



HRSD Fats, Oils and Grease Best Management Practice

Effective Date: October 1st, 2010 Revision Effective: January 1, 2021

1. PURPOSE

This Best Management Practice (BMP) shall be in effect for Food Service Establishments (FSEs) that are connected directly to infrastructure that the Hampton Roads Sanitation District (HRSD) owns and/or operates or for any other FSE as deemed necessary by HRSD. It is designed to aid in preventing the introduction and accumulation of Fats, Oils and Grease (FOG) into the sanitary sewerage system. This BMP requires Grease Control Devices (GCDs) to be properly installed and regularly maintained by the FSE in accordance with this document or any other direction from HRSD. Failure to follow requirements of this BMP may result in a violation and/or civil penalties.

2. GENERAL INFORMATION

GCDs capture FOG that is washed down kitchen fixtures. Improperly maintained GCDs can create backups in the sewer systems which can lead to sanitary sewer overflows (SSOs). SSOs create significant public health hazards and expose HRSD to costly environmental penalties. SSOs are prohibited under the Federal Clean Water Act and are regulated by the Environmental Protection Agency (EPA), the Virginia Department of Environmental Quality (DEQ), and HRSD. SSOs can harm human health, degrade water quality, and impair ecosystem functions. FOG is a major source of SSOs and regular GCD cleaning is required to ensure proper operation and the prevention of SSOs. FSE owners and/or operators must become familiar with and follow all requirements specified in this BMP.

3. ACCESS

In accordance with Section 506 of the HRSD Industrial Wastewater Discharge Regulations, authorized HRSD personnel shall be provided reasonable access to all facilities which directly or indirectly discharge to HRSD's sewerage system at all times, including those occasioned by emergency conditions, and shall be allowed to perform inspections and take independent samples for compliance purposes at all times. Such inspections shall include all records of wastes, whether disposed to the HRSD sewerage system or otherwise.

4. DEFINITIONS

The following words, terms or abbreviations used in this BMP shall be defined as provided below

Brown Grease shall mean floatable fats, oils, grease and settled solids produced during food preparation that are recovered from grease control devices.

Core Sampler shall mean a sampling tool, i.e. Sludge Judge, Dipstick Pro or equivalent, designed to take accurate readings of settleable solids, in a variety of liquids, to any depth.

Decanting shall mean discharging of removed wastewater back into the grease control device, for the purpose of reducing the volume to be hauled or for recharging the GCD.

Enforcement Response Plan (ERP) shall mean a set of detailed procedures indicating how HRSD will respond to instances of discharger noncompliance as referenced in 9 VAC 25-31-800 and 40 CFR Part 403.

Fats, Oils, and Grease (FOG) shall mean a material, either liquid or solid, composed of fats, oils or grease from animal or vegetable sources. Examples of FOG include, but are not limited to, cooking residues, vegetable oil, bacon grease, batter, icing, dairy products, dressings and other compounds from animal or plant sources. These substances are detectable and measurable using analytical test procedures established in 40 CFR Part 136, as amended periodically.

Food Service Establishment (FSE) shall mean any commercial, industrial, institutional, or food processing facility discharging kitchen or food preparation wastewaters to the sanitary sewerage system.

Grease Hauler shall mean a contractor who collects the contents of a grease control device or renderable yellow grease container and transports it to an approved recycling or disposal facility. A grease hauler may also provide other services related to grease control device maintenance for a food service establishment. A certified grease hauler has been certified through the HR FOG Program.

Grease Control Device (GCD) shall mean a device used to collect, contain, and remove food waste, including FOG, from wastewater while allowing remaining wastewater to be discharged to the sanitary sewer system by gravity. Devices include the following:

- A. **Automatic Grease Removal Device (AGRD)** shall mean an active, automatic device that separates and removes FOG from effluent discharge and cleans itself of accumulated FOG at least once every twenty-four hours utilizing electromechanical apparatus. Unless otherwise approved, AGRDs shall not be installed.
- B. **Gravity Grease Interceptor (GGI)** shall mean a plumbing appurtenance of not less than 250 gallons (946 L) capacity that is installed to intercept free-floating fats, oils and grease from wastewater discharge. Separation is accomplished by gravity during a retention time of not less than 30 minutes. Unless otherwise approved, GGIs shall not be installed. GGIs must be cleaned by a certified grease hauler.
- C. **Hydromechanical Grease Interceptor (HGI)** shall mean a plumbing appurtenance that is installed in the sanitary sewer system to intercept free-floating fats, oils and grease from wastewater discharge. Continuous separation is accomplished by air entrainment, buoyancy, interior baffling in combination or separately, and one of the following:
 - 1. Units directly connected, with an external flow control, with an air intake (vent)
 - 2. Units directly connected, with an external flow control, without an air intake (vent)
 - 3. Units directly connected, without an external flow control, with or without internal flow control
 - 4. Units indirectly connected, without an external flow control, with or without internal flow control

Hampton Roads Regional Technical Standards for Grease Control Devices (HRRTS) shall mean a local set of regionally approved standards required to properly size GCDs.

HR FOG Program shall mean the regionally-approved Hampton Roads FOG education, training and certification programs for food service establishment employees and grease haulers administered by the Hampton Roads Planning District Commission (HRPDC).

HRSD Industrial Wastewater Discharge Regulations shall mean the requirements for control of the discharge of industrial wastewater into the sewerage system of HRSD, directly or through its constituent collection systems, and establishes regulations appertaining thereto.

Industrial Wastewater: All wastewater of the community, excluding single-family domestic wastewater from a source not included under the definition of Industry/Industrial User and including, but not limited to all wastewater

from any producing, manufacturing, processing, institutional, commercial, agricultural or other operations from which the wastewater discharged includes wastes of non-human origin.

Renderable Yellow Grease Container shall mean a closed, leak-proof container used for the collection and storage of yellow grease only.

Sanitary Sewerage System shall mean a network of wastewater collection, conveyance, treatment and disposal facilities interconnected by sanitary sewers and connecting, directly or indirectly, to HRSD, including but not limited to intercepting sanitary sewers, outfall sanitary sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances, extensions, improvements, remodeling, additions, and alterations thereof; and any work, including the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.

Stormwater System shall mean any system that is designed to carry storm water, surface water and drainage; typically, flowing directly into a body of water without treatment. FOG shall not be discharged directly or indirectly into the storm water system.

Virginia Plumbing Code Shall mean the set of regulations currently adopted by the Commonwealth of Virginia that governs the design and installation of all plumbing systems and equipment.

Yellow Grease shall mean kitchen cooking oil used in food preparation that has not been in contact or contaminated with other sources such as water, wastewater or solid waste. An example of yellow grease is fryer oil, which can be recycled into products such as animal feed, cosmetics and alternative fuel.

5. GREASE CONTROL DEVICES

A. *Requirements.* FSEs shall have a GCD(s) meeting all applicable requirements for testing and certification of ASME A112.14.3, ASME A112.14.14, PDI G101 and/or CSA B481. The GCD(s) shall be sized and selected in accordance with the HRRTS

1. New Establishments - FSEs shall be required to install, operate and maintain GCD(s) in compliance with the requirements of this Section.
2. Existing Establishments – Existing FSEs in operation as of the effective date of this BMP shall be allowed to operate and maintain their existing GCD, provided such GCD is in proper operating

condition. If the condition of the current GCD is found by HRSD to not be in proper operating condition, then the FSE shall comply with the requirements of this Section. Existing FSEs that are renovated or expanded shall install GCD(s) meeting the requirements of this Section. FSEs with no GCD installed may be required to comply with the requirements of this Section.

3. Retrofit - Any existing FSE may be required to install or upgrade a GCD if such FSE is contributing FOG to the sanitary sewer system, as determined by the locality and/or HRSD.

B. Installation of Grease Control Devices

1. GCDs shall be installed by a plumber licensed in the Commonwealth of Virginia. Every GCD shall be installed per the requirements of this Section and connected so that it is readily accessible for inspection, cleaning and removal of grease laden waste at any time. Installation shall be in compliance with the Virginia Plumbing Code and the manufacturer's instructions. In the event an FSE is not required to install a GCD per the Virginia Plumbing Code, a waiver may be issued by HRSD if the FSE can provide evidence their business practices do not introduce FOG into the sanitary sewerage system. Otherwise, the FSE shall comply with the requirements of this Section.
2. GCD covers shall meet the following load rating requirements:
 - i. Indoor, foot traffic only, minimum 300 pounds
 - ii. Indoor, pallet jack or forklift traffic, minimum 2000 pounds
 - iii. Outdoor, non-vehicular traffic, minimum 2000 pounds
 - iv. Outdoor, vehicular traffic, minimum AASHTO M306 H20/HS20
3. GCD's shall have their manhole covers secured at all times with bolts, or locking mechanisms, or shall be of sufficient weight to prevent unauthorized access, or shall have a safety apparatus secured in place under the cover to prevent accidental entry if the cover is not secured in place.

C. Maintenance of Grease Control Devices

1. All GCDs shall be maintained at the owner's and/or FSEs expense. Maintenance shall include the complete removal of all contents, including floating material, wastewater and settled solids. Decanting or discharging of removed waste back into the GCD, private sewer line or into any portion of the sanitary sewerage system is prohibited. GCDs shall be maintained by a certified grease hauler unless otherwise approved (see HRRTS Appendix C).

2. **Automatic Grease Removal Devices (AGRD)** shall be: (1) opened and inspected for food solids, FOG buildup, and functionality of all parts at a minimum of once every two weeks (bi-weekly) by the FSE; (2) the food solids collection basket and the grease collection bucket shall be emptied of their contents at a minimum of once per day by the FSE; (3) the device shall be inspected and completely cleaned at a minimum of every 90 days (quarterly) by a certified grease hauler.
3. **Gravity Grease Interceptors (GGI)** shall be pumped out completely, at a minimum of, every 90 days or when the total accumulation of FOG, including floating and settled solids, reaches twenty-five percent (25%) of the overall liquid volume; whichever occurs first.
4. **Hydromechanical Grease Interceptors (HGI)** shall be opened, inspected and completely cleaned, before their maximum capacity is reached as established by the manufacturer in accordance with third party validated test reports. The maintenance frequency shall be determined in accordance with the sizing and selection requirements for HGIs in the HRRTS. At no time shall an HGI be cleaned less frequently than once every 90 days, or as approved by HRSD.
5. HRSD may establish a more frequent cleaning schedule if the FSE is found to be contributing FOG in quantities to cause grease buildup in the sanitary sewerage system.
6. HRSD may establish an alternate cleaning schedule on a case-by-case basis upon submittal of the Cleaning Frequency Variance Request Form.
7. The use of additives (including, but not limited to, products that contain solvents, emulsifiers, surfactants, caustics, acids, enzymes or bacteria) by FSEs is prohibited as grease management control. However, additives may be used to clean the FSE drain lines so long as the usage of such additives will not cause FOG to be discharged from the grease control device to the sanitary sewer system. The use of additives shall not be substituted for the maintenance procedures required by this Section. The Safety Data Sheet for all additives shall be submitted to HRSD for review and approval, prior to use.

6. WASTE DISPOSAL

- A. Waste removed from a GCD shall be disposed of at a facility permitted to receive such wastes. Waste material removed from GCD(s) shall not be discharged directly or indirectly into any portion of the sanitary sewerage system, private sewer line, stormwater system, or returned to any GCD.

1.FSEs approved for self-cleaning shall dispose of the waste in accordance with the requirements contained in the HRRTS Appendix C.

- A. FSEs shall dispose of yellow grease in a renderable yellow grease container that is labeled, at a minimum, with the name of the company supplying the container. Contents shall not be discharged to the environment. Yellow grease shall not be poured or discharged into any portion of the sanitary sewer system.

7. RECORD KEEPING

- A. All cleaning and maintenance records shall be available on-site for inspection and copying by HRSD personnel for the most current three (3) year period for all GCDs.
- B. FSEs utilizing professional grease hauling services by a certified grease hauler shall provide records that contain at a minimum: the dates of cleaning and maintenance; the name and business address of the company providing the service; the name of the technician(s) and associated HR FOG Program ID number; the condition of the GCD; the volume of waste removed in the cleaning; and, a core measurement, using a core sampler, to include the total liquid volume, settle solids and grease layer.
- C. Where approved, FSEs performing GCD cleaning, maintenance and waste disposal shall provide records that contain at a minimum, the dates of the cleaning and or maintenance and the name of the employee who cleaned the GCD.
- D. FSEs with an AGRD shall maintain a cleaning and maintenance log that contains at a minimum, the date, time and initials of the employee who performed each of the three (3) maintenance procedures as stated in Section 5C-2.

8. EMPLOYEE CERTIFICATION

FSEs shall always employ at least two (2) employees who have been certified by the HR FOG Program. A copy of each employee's certification shall always be on-site for review. Certifications are valid for three (3) years.

9. UNAUTHORIZED DISPOSAL/ DISCHARGE

Per Section 301 of the HRSD Industrial Wastewater Discharge Regulations, no person shall discharge or cause to be discharged into any

portion of the sewerage system, directly or indirectly, any wastes which may violate any law or governmental regulation or have an adverse or harmful effect on the sewerage system, maintenance personnel, wastewater treatment plant personnel, processes, or equipment, treatment plant effluent quality, biosolids quality, air quality, public or private property, or which may otherwise endanger the public, the local environment or create a nuisance, or which may interfere with or adversely impact wastewater treatment and/or biosolids technology, as determined by HRSD.

Any person causing damage to or obstruction of the sanitary sewerage system shall be liable to HRSD for the cost of the inspection and repair of the damage or obstruction as outlined in Section 609 of the HRSD Industrial Wastewater Discharge Regulations.

10. ENFORCEMENT ACTIONS

Enforcement actions resulting from non-compliance with any portion of this BMP or the HRSD Industrial Wastewater Discharge Regulations shall be applied in accordance with the HRSD Pretreatment & Pollution Prevention Enforcement Response Plan.

Issues identified that fall under the jurisdiction of other governing agencies shall be reported to the responsible agency.

11. CORRESPONDENCE

Correspondence and forms may be submitted via email to p3data@hrsd.com or mailed to:

HRSD
Pretreatment & Pollution Prevention Division
PO Box 5902 Virginia Beach, VA 23471-0902