



# **Mercury Source Control Policies & Procedures Manual**

Colorado Springs Utilities  
Industrial Pretreatment Section

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# Preface

The information, services and equipment listed herein are solely intended for the purpose of advising the customers of the Colorado Springs Utilities. Use of these services, equipment or information shall not be construed as a guarantee or assurance by Colorado Springs Utilities that any discharge or material handling procedure is, or will be, in compliance with Federal, State or Local environmental rules, ordinances, regulations or applicable codes. In addition, inclusion of the services, equipment or information in this manual is not to be construed as a tacit or implicit endorsement by Colorado Springs Utilities as to either mercury removal efficiency or the accuracy of any vendor, manufacturer or sales representative's claims of mercury removal efficiency. The information contained in this manual is not exhaustive; for example, many more environmental services are available, and inclusion or exclusion from this manual does not reflect a judgment by the Colorado Springs Utilities on the reliability of those services.

## Adoption of Policy

To implement City Code requirements in a uniform manner for mercury dischargers, or potential mercury dischargers, to the Colorado Springs Utilities sewer system, this manual is adopted as policy to more specifically defined general regulatory requirements which are now deemed to apply to all non-domestic dischargers of mercury contaminated wastewater.

Pursuant to City Code Section 12-1-109.B., on April 15, 2019, the Colorado Springs Utilities Environmental Services Division provided public notice of its intent to adopt this Mercury Source Control Policies and Procedures Manual. No substantial comments were received. Therefore, Colorado Springs Utilities does hereby adopt this Mercury Source Control Policies and Procedures Manual, May 1, 2019, as Department policy.

This policy shall become effective upon the effective dates of Ordinance No. 19-34 by the Colorado Springs City Council, adopted on May 28, 2019.



Chief Environmental Officer

## **Authority and Purpose**

The Colorado Springs Utilities Industrial Pretreatment Section is responsible for implementing requirements of Local, State, and Federal rules and regulations. This manual is established as the Mercury Source Control Program in accordance with Section 12.5.706 of the Wastewater Treatment Code and serves as Colorado Springs Utilities' (hereinafter designated "Utilities") control strategy for mercury reduction. All non-domestic dischargers that introduce mercury wastewater into the Publicly Owned Treatment Works (POTW) are subject to this manual.

This Mercury Source Control Program sets forth uniform requirements for direct and indirect dischargers to the POTW for the City of Colorado Springs and enables Utilities to comply with all applicable State and Federal laws required by the Clean Water Act of 1977 and general pretreatment regulations (40 CFR Section 403). Wastewater Treatment Code Section 12.5.102.

The legal authority for Utilities to implement a Mercury Source Control Program is provided by the National General Pretreatment Regulations, as amended, Colorado State Pretreatment Regulations, as amended, Colorado Discharge Permit System permit requirements, and City of Colorado Springs City Code.

This Mercury Source Control Program shall apply to the City of Colorado Springs and to districts, persons, or other entities outside the City, who are, by contract or agreement, users of the City's POTW. Wastewater Treatment Code Section 12.5.102.

Industrial Users that generate mercury waste are subject to this Mercury Source Control Program excepting Section 12.5.703 of the Wastewater Treatment Code, and as otherwise noted herein. Wastewater Treatment Code Section 12.5.1111.

## **Applicability**

In accordance with Section 12.5.707 of the Wastewater Treatment Code, the Chief Executive Officer may develop BMPs to implement the prohibitions of Section 12.5.702 of [the Wastewater Treatment Code] and the local limits of subsection 12.5.703.B. of [the Wastewater Treatment Code]. The Chief Executive Officer may develop general BMPs that are applicable to categories of industrial users, categories of activities or geographic areas. Any industrial user may be required to comply with BMPs. BMPs may be incorporated in categorical pretreatment standards, discharge permits, control mechanisms, and orders. Elements of a BMP may include, but are not limited to:

1. Installation of treatment.
2. Requirements for or prohibitions on certain practices or discharges.
3. Requirements for the operation and maintenance of treatment equipment.
4. Time frames associated with key activities.
5. Procedures for compliance certification, reporting and records retention.
6. Provisions for reopening and revoking BMPs.

The Environmental Protection Agency (EPA) published 40 CFR Part 441 (Dental Office Point Source Category) on June 14, 2017, promulgating BMPs and technology-based pretreatment standards to reduce the discharge of mercury from dental offices into POTWs. It is the policy of Utilities to use this Mercury Source Control Program to meet the requirements of 40 CFR Part 441. This Mercury Source Control Program will be implemented directly by Utilities in a manner consistent with 40 CFR Part 441. Dental dischargers will be expected to know and comply with the Mercury Source Control Program.

## **Definitions**

The following definitions and abbreviations from the Utilities Code Article 5 Wastewater Treatment Code and the Code of Federal Regulations apply to this part, except as otherwise cited.

**AMALGAM PROCESS WASTEWATER**: Means any wastewater generated and discharged by a dental discharger through the practice of dentistry that may contain dental amalgam. 40 CFR Part 441.20(a).

**AMALGAM SEPARATOR**: Means a collection device designed to capture and remove dental amalgam from the amalgam process wastewater of a dental facility. 40 CFR Part 441.20(b).

**ARTICLE or THIS ARTICLE**: Chapter 12, Article 5 of the Code of the City of Colorado Springs, as amended (*also referred to in this manual as the Wastewater Treatment Code*).

**BEST MANAGEMENT PRACTICES (BMPs)**: Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State; to implement the prohibitions of Section 12.5.702 of the Wastewater Treatment Code and the local limits Subsection 12.5.703.B. of the Wastewater Treatment Code. BMPs also include treatment requirements, operating procedures and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**BYPASS**: The intentional diversion of waste streams from any point of an Industrial User's treatment facility.

**CFR**: Code of Federal Regulations.

**CONTROL MECHANISM**: Control Mechanisms may be used to control the discharges of Significant Industrial Users and other Industrial Users. Control Mechanisms may be individual or general. Control Mechanisms may include Significant Industrial User permits, written authorizations to discharge for other Industrial Users, liquid waste hauler permits, and other requirements enforceable under the [Wastewater Treatment Code].

**DENTAL DISCHARGER:** An Industrial User where the practice of dentistry is performed, including, but not limited to, institutions, permanent or temporary offices, clinics, home offices, and facilities owned and operated by Federal, State, or Local governments, that discharges wastewater to a publicly owned treatment works (POTW). 40 CFR Part 441.20(e).

**GENERAL BEST MANAGEMENT PRACTICE:** Means a Best Management Practice developed by the Chief Executive Officer applicable to a category of Industrial Users, category of activities, or geographic area.

**INDUSTRIAL USER:** A source of discharge which introduces pollutants into the POTW from any non-domestic source regulated under Section 307(B), (C), or (D) of the Act.

**PRETREATMENT STANDARD, NATIONAL PRETREATMENT STANDARD OR STANDARD:** Any regulation containing pollutant discharge limits promulgated by the EPA in accord with Section 307 (b) and (c) of the Act, which applies to Industrial Users. This term includes prohibitive discharge limits established pursuant to Section 403.5 of the Act, as well as any nonconflicting State or Local Standards. In cases of conflicting standards or regulations, the more stringent thereof shall be applied. There are two (2) different circumstances in which BMPs may be pretreatment standards. The first is when the Chief Executive Officer establishes BMPs to implement the prohibitions of Section 12.5.702 of the Wastewater Treatment Code and the local limits of Subsection 12.5.703.B of the [Wastewater Treatment Code]. The second is when the BMPs are categorical pretreatment standards established by the EPA.

**PUBLICLY OWNED TREATMENT WORKS (POTW), WASTEWATER TREATMENT SYSTEM OR WASTEWATER SYSTEM:**

1. Any devices, facilities, structures, equipment or works owned by the City or used by Utilities for the purpose of the transmission, storage, treatment, recycling, and reclamation of industrial and domestic wastes, or necessary to recycle or reuse water at the most economical cost over the estimated life of the system, including intercepting sewers, outfall sewers, collection lines, pumping, power and other equipment, and their appurtenances, and excluding service lines;
  - A. Extensions, improvements, additions, alterations, or any remodeling thereof;
  - B. Elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and,
  - C. Any works, including the land and sites that may be acquired, that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from the treatment, or reuse of treated water for irrigation, recreation or commercial purposes.
  - D. It does not include the storm water drainage system, which is a separate municipal operation which is not part of Utilities.

2. The municipality, as defined in Section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

**WASTEWATER:** The liquid and water carried industrial or domestic wastes and pollutants from dwellings, commercial buildings, industrial facilities and institutions, including hauled waste, and any groundwater, surface water, and stormwater that may be present, whether treated or untreated.

## **Applicable Code Citations**

The following citations are direct excerpts of the Wastewater Treatment Code.

### **City Code Section 12.5.706: Mercury Source Control**

A. The Chief Executive Officer may implement Best Management Practices under the Mercury Source Control Program for any Industrial User who has the potential to discharge mercury into the Wastewater System. Industrial Users that are Significant Industrial Users are not eligible for coverage under the Mercury Source Control Program.

B. Industrial Users subject to coverage under the Mercury Source Control Program shall comply with BMPs and treatment requirements contained in the Mercury Source Control Program Policies and Procedures Manual. In addition, dental dischargers shall comply with the BMPs and treatment requirements contained in the Mercury Source Control Policies and Procedures Manual and the Dental Amalgam Pretreatment Standards found in 40 C.F.R. Part 441.

C. In order to assure compliance with the POTW CDPS permits, local limits and the MAHL, and to prevent Pass-Through or otherwise protect the wastewater system, the Chief Executive Officer may modify the Mercury Source Control Policies and Procedures Manual in accordance with Subsection 12.1.110.B. of [the Wastewater Treatment Code], to require more restrictive treatment requirements or BMPs, to impose numeric limits, to require discharge monitoring, and/or other conditions determined necessary by the Chief Executive Officer. Alternatively, the Chief Executive Officer may revoke coverage under the Mercury Source Control Program, and may issue an Individual Control Mechanism or discharge permit.

D. If an Industrial User exceeds the local limit for mercury, is not in compliance with the requirements contained in the Mercury Source Control Program or otherwise is designated by the Chief Executive Officer as a Significant Industrial User, the Chief Executive Officer shall revoke coverage under the Mercury Source Control Program. The Chief Executive Officer may require a discharge permit or may issue an Individual Control Mechanism. Remedies for noncompliance shall be in accordance with City Code Chapter 12, Article 5, Part 12. (Ord. 98-173; Ord. 99-162; Ord. 01-42; Ord. 06-195; Ord. 10-82; Ord. 14-66; Ord. 18-42; Ord. 19-34)

### **City Code Section 12.5.707: Best Management Practices**

A. The Chief Executive Officer may develop BMPs to implement the prohibitions of Section 12.5.702 of the Wastewater Treatment Code and the local limits of Subsection 12.5.703.B. of the [Wastewater Treatment Code]. BMPs shall be considered pretreatment standards and local limits for purposes of this article and Section 307(d) of the Act. Additionally, BMPs may be categorical pretreatment standards, established by the EPA.

B. The Chief Executive Officer may develop BMPs that are applicable to categories of Industrial Users, categories of activities or geographic areas. Adoption of BMPs shall be in accord with Subsection 12.1.110.B of the [Wastewater Treatment Code].

C. Elements of a BMP may include, but are not limited to:

1. Installation of treatment.
2. Requirements for or prohibitions on certain practices or discharges.
3. Requirements for the operation and maintenance of treatment equipment.
4. Timeframe associated with key activities.
5. Procedures for compliance certification, reporting, and records retention.
6. Provisions for reopening and revoking BMPs.

D. Any Industrial User may be required to comply with BMPs. BMPs may be incorporated in categorical pretreatment standards, discharge permits, control mechanisms, and orders. (Ord. 06-195; Ord. 10-82; Ord. 18-42; Ord. 19-34)

### **City Code Section 12.5.805: Admission to Property**

A. The Chief Executive Officer has the power to carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable pretreatment standards and requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a discharge source or treatment system is located or in which records are required to be kept under the Wastewater Treatment Code, to assure compliance with pretreatment standards.

B. The inspection shall be completed with reasonable promptness. If any samples are taken, a portion of sample shall be given, if requested, to the owner, agent, or operator. The occupant of such property or premises shall render all proper assistance in the activities.

C. If entry or inspection to any property is denied or not promptly consented to, or at any other time to investigate sources of pollution impacting water quality within the wastewater system or the waters of the State within the City limits, the Chief Executive Officer is empowered to obtain, from Municipal, County or State District Court with

jurisdiction, a warrant to enter and inspect any property, premise or place. (Ord. 98-173; Ord. 99-162; Ord. 00-204; Ord. 01-42; Ord. 10-82; Ord. 19-34)

## **Introduction to Best Management Practices**

This manual is established as the Mercury Source Control Program and serves as Colorado Springs Utilities' control strategy for the reduction of mercury discharges into the POTW. This Mercury Source Control Program sets forth uniform requirements, including Best Management Practices (BMPs), for dischargers to the POTW of the City of Colorado Springs.

BMPs are an approved and proven control strategy used to establish compliance with Federal, State, and local requirements. BMPs may include specific operating practices, prohibitions, maintenance procedures, schedules of activities, disposal practices, and other management practices to prevent or reduce the discharge of mercury waste. The Dental Office Point Source Category (40 CFR Part 441) requires dental offices to use BMPs which are described in detail in this manual.

It is the policy of Utilities to use this Mercury Source Control Program to meet the requirements of 40 CFR Part 441. BMPs outlined in this manual shall be used to implement the Mercury Source Control Program by dental dischargers and shall be consistent with the requirements listed in 40 CFR Part 441. The BMPs for dental dischargers contained in this manual are requirements and are expected to be followed by all dental dischargers to which the requirements of 40 CFR Part 441 apply. Dental dischargers shall certify that these BMPs are being implemented.

This manual also describes BMPs for medical facilities, hospitals, and laboratory facilities. The BMPs for mercury control for hospitals, medical practices, and laboratories are recommendations and guidance unless the Chief Executive Officer determines that greater control over mercury discharges to the POTW is necessary. Should the Chief Executive Officer decide to implement required BMPs for hospitals, medical practices, and laboratories, the compliance certification in Appendix A of this manual shall be used and a Notice of Coverage shall be issued. Appendix A contains the appropriate certification and lists the required BMPs.

## **Evaluation of Mercury Source Control Program**

When evaluating mercury entering the wastewater treatment plant, calculations shall be based on representative influent samples and shall be periodically evaluated to measure the effectiveness of this control manual. When the mercury loading calculated from one representative influent sample exceeds 85% of the maximum allowable headworks loading (MAHL), Utilities may conduct accelerated influent monitoring for mercury. During accelerated monitoring, if greater than 50% of influent samples taken over a two-month period exceed 85% of the MAHL, Utilities will evaluate the need to identify, reduce, or eliminate sources of mercury discharged to the POTW. Targeted monitoring may be performed to determine if additional control measures are needed for controlling

mercury at hospitals, medical facilities, and laboratories. Industrial Users, including dental dischargers, controlled under this program may be inspected or otherwise evaluated to verify compliance with the requirements of this manual. Outreach and education for specific sectors may be performed with consideration given to mercury capture/disposal, spill management, reducing the use of mercury-containing products, etc. to medical facilities, hospitals, and laboratories.

## **Guidance for the Control of Mercury in the Medical and Laboratory Sectors**

This Mercury Source Control Policies & Procedures Manual is established as the Mercury Source Control Program in accordance with 12.5.706.A. of the Wastewater Treatment Code. Since hospitals, medical practices, and laboratories use products containing mercury, this manual provides guidance to businesses in the medical field. Should the Chief Executive Officer decide to implement required BMPs for hospitals, medical practices, and laboratories, completing the compliance certification in Appendix A of this manual will become a requirement. If information on the certification indicates the medical facility has the potential to discharge mercury into the Wastewater System, the medical facility will be required to comply with the requirements found in this manual. Once BMPs are in place and the compliance certification has been submitted, a Notice of Coverage will be provided to the medical facility and should be permanently retained on site and provided if requested by the Chief Executive Officer. A copy of this Notice of Coverage can be found in Appendix C.

## **Products Containing Mercury in Hospitals and Medical Practices**

Products containing mercury which are used in hospitals and medical practices include but are not limited to medical instruments, clinical laboratory chemicals, electrical equipment, and cleaning solutions. Examples include the following:

- Thermometers
- Sphygmomanometers
- Gastrointestinal Tubes
- Laboratory Chemicals (Reagents and catalysts)
- Pharmaceutical Products (Antiseptics)
- Cleaners and Degreasers

### **Thermometers**

Use of mercury-free thermometers is recommended. If mercury thermometers are used, staff should be trained on the proper handling and disposal of the units and on proper spill containment methods should a unit break. Hospitals and medical practices should develop procedures for discarding mercury thermometers, clean-up of broken mercury thermometers, and protocols for transporting mercury to a designated treatment and disposal site. Hospitals and medical practices shall never dispose of mercury from broken thermometers in a sink or floor drain.

## **Sphygmomanometers**

It is recommended to replace all mercury sphygmomanometers with aneroid sphygmomanometers or other non-mercury alternatives. If the mercury in a mercury-containing sphygmomanometer must be removed and filtered, procedures should be in place to guarantee proper handling of mercury and proper disposal if required. Mercury-containing sphygmomanometers often require transport of units to the manufacturer for maintenance and recalibration. Hospitals and medical practices should develop a procedure for the preparation of mercury sphygmomanometers for recycling or disposal that is consistent with Federal, State, and Local regulations. Contact your hazardous waste management coordinator for details about packaging, labeling and transporting that are specific to your facility. Hospitals and medical facilities shall never dispose of mercury from broken sphygmomanometers in a sink or floor drain.

## **Gastrointestinal tubes**

Gastrointestinal tubes may have expiration dates, after which their use should be discontinued. If mercury-containing gastrointestinal tubes are still used, procedures for the handling, recycling, or disposal of mercury-containing tubes that are consistent with Federal, State, and Local regulations should be developed. Contact your hazardous waste management coordinator for details about packaging, labeling, and transporting requirements that are specific to your facility. Mercury-free tungsten weighted tubes may be an alternative.

## **Laboratory Chemicals**

When hospitals and medical facilities use mercury-containing chemicals, there is potential for the release of mercury into wastewater. It is recommended that hospitals and medical practices phase out all nonessential uses of mercury in laboratories:

1. Where possible, eliminate the use of mercury-containing compounds in all clinical, research and teaching laboratories unless there is no alternative.
2. Send all unnecessary mercury compounds from laboratories and storage areas to a designated treatment and disposal site.

### **Alternatives for laboratory chemicals containing mercury**

Unless mercury is an active ingredient, the chemical can often be replaced by a non-mercury containing alternative. Manufacturers might not list mercury as an ingredient of a product on a Material Safety Data sheet if the formula is under copyright protection or if mercury is used in very small amounts. The laboratory purchasing agent may contact the laboratory's suppliers and request that mercury-free reagents be provided. A certificate of analysis for reagents and products purchased can be requested from the manufacturer.

Wherever possible, change methodologies to processes that do not involve mercury. For chemicals that normally include a preservative, select chemicals that use a mercury-free preservative. Many products which once contained mercury have been reformulated so that they are now mercury-free.

### **Recycling/disposal of laboratory chemicals containing mercury**

Hospital and medical facility staff should have training on the proper use, handling and disposal of hazardous materials, including the importance of keeping mercury out of the Wastewater System. Staff should be aware of products that are known to contain mercury. It is important that these products, once ready for recycling or disposal, be controlled in a manner compliant with Local, State, and Federal Regulations.

If mercury-containing chemicals are no longer in use, they may still be present in laboratory storage areas. These chemicals may be categorized as hazardous waste and should be disposed of in accordance with applicable regulations. Do not discard mercury-containing chemicals that are no longer in use into sinks or drains. Contact the medical facility’s hazardous waste management coordinator about transporting the chemicals to the designated hazardous waste collection point. Protective clothing or debris that is contaminated with mercury compound should be managed in accordance with Federal and State regulations.

If using a mercury product is essential, the mercury-contaminated waste should be collected and disposed of properly. The Colorado Department of Public Health and Environment (CDPHE) has a customer technical assistance hotline to answer questions regarding disposal of mercury contaminated wastes. CDPHE’s website has additional information.

### **Pharmaceutical Uses of Mercury**

Examples of pharmaceutical products that contain mercury can be seen in the following table. This list is not exhaustive but is used to demonstrate some common applications of mercury use in modern pharmaceuticals.

Product	Notes
Creams	Fungizone, hemorrhoid ointment, some topical ointments.
Merbromin/water solution	Used in plastic/reconstructive surgery as a disinfectant and marker. Antiseptic.
Nasal Sprays	May contain mercury preservatives: thimerosal, phenylmercuric acetate, Phenylmercuric nitrate.
Ophthalmic and contact lens products	May contain mercury preservatives: thimerosal, phenylmercuric acetate, phenylmercuric nitrate.
Otic Suspension	Used to treat outer ear infection.

Vaccines and Injections	May contain thimerosal (primarily in hemophilus, hepatitis, rabies, tetanus, influenza, diphtheria and pertussis vaccines). Testosterone injection suspension.
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### **Alternatives for products containing mercury**

To learn the mercury content of cleaners, degreasers, and pharmaceutical products used by the medical facility, certificates of analysis can be requested from suppliers. When purchasing materials, mercury-free alternatives should be requested whenever possible. In many cases, products with mercury-free preservatives are available, and your vendor can assist in selecting these products for the facility. If there are no mercury-free alternatives that meet the needs of the facility, choose options that are lowest in mercury.

### **Best Management Practices for Hospitals and Medical Practices.**

Hospitals and medical facilities are encouraged to search for non-mercury containing alternatives to replace mercury-containing products. By choosing non-mercury containing alternatives for thermometers and sphygmomanometers, a hospital or medical practice can eliminate one of the largest sources of mercury on-site and can reduce the potential exposure of mercury to staff, patients, and the environment. Hospitals and medical facilities must recycle or properly dispose of all mercury-containing waste. Hospitals and medical practices must not dispose of mercury waste in sinks or floor drains, trash, or “red bag waste,” and are encouraged to follow the guidance in this manual, including following BMPs. Submittal of the Hospital and Medical Facility Compliance Certification (Appendix A) and implementation of BMPS may become requirements at the discretion of the Chief Executive Officer.

## **Products Containing Mercury in Laboratories**

### **Laboratory Chemicals**

When laboratories use mercury-containing chemicals, there is the potential for the release of mercury into wastewater. It is recommended that laboratories phase out all nonessential uses of mercury:

1. Where possible eliminate the use of mercury-containing compounds in all clinical, research and teaching laboratories unless there is no alternative.
2. Where possible eliminate all nonessential mercury devices, such as thermometers and barometers, and replace them with mercury-free devices.
3. Clear laboratories and storage areas of unnecessary mercury compounds and send this mercury to a certified treatment and disposal site.

### **Alternatives for mercury-containing laboratory chemicals**

Because mercury may be present in very small amounts as a preservative or contaminant, it may not be obvious if a product contains mercury. The laboratory purchasing agent should contact the laboratory’s suppliers and request that mercury-free products be

supplied for any chemicals that can be discharged. A certificate of analysis for chemicals can be requested for those products. When possible, change methodologies to eliminate mercury. For chemicals that include a preservative, select alternatives that use a mercury-free preservative. Some products that once contained mercury have been reformulated to be mercury-free.

### **Recycling/disposal of mercury-containing laboratory chemicals**

Training should be provided to laboratory staff on the proper use, handling and disposal of hazardous materials, including the importance of keeping mercury out of the Wastewater System. Staff must be aware of laboratory products that are known to contain mercury. It is important that laboratory chemicals ready for recycling or disposal be controlled in a manner compliant with Local, State, and Federal Regulations.

If using a mercury-containing product is essential, the mercury-contaminated waste should be collected and disposed of properly. The Colorado Department of Public Health and Environment (CDPHE) has a customer technical assistance hotline to answer questions regarding disposal of mercury contaminated wastes. CDPHE's website has additional information.

Mercury-containing chemicals may still be present in laboratory storage areas, even if not used, and must be disposed of properly. Contact the laboratories hazardous waste management coordinator about proper handling and disposal of these chemicals in accordance with U.S. EPA and state regulations. Do not discard mercury-containing chemicals that are no longer in use into sinks or drains.

### **Best Management Practices for Laboratories**

Laboratories are encouraged to search for non-mercury containing alternatives to replace mercury-containing products. Laboratories must recycle or properly dispose of all mercury-containing waste. Laboratories must not dispose mercury waste in sinks or floor drains, the trash, or "red bag waste.". Laboratories are encouraged to follow the guidance in this manual including following BMPs and can submit the Hospital and Medical Facility Compliance Certification to Utilities. This may become a requirement at the discretion of the Chief Executive Officer.

## **Dental Amalgam Control Program**

This program has been implemented by the Utilities' Industrial Pretreatment Section to meet the requirements in 40 CFR Part 441 published on June 14, 2017 to the Federal Register as the Dental Office Point Source Category by the EPA. This Mercury Source Control Policies and Procedures Manual provides for a Dental Amalgam Control Program to be used to meet the requirements of 40 CFR Part 441 and control mercury wastewater discharges in Utilities' service area. Dental dischargers subject to 40 CFR Part 441 are not Significant Industrial Users as defined in 40 CFR Part 403, and are not "Categorical Industrial Users" or "industrial users subject to categorical pretreatment

standards” as those terms and variations are used in 40 CFR Part 403, as a result of applicability of 40 CFR Part 441.

## **Applicability**

The requirements of the Dental Amalgam Control Program apply to dental dischargers, as defined in 40 CFR Part 441 and in the definitions section of this manual. These requirements do not apply to dental dischargers that exclusively practice one or more of the following dental specialties: oral pathology, oral and maxillofacial radiology, oral and maxillofacial surgery, orthodontics, periodontics, prosthodontics, mobile dental units, dental dischargers who do not discharge any amalgam process wastewater to a POTW (such as dental dischargers that collect all dental amalgam process wastewater for transfer to a Centralized Waste Treatment facility as defined in 40 CFR Part 437), or dental dischargers who place no dental amalgam and do not remove dental amalgam except in limited emergency or unplanned, unanticipated circumstances (accounting for less than 5% of the offices daily operations) and certify such to the Chief Executive Officer per 40 CFR Part 441.50. Dental dischargers who exclusively participate in these specialties will be required to complete the compliance certification to allow Utilities to evaluate their practice for the applicability of the Dental Amalgam Control Program.

## **Report Requirements**

All dental dischargers are required to submit a one-time compliance report to Utilities. Dental dischargers must certify that BMPs are used and that amalgam separators are installed at their facilities if required by 40 CFR Part 441. A copy of the one-time compliance report can be found in Appendix B of this manual. If information provided in the report indicates the dental discharger has the potential to discharge mercury to the POTW, the dental discharger will be required to comply with the requirements listed in this manual. The one-time compliance report should be permanently retained on site by the dental discharger and provided if requested by the Chief Executive Officer. Coverage under this Mercury Source Control Program shall not be reassigned or transferred to a new owner, new user, different premises, or new or changed operation without, at a minimum, ten (10) days prior notification to Utilities. Changes to the operations of the dental facility may require the submission of a new compliance report.

## **Dental Amalgam Control Program Requirements**

### **Amalgam Separator Requirements for Dental Dischargers:**

If electing to place or remove mercury amalgam restorations, an amalgam separator that meets the following requirements from 40 CFR Part 441.30(a)(1) shall be installed:

- Compliant with either the American National Standards Institute (ANSI) American National Standard/American Dental Association (ADA) Specification 108 for Amalgam Separators (2009) with Technical Addendum (2011) or the International Organization for Standardization

(ISO) 11143 Standard (2008) or subsequent versions so long as that version requires amalgam separators to achieve at least a 95% removal efficiency. Compliance must be assessed by an accredited testing laboratory under ANSI's accreditation program for product certification or a testing laboratory that is a signatory to the International Laboratory Accreditation Cooperation's Mutual Recognition Arrangement. The testing laboratory's scope of accreditation must include ANSI/ADA 108-2009 or ISO 11143.

- The amalgam separator(s) must be correctly sized to accommodate the maximum discharge rate of amalgam process wastewater from the dental facility.
- The amalgam separator(s) must be inspected in accordance with the manufacturer's operating manual to ensure proper operation and maintenance of the separator(s) and to confirm that all amalgam process wastewater is flowing through the amalgam retaining portion of the separator.
- In the event that an amalgam separator is not functioning properly, the amalgam separator must be repaired consistent with manufacturer instructions or replaced with a unit that meets the requirements of 40 CFR Part 441 as soon as possible, but no later than 10 business days after the malfunction is discovered by the dental discharger, or an agent or representative of the dental discharger.
- The amalgam retaining units must be replaced in accordance with the manufacturer's schedule as specified in the manufacturer's operating manual or when the amalgam retaining unit has reached the maximum fill level, as specified by the manufacturer in the operating manual, at which the amalgam separator can perform to the specified efficiency, whichever comes first.
- Dental dischargers subject to 40 CFR Part 441 that operate an amalgam separator that was installed at a dental facility prior to June 14, 2017 satisfy the requirements of 40 CFR Part 441.30(a)(1)(ii) until the existing separator is replaced as described in 40 CFR Part 441.30(a)(1)(v) or until June 14, 2027, whichever is sooner.
- Installation, operation, and maintenance of one or more amalgam removal devices other than an amalgam separator must meet the requirements of 40 CFR Part 441.30(a)(2).

### **Best Management Practices for Dental Dischargers:**

- Waste amalgam including, but not limited to, dental amalgam from chair-side traps, screens, vacuum pump filters, dental tools, cuspidors, or collection devices, must not be discharged to a POTW.

- Dental unit water lines, chair-side traps, and vacuum lines that discharge amalgam process wastewater to a POTW must not be cleaned with oxidizing or acidic cleaners, including but not limited to bleach, chlorine, iodine, and peroxide that have a pH lower than 6 or greater than 8.

### **Compliance Schedule:**

All existing dental dischargers which operated prior to July 14, 2017 must achieve compliance with the Utilities' Dental Amalgam Control Program by July 14, 2020. All existing dental offices are required to complete and submit to Utilities, a one-time compliance report within ninety (90) days of receipt of the certification from Utilities, or by October 12, 2020, whichever comes first. New dental facilities (opened after July 14, 2017) must submit this form 90 days from the effective date of opening. In the event that ownership of a dental discharger changes, the new owner must complete and submit to Utilities, a one-time compliance report within ninety (90) days. The report is found in Appendix B of this manual. Dental dischargers that begin operating in the service area following the promulgation of the rule must come into compliance with the Dental Amalgam Control Program immediately and complete and submit to Utilities, a one-time compliance report within ninety (90) days of the date it began operating.

### **Records Retention Policy:**

As long as a dental discharger is in operation, or until ownership is transferred, the dental discharger must maintain a copy of the one-time compliance report and make it available for inspection in either physical or electronic form (40 CFR 441.50(a)(5)). If the facility moves to a new location within Utilities' service area, a new report shall be required.

The following documents will be maintained on site for a minimum of three (3) years and made available to the Chief Executive Officer upon request (Wastewater Treatment Code Section 12.5.902.B):

- Documentation of the date, person(s) conducting the inspection, and results of each inspection of the amalgam separator(s) or equivalent device(s), and a summary of follow-up actions if needed
- Documentation of amalgam retaining container or equivalent container replacement (including the date, as applicable)
- Documentation of any repair or replacement of an amalgam separator or equivalent device, including the date, person(s) making the repair or replacement, and a description of the repair or replacement (including make and model).
- Documentation of all dates that collected dental amalgam is picked up or shipped for proper disposal in accordance with 40 CFR 261.5(g)(3), and the name of the permitted or licensed treatment, storage, or disposal facility receiving the amalgam retaining containers. Dischargers or an

agent or representative of the dental discharger must maintain and make available for inspection in either physical or electronic form the manufacturer's operating manual for the current device.

## **Enforcement**

Compliance with the Mercury Source Control Program is required.

Failure to comply with any terms and/or conditions of the Mercury Source Control Program shall be a violation and shall be subject to enforcement as such. Violations will be enforced upon in a manner consistent with the Utilities Industrial Pretreatment Section's Enforcement Response Plan (ERP).

Enforcement response is determined by the type of noncompliance and, to some extent, the circumstances surrounding the noncompliance. The Chief Executive Officer or his designee may use any enforcement response either individually, sequentially, concurrently, or in any order or sequence for one violation or a group of violations, as appropriate for the circumstances. Responding to noncompliance with one informal response will not prevent the Industrial Pretreatment Section from responding to the same instance of noncompliance with a more severe formal administrative or judicial/monetary enforcement response at a later date. The legal authority for enforcement is contained in the City Code, Chapter 12, Article 5, Part 12, "Enforcement."

For a complete copy of the Enforcement Response Plan (ERP), contact the Industrial Pretreatment Section at [dental@csu.org](mailto:dental@csu.org).

# Mercury Source Control Policies and Procedures Manual

## Appendix A

### Hospital, Medical Facility, or Laboratory Certification

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## Hospital, Medical Facility, or Laboratory Certification

Please return this completed certification with an original ink signature via U.S. mail.

### Section 1 – Business Name and Addresses

Name of Facility: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Website: \_\_\_\_\_

Site Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

-----  
Name and Title for Primary Operator or Owner \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email Address: \_\_\_\_\_

### Section 2 – Best Management Practices (BMPs)

Has this facility identified all sources of mercury containing products and wastes? Yes  No

Does this facility recycle or properly dispose of all mercury containing waste? Yes  No

Does this facility dispose of mercury waste in the trash, “red bag waste,” or wastewater? Yes  No

Does this facility replace products containing mercury with mercury free alternatives when possible? Yes  No

Does this facility prevent mercury contaminated wastewater from discharge into the sanitary sewer? Yes  No

Are employees trained in proper handling and disposal of hazardous wastes? Yes  No

**Section 3 – Operation and Maintenance (O&M) Plan**

Products containing mercury are controlled as to prevent spills and accidental releases to the sanitary sewer system. Yes  No

This hospital, medical facility, or laboratory ensures the proper disposal of products containing mercury. Yes  No

This hospital, medical facility, or laboratory maintains records of transportation and disposal of products containing mercury. Yes  No

This hospital, medical facility, or laboratory has made efforts to replace products containing mercury with alternatives that are free of mercury. Yes  No

Are required records maintained for a minimum of three (3) years in accordance with the records retention policies found in the Mercury Source Control Policies and Procedures Manual? Yes  No

**Section 4 - Specific Prohibitions**

I understand that it is unlawful for any person to discharge or cause the discharge of wastewater containing elemental mercury. Yes  No

I understand that it is unlawful for any person to discharge or cause the discharge of wastes or rinse water from empty chemical containers that contained mercury compounds. Yes  No

**Section 5 - Certification Statement**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_ Date \_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_ Position or Title \_\_\_\_\_  
Name (please type or print)

# Mercury Source Control Policies and Procedures Manual

## Appendix B

### Dental Discharger Certification

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## One-Time Compliance Report for Dental Dischargers

In accordance with federal regulations (Title 40 of the Code of Federal Regulations Part 441 – Dental Office Point Source Category) and the Colorado Springs Utilities Mercury Source Control Program, this form must be completed by all Dental Dischargers in the Colorado Springs Utilities service area and any connector districts. Please complete the information below. A response is required on all statements. Return the completed certification with an original ink signature via US Mail to the address (or fax to the number) listed above.

Existing facilities must be in compliance by July 14, 2020 and must submit this report as soon as possible, but in no case, any later than October 12, 2020. New dental facilities (opened after July 14, 2017) must submit this form 90 days from effective date of opening. Dental offices that have had a transfer of ownership must complete this form within 90 days of the effective date of the transfer of ownership. As long as any dental facility subject to this program is in operation, or until ownership is transferred, the dental facility or an agent or representative of the dental facility must maintain this One-Time Compliance Report and make it available for inspection in either physical or electronic form ([§ 441.50\(a\)\(5\)](#)).

### GENERAL INFORMATION

Name of Facility: \_\_\_\_\_

Physical Address of Dental Facility: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Facility Contact: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Name of Owner(s): \_\_\_\_\_

Name of Operator(s) if  
different from Owner(s): \_\_\_\_\_

Applicability: Please Select One of the Following:

This facility is a dental discharger subject to <a href="#">40 CFR Part 441</a> and places or removes dental amalgam. <i>Complete sections A, B, C, D, and E</i>	<input type="checkbox"/>
This facility is a dental discharger subject to this rule and (1) it does not place dental amalgam, and (2) it does not remove amalgam except in limited emergency or unplanned, unanticipated circumstances. <i>Complete section E only</i>	<input type="checkbox"/>
<b>(Also, select if applicable) Transfer of Ownership (<a href="#">§ 441.50(a)(4)</a>)</b>	
This facility is a dental discharger subject to this rule ( <a href="#">40 CFR Part 441</a> ), and it has previously submitted a one-time compliance report. This facility is submitting a new One Time Compliance Report because of a transfer of ownership as required by <a href="#">§ 441.50(a)(4)</a> .	<input type="checkbox"/>

**Section A – Description of Facility**

Total number of chairs at which amalgam may be placed or removed: \_\_\_\_\_ Total number of chairs in facility: \_\_\_\_\_

**Section B - Description of Amalgam Separator(s) or Equivalent Device(s) currently operated`**

This dental facility has installed one or more ISO 11143 (or ANSI/ADA 108-2009) compliant amalgam separators (or equivalent devices) that captures all amalgam containing waste:	Yes <input type="checkbox"/> No <input type="checkbox"/>
This dental facility installed prior to June 14, 2017 one or more existing amalgam separators that do not meet the requirements of <a href="#">§ 441.30(a)(1)(i) and (ii)</a> :	Yes <input type="checkbox"/> No <input type="checkbox"/>
I understand that separators that do not meet the requirements of <a href="#">§ 441.30(a)(1)(i) and (ii)</a> must be replaced with one or more amalgam separators (or equivalent devices) that meet the requirements of <a href="#">§ 441.30(a)(1)</a> or <a href="#">§ 441.30(a)(2)</a> , after their useful life has ended, and no later than June 14, 2027, whichever is sooner:	Yes <input type="checkbox"/> No <input type="checkbox"/>

This dental facility operates ISO-11143 (or ANSI/ADA 108-2009) certified separator(s):			Yes <input type="checkbox"/> No <input type="checkbox"/>
Manufacturer and make/model name	Installation date	Separator serial number	Number of chairs serviced by this separator

Note: Add more lines if necessary

This dental facility operates equivalent device(s):				Yes <input type="checkbox"/>	No <input type="checkbox"/>
Manufacturer and make/model name	Installation date	Separator serial number	Average removal efficiency of device, as determined per <a href="#">§ 441.30(a)(2)i- iii.</a>	Number of chairs serviced by this separator	

Note: Add more lines if necessary

This dental facility operates amalgam separator(s) that do not meet the requirements of <a href="#">§ 441.30(a)(1)(i) and (ii)</a> :				Yes <input type="checkbox"/>	No <input type="checkbox"/>
Manufacturer and make/model name	Installation date	Separator serial number	Number of chairs serviced by this separator		

Note: Add more lines if necessary

**Section C - Design, Operation and Maintenance of Amalgam Separator/Equivalent Device**

I certify that the amalgam separator (or equivalent device) is designed and will be operated and maintained to meet the requirements in <a href="#">§ 441.30</a> or <a href="#">§ 441.40</a> .	YES <input type="checkbox"/>
A third-party service provider is under contract with this facility to ensure proper operation and maintenance in accordance with <a href="#">§ 441.30</a> or <a href="#">§ 441.40</a> .	YES <input type="checkbox"/>
Name of third-party service provider that maintains the amalgam separator or equivalent device (if applicable):	
If no service provider is used, provide a description of the practices employed by the facility to ensure proper operation and maintenance in accordance with <a href="#">§ 441.30</a> or <a href="#">§ 441.40</a> .	
Describe practices:	

## Section D - Best Management Practices (BMP) Certifications

<p>The above named dental discharger is implementing the following BMPs as specified in <a href="#">§ 441.30(b)</a> or <a href="#">§ 441.40</a> and will continue to do so.</p> <ul style="list-style-type: none"><li>• Waste amalgam including, but not limited to, dental amalgam from chair-side traps, screens, vacuum pump filters, dental tools, cuspidors, or collection devices, must not be discharged to a POTW.</li><li>• Dental unit water lines, chair-side traps, and vacuum lines that discharge amalgam process wastewater to a POTW must not be cleaned with oxidizing or acidic cleaners, including but not limited to bleach, chlorine, iodine and peroxide that have a pH lower than 6 or greater than 8 (i.e. cleaners that may increase the dissolution of mercury).</li></ul>	YES <input type="checkbox"/>
--	------------------------------

## Section E - Certification Statement

Per [§ 441.50\(a\)\(2\)](#), this One-Time Compliance Report must be signed and certified by a responsible corporate officer, a general partner or proprietor if the dental facility is a partnership or sole proprietorship, or a duly authorized representative in accordance with the requirements of [§ 403.12\(l\)](#).

“I am a responsible corporate officer, a general partner or proprietor (if the facility is a partnership or sole proprietorship), or a duly authorized representative in accordance with the requirements of § 403.12(l) of the above named dental facility, and certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (please type or print)

\_\_\_\_\_  
Position or Title

# Mercury Source Control Policies and Procedures Manual

## Appendix C

### Notice of Coverage

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## **Notice of Coverage Under the Colorado Springs Utilities Mercury Source Control Program**

In accordance with Article 5, Chapter 12 of the Code of the City of Colorado Springs (Code), (Business Name) at (Address) has been issued a Notice of Coverage under the Mercury Source Control Program. This Notice of Coverage is not transferrable to new ownership or new locations.

This notice verifies that the Certification required under the Mercury Source Control Program was completed by (facility), has been reviewed by the Industrial Pretreatment Section of Colorado Springs Utilities, and was found to be complete and satisfactory.

This coverage remains conditional upon conformance to the above-mentioned Code, as amended, and/or all other requirements set forth in the Mercury Source Control Policies and Procedures Manual.

Please retain a copy of this notice to be made available upon request of the Chief Executive Officer at the time of a facility inspection. An inspection may be used to verify the information to which the Authorized Representative certified.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 20XX

\_\_\_\_\_

Colorado Springs Utilities Representative