positive impact in overall compliance with the rule across the dental industry, while imposing a substantial burden on state and local regulating authorities.”

[A link to the final rule can be found here.](#)