

# Environmental sanitation and maintenance essay sample

[Environment](#), [Water](#)



## I. Conditions of Premises

Food establishments are all about its physical facilities, its contents and its surroundings or property. The exterior of the establishment including the building structure, parking space, landscaping, doors and windows. The exterior design is also responsible for attracting customers. The exterior must be clean, safe and pest-free. i. Proper Water Supply

Adequate water supply and proper sewage disposal are vital to the sanitation of the establishment thus drinking water must only be obtained from an approved source. When another non-public water system is used, it must be operated and maintained according to the water system jurisdiction. A reservoir that is used to supply drinking water to devices such as Fountain dispensers, Vending Machines, or Produce foggers must be maintained and cleaned at least once a week by: Drain and disassemble water and aerosol parts

Brush clean the reservoir, aerosol tubing, and discharge nozzles with a suitable detergent sol'n. Flush the complete system with water to remove the detergent and particulate accumulation. Rinse by immersing, spraying or swabbing the reservoir, aerosol tubing, and nozzles with at least 50 ppm hypochlorite sol'n. – Non-potable water sources must be approved and may not be used for culinary purposes. A drinking water system must be flushed and disinfected before being placed into service. – Proper disposal of sewage greatly reduces the risk of Fecal Contamination of food and water. The FDA food code require sewage from food establishments to be disposed through: A public sewage treatment plant

An individual sewage disposal system that is sized, constructed, maintained and operated according to the rules and regulation of the jurisdiction. II.

#### CONDITION OF BUILDING

-The entrance area to the facility creates a lasting impression, it should be easy to find and accessible to streets and parking areas. Using a self-closing door is acknowledged to keep flying insects from entering. i. Floors, Walls, Ceilings

-Proper cleaning, repair and construction are important elements of an effective sanitation program. Consider the ff. when making a selection of floors and walls: Sanitation

Safety

Durability

Comfort

Cost

-Smooth and easy to clean surfaces are needed in food preparation areas, store rooms, and ware washing areas. iii. Floors

-The Preferred floor materials include:

Terrazzo

Quarry Tile

Asphalt Tile

Ceramic Tile

-Ceramic may also be used if it has been sealed with an epoxy. -In food production and ware washing, avoid:

Wood

Vinyl

Carpeting

\*Mainly because these materials absorb dirt, soil and water that may cause contamination.\* – Floors graded to drains are needed in the food establishments where water-flush method is used for cleaning. -Floors and walls must be coved and sealed.

-Slips and Falls are the most common accidents happening in food establishments, In order to prevent this, it is advisable to use mats and anti-slip floor coverings to protect the safety of the workers thus it is prohibited to use sawdust, diatomaceous earth. iv. Walls and Ceilings

-Smooth, nonabsorbent and easy to clean walls and ceilings must be provided in food preparation and ware washing areas, walk-in refrigerators, and toilet facilities. Light colors enhance the lightning and makes dirt's easy to see. Ceilings should be of non-porous, easily cleanable materials. Everything that is attached to the ceiling and walls must be easy to clean and always maintained. ii. RESTROOM SANITATION

-Toilet facilities are required for all employee restrooms must be conveniently located and accessible to employees during all hours of operation. Materials used in the construction of the toilet facility should be durable and easily cleanable. The walls, fixtures and the floor must be maintained cleaned at all times thus poor toilet sanitation can spread diseases. Unclean toilet facility can also affect the employees attitudes and moods. iii. HANDWASHING FACILITIES

-a hand washing facility must always be equipped with sanitary materials like hot and cold running water, hand dryer, toilet paper and liquid soap. Bar soaps are frequently discouraged because bar soaps may become contaminated by germs and soil. Hand Washing Stations must be adjacent or located to restrooms. III. PLUMBING HAZARDS IN FOOD ESTABLISHMENTS

- The FDA food code includes many different components within the definition of a Plumbing system, these are: Water Supply and Distribution pipes

Plumbing fixtures and traps

Soil, waste and vent pipes

Sanitary and storm sewers

Building drains including their respective connections and devices within the building and at the site - A properly designed and installed plumbing is extremely important. Contamination on the public water supply is a real public health problem. A lot of outbreaks of dysentery, gastroenteritis, typhoid fever, and chemical poisonings have been traced to cross connection and other types of plumbing hazards. Plumbing systems are to be maintained in good repair. i. CROSS CONNECTIONS

Cross Connection is where contaminants from drains, sewers, or waste pipes has any physical links to a potable (safe to drink) water supply. It can either be Direct or Indirect. A Direct Cross Connection happens when a potable water system is directly connected to a drain, sewer, or any other source of contaminants. An Indirect Cross Connection is when the source of contamination may be blown or sucked into a potable water. ii. BACKFLOW

The backward flow of the contaminated water to a potable water supply which is caused by Back Pressure and that only occurs under 2 conditions: 1. Backpressure where the contamination is forced into a potable water through a connection that's has a higher pressure than the water system 2. Backsiphonage when there is reduced pressure or vacuum formed in the water system which may be caused by A water main break or the shut-down of a portion of the system for repairs. iii. METHODS AND DEVICES TO

#### PREVENT BACKFLOW

-a properly designed and installed plumbing system will keep food, utensils and equipments from being contaminated. Cross connections and backflow can be prevented by using these devices: Air Gap – a physical separation of the potable and non-potable system by a vertical air space. It is also the most dependable backflow device. Atmospheric Type Vacuum Breaker- Can be used on most inlet type water connections which are not subject to back-pressure. Pressure Type Vacuum Breakers- designed for use under continuous supply pressure but are not good under back pressure. This device should only be used where non-pressure vacuum breakers cannot be used. Double Check Valve- may be used as protection for all direct connections through which foreign materials might enter the potable water system Reduced Pressure Principle Backflow Preventers- Installed as main line protection to protect the municipal water supply. May also be used when there is the possibility of contamination by material that is a potential health hazard. IV. GREASE TRAPS

Food Establishment that uses a lot of grease should have a grease trap. A grease trap removes liquid grease and fats after they have hardened and become separated from the waste water. Failure to locate a grease trap may lead to failure of the sewage system and vermin harborage.

## V. GARBAGE REFUSE AND SANITATION

Proper storage and disposal of Garbage and refuse protects food and equipments from contamination. REFUSE is a solid waste which is not disposed through the sewage disposal system. GARBAGE is the term applied to food waste that cannot be recycled. Good management of these waste decreases attraction of insects, rodents and other pest. An inside storage room and all containers must be large enough to hold any refuse, recyclables, and returnables that accumulate food in the establishment. Do not put containers in locations where they might create a public health nuisance or interfere with the cleaning of nearby areas. Use durable, cleanable, insect and rodent repellent, leak proof and non-absorbent equipment and receptacles to store refuse, recyclables, garbage, and returnables.

Use plastic bags and wet strength paper bags instead. Always keep the receptacle covered if they contain garbage and are not in continuous use or after they have been filled. It is also advisable to provide suitable cleaning equipments and supplies such as high pressure pumps, hot water, steam and detergent to thoroughly clean the receptacles, water used for cleaning these materials are considered to be sewage and to be disposed according to the

law. Outdoor storage are also required, it must be kept clean and has a tight-fitting lid to keep insects and rodents away. VI. PEST CONTROL

-All food establishments must have this program. Insects (house flies, cockroaches, small moths and beetles) and Rodents (rats, house mice) are the targets, they carry a disease-causing bacterias In and on their bodies. -

The key element of a successful pest control program is Prevention by:

Prevent entry of insects and rodents into the establishment

Eliminate food, water, and places where insects and rodents may hide.

Implement an integrated pest management program to control insect and rodent pests that enter the establishment i. INSECTS

-Insects may spread diseases, contaminate food, destroy property or be nuisance in food establishments. Insects need food, water and a breeding place in order to survive. The best method of insect control is keeping them out, good sanitation and integrated pest management when needed. ii. FLIES

-House flies, blow flies and fruit flies are the most common flies found in food establishments. The House fly is the one most likely to spread diseases. 21 species of flies are categorized as “ disease-causing flies” they are proven to be carriers of Shiga toxin-producing Escherichia coli,

Salmonella, Shigela, and other germs that can cause Food Bourne Illness.

When a fly walks over filth such as feces, the bacteria sticks to its body and legs, when the fly goes into an area where food is prepared, it walks on food therefore contaminating it. The fly cant chew sold food so the fly vomits on the food to soften it before eating it. Blow-Flies are usually larger than



house-flies. They're a shiny blue, green, or bronze color; they have a keen sense of smell and are attracted to odors produced by food establishments and food-processing plants. Fruit Flies are the smallest among the three and are attracted to decaying fruit. They are known to spread plant diseases. Their role in the spread of germs that cause infections in humans is currently under investigation. ii. i FLY CONTROL

-Eliminating the insects food is the first step to fly control. Store food properly to protect it from flies, store garbage and other waste in a fly tight container that are cleaned regularly. Equip windows, entrances, and loading and unloading areas with tight fitting screens to prevent the entry of insects. Insect electrocutor traps are devices used to control flying insects such as moths and houseflies although the FDA prohibits this device from being used over a food preparation area, instead, one can use non electronic devices such as glue traps and pheromone attractants which is effective and are allowed in areas where electrocuting devices are not. Chemical Insecticides should be applied by a professional pest control operator. Remember, Insecticides are supplement to, never a substitute for, a clean food establishment. iii. COCKROACHES

Roaches are capable of carrying disease organisms on their body. They crawl from toilets, sewers into kitchens, running over utensils, food preparation areas and unprotected food. They carry bacteria on their hairy legs and body as well as their intestinal tract. Roaches avoid light and commonly hide in cracks and crevices under and behind equipment and facilities iii. i

COCKROACH CONTROL

To control cockroaches, maintain good housekeeping indoors and outdoors. Eliminate hiding places by picking up unwanted materials, such as boxes and rags. Also fill cracks and crevices in floors and walls and around equipment. Doors and windows should be tight fitting or protected by screening, air curtains or any effective means. Check incoming food supplies for egg cases and live roaches. Chemical Control is only recommended in combination with the other control procedures and not as primary method. Insecticides are made to kill, only a professional pest control operator may do this procedure.

#### iv. Moths and Beetles

Moths and beetles cause concern since they invade certain foods and can do extensive damage. The saw-toothed grain beetle, flour weevil, and rice weevil are examples of stored product beetles. These insects feed on a variety of products including corn, rice, wheat, flour, beans, sugar, meal and cereals. Small moths and beetles create problems of wasted food and nuisance rather than disease.

#### iv. i CONTROL OF MOTHS AND BEETLES IN STORED FOODS

-begins with proper restoration. Use the FIFO (first in, first out) system of stock rotation. All opened packages or sacks should either be used immediately or stored in covered containers. Clean shelves and floors frequently. Examine incoming packages for signs of infestations; keep infested products away from other stocks until they are ready for disposal. Always keep dry food storage area cool. Cold temperatures limit the growth of these insects due to egg laying. Insecticides may also be used if re-infestation occurs.

Rodents easily adapt to human environment and tolerate a wide range of conditions; they may carry germs that can cause a number of diseases including Salmonellosis, Plague, and Murine Typhus. Rodent damage and consume large quantities of foods each year. The term “ domestic” rodents include the Norway Rats, Roof Rats and House Mice. Norway Rats- is a primarily a burrowing rat. Norway rats would eat anything but prefers garbage, meat, fish, and cereal. They stay close to food and water. Their range of travel is no more than 100-150 ft. Roof Rats- is smaller than the Norway rat but is a very agile climber. It harbors in the upper floors of building but is sometimes see in sewers. They prefer vegetable, fruit, cereal and grain for food. The range of travel is also 100-150 ft. House Mouse- is the smallest among the domestic rats. Primarily found in and around buildings, nesting in walls, cabinets and stored goods. The House mouse is a nibbler ad prefers cereal and grain for food. Its range of travel is 10-30 ft. v. i

#### SIGNS OF RODENT INFESTATION

– Rodents are nocturnal. It is necessary to look for signs of their activities from rodent signs you can determine the type of rodent, whether it is a new or old problem, and whether there is a light or heavy infestation.

**DROPPINGS-** the presence of rat or mouse feces is one of the best indication of an infestation. Fresh droppings are usually moist, soft and shiny, old droppings become dry and hard. Norway rat droppings are the largest and have rounded ends. Roof rat droppings are smaller and more regular in shape. House mouse droppings are very small and pointed at each end

**RUNWAYS AND BURROWS-** Rats stay in a limited area; they are very cautious

and use the same trails and paths, the usual size of these paths are 2-3 inches wide.

**RUBMARKS-** Rats prefer to stay close to walls by using the same runs, their bodies rub against the wall leaving a black mark called rubmark. Mice don't leave rubmarks that are detectable; except when infestation is heavy.

**Gnawings-** Rats teeth grow up to 4-6 inches a year, as a result rats have to do the same gnawing each day to keep their teeth short enough to use.

**TRACKS-** Tracks are easier to see in a dust in little used rooms and in mud around puddles. Rat tracks may be 1 to ½ " long.

**MISCELLANEOUS SIGNS-** Rodent urine can be seen in UV light. Rats can leave a different pattern than mice.

#### v. ii RODENT CONTROL

-Effective rodent control begins with a building and grounds that will not provide a source of food shelter and breeding areas. The area around the food establishment should be free of litter, waste, garbage, refuse, uncut weeds and grass. Get rid of all unwanted materials that may provide as food and shelter to rodents. Prevent rodent entry by equipping an establishment with a self-closing door and door flashings that will serve as a rodent barrier.

Traps are useful around food establishments where rodenticides are not permitted or hazardous. Rodenticides are dangerous chemicals that can contaminate food and food-contact surfaces if not handled properly. The use of tracking powder pesticides is prohibited in food establishments.

These type of pesticides can be dispersed throughout the building and directly and indirectly contaminate food, equipment, utensils, linens and single service/single use articles.

Is a system that uses a combination of sanitation, mechanical and chemical procedures to control pests. Chemical pesticides are only used as a last resort and only in the amount needed to support the other control measures in the IPM program. The National Pest Management Association (NPMA) recommends a 5 stem program for IPM

1. INSPECTION/
2. IDENTIFICATION
3. SANITATION
4. APPLICATION OF TWO OR MORE PEST MANAGEMENT PROCEDURES
5. EVALUATION OF EFFECTIVENESS THROUGH FOLLOW UP INSPECTIONS.

There are many benefits of an integrated pest management control program. It is cost-effective and more efficient than programs using only chemicals. IPM is also longer lasting and safer to you, your employees and your customers.