



MAINTENANCE OF PRETREATMENT DEVICES

ENVIRONMENTAL GUIDELINE



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ACTIVITY DESCRIPTION

Maintenance of pretreatment devices - includes all devices used to alter the characteristics of water prior to discharge to either the sanitary or storm sewer systems. These devices include oil water separators, sand traps, grease traps, grit chambers, and sand filters. DEN tenants are responsible for providing maintenance and documenting maintenance activities for devices treating water connected with their operations. DEN is responsible for providing maintenance and documentation for City owned devices treating common use areas (e.g., main terminal and parking structures, concourses) and non-common use areas (e.g., Maintenance Center).

* This EG is one of several specifically identified procedures for activities/facilities that are required by the Pollution Prevention/Good Housekeeping section of CCD's MS4 permit. Related procedures not specially addressed in this EG include, but are not limited to, those identified in the Reference section of this document.

POTENTIAL ENVIRONMENTAL RISKS

The following environmental concerns are associated with these activities:

- Fuel spills
- Air pollution & odors
- Improper or inappropriate disposal of wastes
- Sanitary sewer overflow
- Disposal of contaminated spill response media
- Contamination of soils
- Contamination of surface water
- Contamination of ground water
- Collection of wash water

Potential consequences from performing the activity incorrectly:

- Personal injury, property damage, or long-term damage to the environment
- Possible regulatory noncompliance, Notices of Violation, and related [financial & non-financial] penalties

RECOMMENDED OPERATING CONTROLS

Prohibited Activities

- Sand/oil/grease and other waste material removed from the trap/interceptor should not be introduced into any drain, sewer, storm drain or natural body of water.
- Do not decant water back into the trap/interceptor after removing the waste material.
- Do not use hot water, acids, caustics, solvents, or emulsifying agents when cleaning grease traps and interceptors.
- Do not utilize biological agents for grease remediation.



General Considerations

- The frequency of cleaning is determined based on inspection or set schedule.
- The cleaning and waste removal frequency is dependent upon the capacity of the trap/interceptor and the loading rate of sand, oil, or grease in the effluent.
- Schedule cleanout of pretreatment devices using contractors approved by the City and County of Denver (CCD) Department of Transportation and Infrastructure (DOTI) to comply with the agreed-on device maintenance schedule. *Obtaining Department of Public Works Wastewater Management Approval of Pretreatment Device Maintenance Contractors* provides guidance for obtaining WMD approval for vendors/service companies.
- Protect storm drain inlets and drains, within proximity, with curb socks, rock berms, inlet protection, or drain covers/mats prior to any activity.
- Leaking material containers should be properly discarded and replaced.
- Monitor equipment for leaks and use drip pans, as necessary.
- If necessary, sweep or vacuum the area once activities are complete.

Training Requirements

- Training will be conducted as necessary to conduct the Activity as described herein and to inform employees of impacts associated with illegal discharges and improper disposal of waste from municipal operations.
- Records of on-the-job training are not required. Records of formal employee training, if provided, should be retained.
- If maintenance activities are performed under DEN's Industrial Stormwater Management Plan, evidence of stormwater training is expected.
- While formal certifications are not necessary, some form of "proof of training" (such as sign-in sheets and handouts) is expected and should be maintained on file.

Storage and Materials Management

- Maintain legible labels and markings on all containers and tanks.
- Ensure adequate secondary containment for all bulk storage containers, and that all containers and containment are in good operating condition.
- Tenants, operators, and contractors must dispose of all wastes collected from pretreatment devices according to all applicable local, state, and federal regulations.

EMERGENCY RESPONSE

If a spill occurs, refer to Environmental Guideline Spill Response.

- If a spill occurs, refer to Environmental Guideline Spill Response.
- Control spills to minimize property damage and eliminate imminent risk to human health and the environment.
- Containerize all collected waste and evaluate for labeling, storage, and disposal.



TENANT OWNED AND OPERATED DEVICES

Inspection and Maintenance Requirements

A tenant, operator, or owner representative should be present when any pumping is being performed so that proper cleanout procedures by the contractor are ensured and the device is not damaged. Pumping companies are not allowed to decant water back into the device after removing the solids without approval from DEN Environmental Services (ES). These fluids must be disposed of appropriately with the collected wastes and disposed off-site at an appropriately permitted facility.

Visually inspect pretreatment devices routinely and do not allow the equipment to overflow. Devices should be kept on a regular cleaning schedule (depending on usage) or when the device meets the following criteria:

- Pump out the grease/oil cap when it reaches 12" cap and/or 9" of solids on the bottom of the trap.
- Pump out the sand trap when 9" + of solids accumulate on the bottom of the trap or 4" or more of oil is observed in the trap.
- Review the attached Pretreatment Device Inspection Checklist for further instruction.

Visually inspect pretreatment devices after cleanout for any damage to the system. If any damage is noted, notify the DEN Director of Environmental Programs immediately.

Expected Records and Outputs

- If the facility is not on a regular cleaning schedule, the Tenant Pretreatment Device Measurement Record (or other similar record of inspection) should be completed at least once a month to demonstrate that the device does not need cleaning.
- For tenant and operator facilities, invoices should be maintained on file at the tenant / operator site and available for review by DEN ES.
- If maintenance activities are performed under DEN's Industrial Stormwater Management Plan, complete the SWMP Industrial Activities Survey/Matrix (Appendix B).
 - Obtain a copy of this document from DEN ES or from Appendix B of the SWMP.
 - Complete and return to ES for evaluation. Retain a copy with user's SWMP.

DEN OWNED AND OPERATED DEVICES

Inspection and Maintenance Requirements

The DEN Plumbing Department provides maintenance and documentation for City owned pretreatment devices treating common use areas and non-common use areas. These include pretreatment devices located in following areas; A, B, and C concourses, ARFF stations, CRON East and West, terminal parking structures, terminal baggage tunnels, DEN facilities including the Fleet Maintenance Center, Paint Shop, and Building Maintenance Shop. The attached pretreatment device lists identify the location and



cleaning frequency for common use devices covered in the Pretreatment Device Maintenance Contract administered by DEN Plumbing.

Due to the potential of spills entering the clean water system, DEN ES will conduct additional inspections of pretreatment devices located at the following areas: monthly inspections at the DEN Maintenance Center fuel island. These inspections are in addition to the DEN Plumbing scheduled inspections of these devices. DEN Plumbing Department will be notified and will be responsible for providing maintenance activities if required.

- Results of these inspections are kept electronically in the EMS Portal/ES Data Files/Water/Pretreatment Device/ES Pretreatment Device Inspections. The form template is stored at ES Data Files/Recordkeeping Forms/ES Pretreatment Device Inspection Form.

Common Use Grease Pretreatment Devices

Grease Trap Areas	Treatment Frequency
ARFF 1	2x per year
B90	2x per year
B23	2x per year
Westin Hotel East	2x per year
Westin Hotel West-1	2x per year
Westin Hotel West-2	2x per year
Westin-Jet Drain Lines	2x per year
A-33	3x Per Year
A-49	3x Per Year
B-22	3x Per Year
B-28	3x Per Year
B-29	3x Per Year
B-44	3x Per Year
B-45	3x Per Year
B-52	3x Per Year
B-53	3x Per Year
B-60	3x Per Year
C-30	3x Per Year
C-41	3x Per Year
C-48	3x Per Year
C-49	3x Per Year
WEST TERMINAL	4x per year
EAST TERMINAL	4x per year
A-38	4x per year
A-39	4x per year
A-40	4x per year
A-41	4x per year
B-36	4x per year
B-37	4x per year
B-38	4x per year
B-39	4x per year
C-38	4x per year
C-39	4x per year
C40	4x per year

Common Use Sand Pretreatment Devices

Sand Trap Areas	Treatment Frequency
PAINT SHOP SOUTH	Quarterly
PAINT SHOP NORTH	Quarterly
VEHICLE STORAGE BLDG	Quarterly
FLEET BAY DOOR 1	Quarterly
FLEET BAY DOOR 19A	Quarterly
FLEET BAY DOOR 23	Quarterly
CAR WASH SOUTH	
TROUGHS X2	Quarterly
Q/A Lab	Quarterly
EAST TERM PKG (HJ)	As Needed
WEST TERM PKG (DE)	As Needed
WEST TERM PKG (HJ)	As Needed
MOD 4 PARKING	As Needed
A33	As Needed
A47	As Needed
B22	As Needed
B23	As Needed
B28	As Needed
B29	As Needed
B36	As Needed
B44	As Needed
B45	As Needed
B52	As Needed
B53	As Needed
C30	As Needed
C48	As Needed
C49	As Needed
AGTS	As Needed
CARPENTER BUILDING	As Needed
8,000 Gallon Tank	As Needed

Expected Records and Outputs

- Records for devices maintained by DEN are maintained by DEN Plumbing Department.



- Annual yellow grease collection totals shall be submitted to DEN ES for inclusion into the DEN Environmental Annual Report.

REFERENCES

Contacts

- DEN Communications Center (for spill reporting): 303-342-4200
- DEN Environmental Services (Main Line): 303-342-2730; DIA.Environmental@flydenver.com
- Tom Somers, DEN Environmental Services: 303-342-2733; Tom.Somers@flydenver.com

Guidance Materials

- SDSs
- DEN Stormwater Management Plan (SWMP)
- DOT Labeling and Placarding Guidance
- SPCC Plan

Related Environmental Guidelines

Note: The following list identifies procedures related to MS4 Operations and Maintenance Procedures but may not be all-inclusive. The following procedures are considered primary documents for purposes of compliance with the MS4 permit.

- Cleaning/Washing – Aircraft, Vehicles, and Equipment
- Storage of Vehicles and Equipment Containing Chemicals
- Cleaning/Washing – Indoor Industrial Surfaces
- Construction
- Planning and Design
- Management of Pesticides and Herbicides
- Cleaning/Washing – Outdoor Areas and Structures
- Pavement Deicing
- Inspection and Maintenance of MS4 Structural Controls
- Spill Response
- General Waste Management

Applicable Regulations

- 40 CFR 117.3 Determination of Reportable Quantities for a Hazardous Substance
- 40 CFR 122-124 NPDES Regulations for Storm Water Discharges
- 40 CFR 260-262-273 Federal RCRA Regulations
- 40 CFR 150-189 Federal Insecticide, Fungicide and Rodenticide Act Regulations
- 6 CCR 1007-3, Part 261 State RCRA Regulations
- City and County of Denver Municipal Separate Storm Sewer System (MS4) Permit
- City and County of Denver Pesticide Discharge Management Plan



- CCoD Ordinances
- Denver Wastewater Management Division Rules and Regulations
- Metro Wastewater Reclamation District Rules and Regulations
- DEN Rules and Regulations
- City and County of Denver Mayor's Executive Orders

Other Documents

- DEN Managers Bulletins
- CCoD Executive Orders