Fats, Oils, and Grease (FOG) Control Program
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Best Management Practices

Best management practices (BMP) are designed to help Food Service Establishments(FSEs) comply with environmental regulations and prevent pollution. This BMP contains a set of operating procedures and guidelines designed to reduce the amount of fats, oils, and grease (FOG) discharged to the City of Wheeling's, Publicly Owned Treatment Works (POTW). The development of this BMP is intended to reduce the amount FOG introduced to the sanitary sewer system and protect the public health and environment from the hazards presented by sewer overflows.

As part of the Clean Water Act, the National Pretreatment Regulation (40CFR 403) was established to protect POTWs and the waterways in which they discharge. The Environmental Protection Agency (EPA) delegates this responsibility to the State of West Virginia Department of Environmental Protection (DEP). In Wheeling, WV the State has delegated local authority to the City of Wheeling, Water Pollution Control Division. It is the responsibility of the WPCD Industrial Pretreatment and FOG program to regulate non-residential discharges to the POTW.

***BMP guidelines for Food Service Establishments are enforceable through the City of Wheeling's Sewer Use Ordinance.**

Background

FSEs are commercial facilities that prepare and or serve food or beverages for sale or consumption. Through daily activities working with food, all FSEs generate varying amounts of FOG. While fats, oils, and grease are most commonly associated with fried foods, they are generated in significant quantities in all types of commercial food preparation:

- Cooking meats
- Mayonnaise and salad dressings
- Butter, ice cream and other dairy products
- Creams and sauces

Problem

FOG tends to coat any pots, pans, ware, utensils, and equipment in which it contacts. When these materials are washed, the FOG is rinsed to the sewer. Sanitary sewer systems are neither designed nor equipped to handle FOG. In the sewer, the FOG coats the interior surface of the pipes. Overtime, FOG accumulations restrict the flow of wastewater through the sewer. Eventually the FOG can clog the sewer pipes causing the sewage to back up and spill onto the ground, waterways, and homes or buildings. This is called a sanitary sewer overflow (SSO) and endangers both the public health and the environment.

Fats, oils, and grease can also cause interference at the wastewater treatment facility. The FOG can negatively impact operations resulting in improper treatment of pollutants. These pollutants that are otherwise removed by the treatment process could be discharged to the river.

Grease Interceptor Practices

All grease interceptors and traps must be maintained on a regular basis.

Grease interceptor devices must be inspected to insure proper functionality during each pump out event.

Kitchen Practices

Strictly control the discharge of grease and solids to the interceptor/trap. By reducing the amount of these substances discharged, a food service establishment may be able to reduce the cost associated with a greater than quarterly pump out frequency. This will also lead to decreased plumbing maintenance cost.

- Fryer oil (yellow grease) must not be disposed of through the sanitary sewer. Yellow grease has re-use value and should be placed in a secured tank. Contract with a rendering service to haul the grease offsite for beneficial re-use.
- Reduce the amount of food particles washed down the drain. Food particles take up volume in the grease interceptor, resulting in increased pump out frequency.
- Do not use grinders or garbage disposal units. Ground food takes up volume in the grease interceptor, resulting in increased pump out frequency.
- Use rubber scrapers and paper towels to wipe off grease from pots, pans and ware into garbage cans before washing.
- Clean up all grease spills with paper towels and dispose of in the garbage.
- Do not wash straws, disposable gloves, paper, towels, or any other inappropriate materials down the drain.
- Skim/filter fryer grease daily and change oil when necessary.
- Use a test kit provided by your grocery distributor to determine when to change the oil in fryers. This extends the life of both the fryer and the oil. Build-up of carbon deposits on the bottom of the fryer acts as an insulator that forces the fryer to heat longer, thus causing the oil to break down sooner.
- Develop a rotation system if multiple fryers are in use. Designate a single fryer for products that are particularly high in deposits and change more often.
- Train all kitchen staff in these best management practices and the environmental impacts of grease in the sewer system.
- Place yellow grease re-use bins in easy access areas for staff. Follow up to ensure sure staff properly disposes of grease.
- Provide constant re-enforcement on proper disposal of fats, oils, and grease with staff.
- Post NO GREASE signs above sinks and on the front of dishwashers. The signs will serve as a constant reminder for staff working in the kitchens.
- Always use sink basket strainers to collect food wastes.
- Witness all grease interceptor cleaning and maintenance to ensure the device is properly operating. The food service establishment will ensure it is getting value for the cost of cleaning the grease interceptor. To properly clean the interceptor the entire contents must be removed,

which includes the scraping of the walls, floor, baffles, and pipework.

- Keep a bound maintenance log. The maintenance log serves as a record of the frequency and volume of grease collected during the grease trap/interceptor cleaning. It also serves as a record of all maintenance and repairs pertaining to the grease trap/interceptor.

- Prevent Grease from Entering Surface Waters through the Storm Drain

- Cover outdoor grease storage containers so that they do not collect rainwater. Since grease floats on water, the rainwater can cause an overflow onto the ground, which will eventually reach the stormwater system.

- Locate grease storage containers away from storm drain catch basins.

- Use absorbent pads or other material to clean up spilled material around outdoor equipment and grease storage containers and dispose of through solid waste procedures. Do not use free flowing absorbent material such as kitty litter that can discharge to the storm drain system.

- Do not clean equipment outdoors in an area where water can flow to the gutter, storm drain or street.

Additives

Many vendors service grease interceptors with chemicals or microorganisms to remove FOG material. Known interceptor additives are:

- Emulsifiers, detergents, or caustic substances – these chemicals act to break up the grease and allow it to pass through the interceptor and into the sewer system where it can reform and cause blockages. These substances reduce the efficiency of the interceptor or trap and are prohibited for use as an additive.

- Enzymes – have the same effect as emulsifiers and are therefore prohibited as additives.

Guidance for Working with Grease Hauling Companies

- Work closely with your hauling company to make sure your interceptor is serviced at the proper frequency.

- Be sure your hauler leaves a copy of each pump out report and any other interceptor maintenance documentation.

- Review your pump out reports from haulers for accumulations of grease and solids. If amounts are nearing or exceeding 25% review kitchen practices to find areas in which improvements can be made to reduce the introduction of FOG and solids. If the pump out report indicates that the interceptor is in need of repair, contact hauler or plumber to have it serviced immediately.

- Ask your hauler where/how grease interceptor contents are disposed.

Grease Trap Maintenance

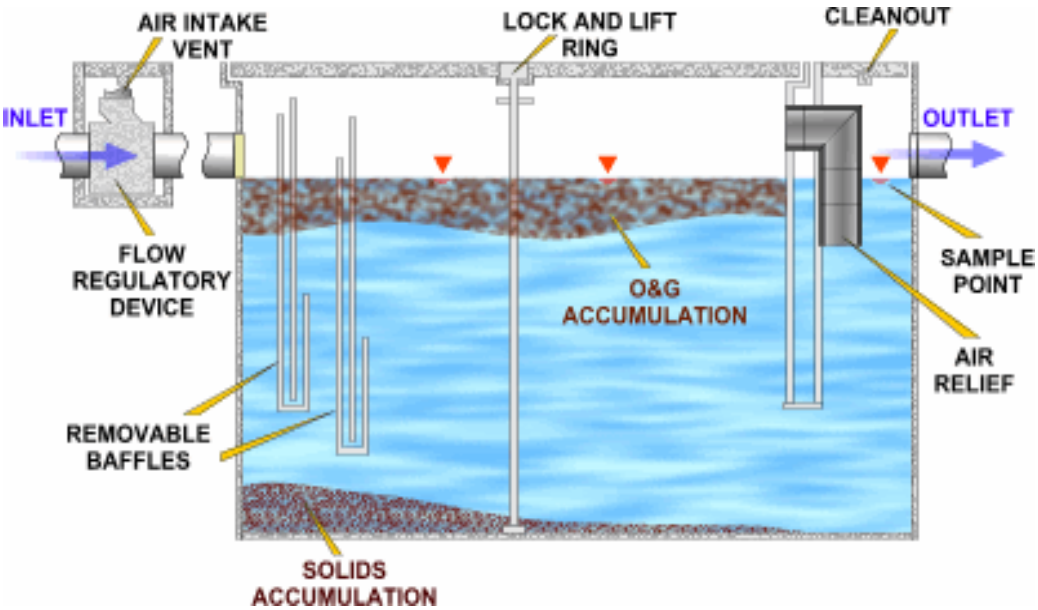
Maintenance staff or other employees of the establishment usually perform grease trap maintenance. Facilities with grease traps must clean their traps weekly at a minimum or sometimes even daily. When performed properly and at the appropriate frequency, grease trap maintenance can greatly reduce the discharge of fats, oil, and grease to the wastewater collection system. In many cases, an establishment that implements BMP's will realize financial benefit through a reduction in their required grease trap maintenance frequency.

WARNING! Do not add or use hot water, acids, solvents, caustics, or emulsifying agents when cleaning a grease trap.

Maintenance Instructions

1. Remove baffles if possible.
2. Dip the accumulated grease out of the trap and place in a watertight container.
3. Scrape the sides, lid, and the baffles with a putty knife to remove as much of the grease and solids as possible. Deposit the waste material in a watertight container.
4. Contact a hauler or recycler for grease pick-up or dispose of through solid waste procedures.
5. Replace the baffles and lid.
6. Record maintenance in maintenance log and include the following:
   (a) Date of maintenance
   (b) Person performing maintenance
   (c) Estimated volume of grease removed
   (d) Disposal location
   (e) Manager's signature or initials for verification

Typical Grease Trap Design (HGI)



Grease Interceptor Maintenance

Grease interceptor maintenance is usually performed by a grease pumper. The pumpers will empty the entire contents of the interceptor with a pumper truck and haul the grease and sludge to an approved disposal facility. When performed properly and at the appropriate frequency, grease interceptor maintenance can greatly reduce the discharge of fats, oil, and grease to the wastewater collection system. In many cases, an establishment that implements BMP's will realize financial benefit through a reduction in their required grease interceptor maintenance frequency.

WARNING! Do not use hot water, acids, solvents, caustics or emulsifying agents when cleaning a grease interceptor.

Maintenance Instructions

1. Contact a grease hauler or recycler for cleaning,
2. Record maintenance in maintenance log and include the following:
   (a) Date of maintenance
   (b) Person performing maintenance
   (c) Estimated volume of grease removed
   (d) Disposal location
   (e) Manager's signature or initials for verification
3. Retain receipt or manifest from grease pumper or recycler.

Typical Grease Interceptor Design (GGI)