FOOD SERVICE MANAGER'S CERTIFICATION MANUAL

CITY OF HOUSTON
Department of Health and Human Services
Bureau of Consumer Health Services
8000 N. Stadium Drive
Suite # 200
Houston, Texas 77054
832-393-5100

rev.8/2011

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INTRODUCTION

Food establishment owners, managers, supervisors, and employees must work as a team to achieve the highest standards of food safety. It is a constant battle in the industry with high turnover among employees, language barriers, complacency, negligence, lack of knowledge, and other factors to consider with the operation of a food service establishment. Most of these barriers can be overcome with proper initial and on-going training of your staff. Your cooks should have knowledge of various recipes, including steps to prevent contamination in the process. Survey the entire facility for flaws both physical and human in nature. Make appropriate corrections immediately or as soon as possible. Develop logs, records, mini-posters, pocket cards, and charts for workers to refer to as reminders of safe food practices. It is vital to understand when and how contamination can occur to prevent foodborne illness. Employees must be trained to handle foods safely.

FOOD SAFETY ISSUES

According to the Restaurant USA report in November 2002, "an average of one out of five meals consumed by Americans at the rate of 4.2 meals per week is prepared in a commercial setting. Privately prepared meals are consumed at an average of 14.4 meals per week". In commercial dining settings, consumers expect good food, good service, clean workers, and a clean environment. Food establishments attempt to meet or exceed these expectations in order for a return visit by the consumer.

Foodservice operations must take into consideration the multiple food handling and processing methods that incur from farm to table that may afford the opportunity for food contamination. Massive feeding operations, imported foods being introduced into the food chain with specialized processing or undeveloped food safety practices, and high employee turnover impacting food safety, make the task of protecting foods from contamination not only complicated, but critically important.

PRICE OF FOODBORNE ILLNESS

Per year:

76,000,000 = Reported Illnesses 325,000= Hospitalized 5,000 = Deaths

Food servicing, food processing, and other food related operations loose between $10 – $83 billion dollars annually due to food borne illness outbreaks. The repercussions of a foodborne illness to a food operation include:

- Lawsuits including attorney and court fees in payment to the plaintiff
- Closure of the operation by the regulatory authority and/or business losses
- Loss of customers, sales, vendors
- Loss of reputation and good will
- Loss of employees
- Employee morale decrease or absenteeism
- Increase of insurance premiums
- Retraining of employees
- Embarrassment (exposure by the media, internet)

RISK FACTORS

Risk factors are those practices or procedures that pose the greatest potential for foodborne illness. The risk factors are determined by the Center for Disease Control and Prevention (CDC) and the US Food and Drug Administration (FDA).

The five (5) most common risks factors responsible for foodborne illness:

- Food from Unsafe Sources
- Improper Holding/Time and Temperature
- Inadequate Cooking
- Poor Personal Hygiene
- Contaminated Equipment/Prevention of Contamination

PEOPLE AT RISK

There are certain groups of people such as infants and pre-school age children, elderly people, pregnant women, people with weakened immune systems, including people taking certain medications who have a higher risk for contracting foodborne illness. For this group, the length and severity of a foodborne illness is much greater.

HIGHLY SUSCEPTIBLE POPULATION (HSP)

Groups of persons who are more likely than the other populations in general to experience foodborne disease because they are:

1. Immunocompromised, pre-school age children or older adults.
2. Obtaining food at a facility that provides services such as custodial care, health care, or assisted living such as a child or adult day care center, kidney dialysis center, hospital, nursing home, or senior center.

Highly susceptible population (HSP) facilities shall not serve or offer for sale in a ready-to-eat form:

- Raw animal foods/raw fish/raw-marinated fish/raw molluscan shellfish/steak tartare;
- Partially cooked animal foods/lightly cooked fish/rare meat/soft cooked eggs (made from raw shell eggs)/ meringue; and
- Raw seed sprouts.

MANAGEMENT AND EMPLOYEE RESPONSIBILITY

Preventing food contamination which can lead to foodborne illness is the responsibility of every food service employee, regardless of the type of operation.

The **person in charge** is the individual present in the food establishment who is the apparent supervisor of the food establishment at the time. The person in charge must **demonstrate knowledge** of foodborne illness prevention and other factors at the request of the health officer. Their duties include:

- ensuring that the food service operation is in compliance with the Food Ordinance,
- monitoring employees health/symptoms of diseases transmissible through food; monitoring employees activities and making immediate corrections of deficiencies;
- controlling cross-contamination through handwashing and maintaining the food establishment in clean condition, and in good repair;
- knowledge of maintaining time and temperature of potentially hazardous foods and the prevention of foodborne illness;
- knowledge of hazards associated with the consumption of raw or undercooked meat, poultry, eggs, and fish;

- knowledge of the required temperatures and times for safe refrigerated storage, hot and cold holding, cooling, thawing, and reheating of potentially hazardous foods; ensuring that bare hand contact with ready-to-eat food is prevented unless employee training is initiated and documented procedures are maintained and not allowed at HSP establishments;
- knowledge of correct procedures for washing and sanitizing equipment and utensils; providing equipment that is properly designed, used in accordance to instructions, maintained in good repair, and cleaned;
- ensuring that water sources are protected from contamination by preventing backflow and cross connections.
- ensuring that employees are provided with the required handwashing and toilet facilities including supplies.

The food service worker's responsibilities include: reporting to work clean and free of illness, reporting to management illnesses that pose harmful risks to other workers/persons/foods/utensils, following procedures to protect foods from contamination, recognizing and correcting food safety hazards and activities, reporting to management hazards and violations, utilizing and referring to temperature logs and records, utilizing proper utensils/food equipment/temperature measuring devices, practicing good and safe personal hygiene, following hand washing procedures and bare hand contact policies.

LESSON 1

FOODBORNE ILLNESS, FOOD HAZARDS, POTENTIALLY HAZARDOUS FOODS

MICROORGANISMS ARE THE PRIMARY CAUSE OF FOODBORNE ILLNESS

Microorganisms are the primary cause of foodborne illness and are identified by type: bacteria, virus, mold, yeast, and parasites. Bacteria can cause foodborne illness or spoil foods. For example, mold is a spoilage microorganism while Shigella is a disease-causing microorganism. Some bacteria are good for us. For example their presence in our digestive tracts breaks down wastes in our body. Some molds are used to make the antibiotic penicillin, and are utilized in the ripening of cheese. Yeasts are used for breads and beer fermentation.

FOODBORNE ILLNESS

A foodborne illness is an infection or illness carried or transmitted to people by food containing harmful substances.

TYPES OF FOODBORNE ILLNESS

1. Foodborne infection is caused by eating food contaminated with microorganisms and once in the body, the organisms continue to reproduce and cause illness. Bacteria causing infections include Salmonellosis and Listerosis. Viruses include Hepatitis A, and norovirus. Parasites include Trichinella and Anisakis.

2. Foodborne intoxication is caused by consuming food containing a toxin or chemical. Toxins may be caused by bacteria due to waste products released by the microorganisms. Clostridium botulinum or Staphylococcus aureus are examples of foodborne illness intoxications. Toxins are also the natural part of some plants such as mushrooms. Seafood toxins include scombroid and ciguatera. Chemicals and poisons such as cleaning compounds, pesticides, sanitizers, and metals cause intoxications.

3. Toxin-mediated infections are the result of eating food containing harmful microorganisms which produce toxins while in the intestinal tract. Viruses and parasites do not cause toxin-mediated infection. Bacteria such as Shigella and Shiga toxin-producing E. coli cause toxin-mediated infection.

FOODBORNE DISEASE OUTBREAK

<u>The occurrence of two or more cases of a similar illness resulting from the ingestion of a common food</u>

INCUBATION PERIOD

An incubation period refers to the amount of time it takes for the symptoms of a foodborne illness to appear once the contaminated food is consumed. The incubation period for most microorganisms causing foodborne illness is 4 to 24 hours. Typical symptoms of foodborne illness include diarrhea, nausea, and vomiting.

HAZARDS

Food hazards (anything that can cause an unacceptable health risk by illness or injury to a consumer), are divided into three categories: biological, chemical, and physical. When safe foods are exposed to hazards, contamination occurs**. Contamination is the presence of harmful substances or organisms in food.** Of the three hazards, it is the biological hazard that causes a majority of foodborne illnesses.

- **Biological**- disease-causing microorganisms commonly associated with humans and raw food.
- **Chemical** - chemical substances enter into the food.
- **Physical -** foreign objects that are not intended to be a part of the ingredients get into the food.

HAZARD	DESCRIPTION	EXAMPLE
Biological	"Germs": bacteria, parasites, viruses, fungi, biological toxins.	Food worker with Hepatitis A handles ready-to-eat foods with his/her bare hands.
Chemical	Poisonous substances: pesticides, food additives, cleansing agents, plant/fish toxins, toxic metals.	Soft drinks become contaminated by copper leaking from a broken soda fountain valve.
Physical	Hard or soft objects in foods often causing immediate injury: broken glass, jewelry, band-aids, staples, fingernails.	Staples from a message board falls onto sandwiches below.

BACTERIA

Bacteria are living microorganisms each made up of a single cell. They are present everywhere: in the human body, in meats, plants, soil, fish, air, and water. Bacteria, more common than any of the other microorganisms, are the biggest threat to food safety. Since bacteria require nutrients to function
(water, air, food). Disease - causing bacteria, or **pathogens** feed on the nutrients in potentially hazardous foods and multiply very rapidly at favorable temperatures while other bacteria discharge toxins as they multiply or die – both resulting in foodborne illness.
Toxins are the waste product released by microorganisms into foods,

REPRODUCTION

Bacteria reproduce by cell division. One cell becomes two, two - four, four-eight, and so on. This doubling process is called **binary fission**. Under ideal conditions, bacteria multiply at an explosive rate. A single cell becomes billions in 10 – 12 hours.

GROWTH PATTERN

The growth pattern of bacteria follows a curve and occurs in the following phases:

- **Lag phase -** bacteria adjust to a new food environment.
- **Growth phase -** rapid growth, cells double at a constant rate during this phase.
- **Stationary phase -** bacteria have increased to large numbers and compete for space/nourishment. Bacteria no longer reproduce, some may die.
- **Death phase -** cells die more quickly from producing toxins or from a lack of nutrients.

VEGETATIVE AND SPORE FORMS

Bacteria may exist in two forms – a vegetative state or spore state.
In a **vegetative** state, bacteria are actually reproducing, consuming nutrients, and producing waste products known as toxins. In a **spore** state, bacteria form a thick wall within the cell for protection against harsh environmental conditions such as boiling or freezing. During this protective period of hibernation, spores cannot reproduce or grow. However, spores return to a vegetative state when the environment becomes favorable for their growth. For example, holding cooked meats at room temperature for an extended amount of time would allow spores to return to a vegetative state.

The following table compares the vegetative and spore forms of bacteria. The table shows that spores are almost impossible to destroy. Keep foods safe and prevent illness by keeping harmful numbers of bacteria out of food.

VEGETATIVE BACTERIA	**SPORE BACTERIA**
Can be killed by cooking temperatures.	Are resistant to boiling and freezing temperatures. Can not be killed by cooking. Difficult to destroy.
May be resistant to refrigeration temperatures.	
May survive freezing.	May survive freezing.
Cook foods to required temperatures to kill vegetative bacteria.	Properly thaw, cool, and reheat foods to prevent spores from returning to a vegetative state.
Associated foods: Chicken salads and gravies, eggs, puddings, meats, poultry.	Associated foods: Foods from the soil such as potatoes, rice. Gravies, meat dishes.
Associated practices: Cross contamination from raw meats to ready-to-eat foods, improper hand-washing, leaving foods at room temperatures.	Associated practices: Improper cooling, cooling in large batches, reheating on steam tables, slow cooking, cooking in large batches.
Associated microorganisms: Salmonella, Staphylococcus aureus.	Associated microorganisms: Clostridium perfringens, Bacillus cereus.

BACTERIAL GROWTH FACTORS (F.A.T.T.O.M.)

There are six factors that affect bacterial growth:

F	A	T	T	O	M
food	**acidity**	**time**	**temperature**	**oxygen**	**moisture**

FOOD

Bacteria can grow to dangerous levels in high-protein foods such as meat, poultry, seafood, dairy products, cooked pasta, cooked beans, and other food of plant origin that has been heat treated. These potentially hazardous foods are most likely to support the rapid and progressive growth of harmful bacteria.

ACIDITY (pH)

The pH of a food is the measure of its acidity or alkalinity. Water is neutral. Bacteria grow best in food that is neither strongly acidic nor strongly alkaline with a pH value between 4.6 and 7.0.Highly acidic foods, (foods with a pH of 4.6 or less), such as vinegar and citrus fruits make it difficult for bacteria to grow.

TIME

Bacteria reproduce by dividing every 10 to 30 minutes under ideal conditions. For example, one bacterium can multiply to over 1,000,000 in **4 hours.**

TEMPERATURE

Bacteria grow best at certain temperatures. Most harmful bacteria grow best in a temperature zone between **41° F. and 135° F. (5° C. and 57° C.). = "Danger Zone"**

OXYGEN

Bacteria vary in their requirements for free oxygen and are classified as follows:

- Aerobes grow only when supplied with free oxygen. Example: Listeria monocytogenes
- Anaerobes grow only when free oxygen is absent or excluded such as in a vacuum-sealed jar or pouch, in a can or in a large, deep pot of food.) Example: Clostridium botulinum
- Facultative cells grow with or without the presence of free oxygen. Example: Salmonella

MOISTURE

Bacteria need water for growth and development. Their nutrients must be received in a water solution. The availability of water is described as **water activity (Aw).** Foods with a water activity of **0.85 or more** contain sufficient moisture for rapid bacterial growth.

The factors a food service manager uses to control bacterial growth are:
TIME & TEMPERATURE.

MAJOR FOODBORNE ILLNESSES

FI = INFECTION IN = INTOXICATION TM = TOXIN MEDIATED V = VIRUS P = PARASITE ST = SEAFOOD TOXIN

ILLNESS/PATHOGEN	FACTS/SOURCE/IMPLICATED FOODS	SYMPTOMS/PREVENTATIVE MEASURES
Listeriosis Listeria monocytogenes FI	Resists heat, salt, and acidity. Survives and grows at low temperatures. Unpasteurized dairy products, soft cheese, vegetables, seafood, ready-to-eat foods, meat, poultry.	**Onset**: 1 day to 3 weeks after eating. Fever, chills, headache, vomiting, meningitis, backache. Complications for pregnant women. Use pasteurized dairy products; thoroughly cook foods; proper refrigeration temperatures and time.
Salmonellosis Salmonella FI	Raw meat; poultry; seafood; eggs; dairy products; yeast; salad dressings; cake mixes; cream filled desserts, raw fruits and vegetables. Undercooked meat and poultry, cross contamination of ready-to-eat foods, improper cooling/refrigeration.	**Onset:** 6 to 72 hours after eating. Stomach pain, diarrhea, nausea, chills, fever, headache, vomiting. Thorough cooking of meats and poultry; avoid cross contamination of ready-to-eat foods; proper cooling and refrigeration; employee handwashing.
Campylobacteriosis Campylobacter jejuni FI	Low infective dose may cause illness. Cattle; sheep; chickens, infected food handler. Raw or undercooked chicken; unpasteurized dairy and meat products. Improper handwashing.	**Onset:** 2 to 10 days after eating. Fever, headache, and muscle aches, diarrhea (sometimes bloody), stomach pain, nausea. Cook foods thoroughly, especially poultry; avoid cross contamination and unpasteurized dairy products; proper handwashing.
Vibrio cholera Vibriosis FI	Fish and shellfish harvested from waters contaminated by human sewage. Improper handwashing after using toilet, improperly handling of raw seafood, improperly cooked seafood, poor refrigeration.	**Onset**: 2 to 48 hours after eating. Diarrhea, abdominal pain, nausea, vomiting, dehydration, shock.
Vibrio vulnificus Vibriosis FI	Raw or undercooked shellstock such as oysters. Bacteria in warm waters can infect human through open wounds. Shellfish harvested from waters contaminated by sewage. Improper cooking of shellfish and cross contamination, time/temperature abuse; unapproved product source.	**Onset**: 24 to 48 hours after eating. Nausea, Chills, fever, can cause wound infections; gastroenteritis; mild to severe watery diarrhea. **One of the most severe foodborne infectious diseases.** Thorough cooking of shellfish, prevent time/temperature abuse; obtain foods from approved sources.
Bacillus cereus gastroenteritis Bacillus cereus IN	Two onsets of illness. Grain foods, rice, soil, dust. Implicated foods are rice, pasta dishes, meats, cereal products, vegetable dishes, puddings, soups, pastries. Improper cooking and cooling.	**ONSET:** 1 to 6 hours- nausea and vomiting. Onset 8-16 hours- diarrhea. Thoroughly cook and cool foods.
Staph Food Poisoning Staphylococcus aureus IN	Toxin is produced. Skin infections; hair, nose and throat of human carriers. Ready-to-eat foods such as ham sandwiches; warmed- over foods, dairy products, custards, potato salad, and cream filled pastries. Poor hygiene. Time/temperature abuse provides bacteria the environment to produce toxins.	**Onset**: 1 to 6 hours after eating. Mimics the flu; sudden onset of vomiting, nausea, diarrhea, stomach cramps and dehydration. Eliminate poor hygiene; proper handwashing; proper hot holding and rapid cooling. COOKING WILL NOT DESTROY TOXIN.
Botulism Clostridium botulinum IN	Bacteria will produce the toxin in an anaerobic (no oxygen) environment. Soil, water, animal and vegetable origin. Improperly processed canned foods; garlic-in-oil products, grilled onions, baked potatoes, turkey loaf, and stews. Vacuum- packaged foods; time/temperature abused foods.	**Onset:** 12 to 36 hours after eating. Dry mouth, double vision, difficulty focusing, and trouble speaking, swallowing, breathing. Also nausea, vomiting, stomach cramps, diarrhea. **Can be fatal.** Do not use swollen, bulging, leaking canned food. Keep foods at the proper temperatures.
E. coli 0157: H7 Escherichia coli (Shiga- toxin producing) TM	Toxin produced by the bacteria attack lining of the intestines. Intestinal tract of cattle, infected food handlers. Non-chlorinated water; raw unpasteurized milk. Undercooked ground beef/meats; chicken; turkey; lamb; apple cider.	**Onset**: 1 to 4 days after eating. Severe Stomach cramps, bloody diarrhea, nausea and vomiting. Thoroughly cook meats/beef; avoid cross contamination; use pasteurized dairy products, juices.

MAJOR FOODBORNE ILLNESSES

FI = INFECTION IN = INTOXICATION TM = TOXIN MEDIATED V = VIRUS P = PARASITE ST = SEAFOOD TOXIN

ILLNESS/PATHOGEN	FACTS/SOURCE/IMPLICATED FOODS	SYMPTOMS/PREVENTATIVE MEASURES
Perfringens poisoning Clostridium perfringens TM	Toxin produced by spore activity. Found in humans; domestic and feral animals, soil, dust, insects, contaminated drinking water or milk. Slowly cooked meat at low temperatures; poultry; gravy; casseroles; sauces/soups. Improper cooling and reheating.	**Onset:** 8 to 22 hours after eating. Diarrhea, stomach pains, fever, vomiting. Proper rapid cooling, holding, and reheating. Cook in small batches.
Shigellosis Shigella TM	Transmitted by fecal-oral route. Infected food handlers; sewage, flies. Organisms multiply in foods left at room temperature. Ready –to- eat foods associated with bare hand contact such as salads and sandwiches; raw vegetables; poultry; dairy/bakery products.	**Onset**: 1 to 7 days after eating. Abdominal pains, diarrhea, fever, chills, vomiting. Practice good hygiene - wash hands thoroughly after using the toilet. No bare hand contact with ready-to-eat foods. Use approved food/water sources; control flies; cool foods rapidly.
Hepatitis A Hepatitis A Virus V	Transmitted by fecal-oral route. Spread from the body waste of infected people. Chief food source: shellfish harvested from contaminated seawater. Cross contamination from raw to ready-to-eat foods; poor hygienic practices of food workers. Water, ice, shellfish, salads, cold cuts, sandwiches, fruits, milk products that have been contaminated.	**Onset**: 2 to 6 weeks after eating. Inflammation of the liver causing jaundice with darkened urine; loss of appetite, pain, abdominal discomfort, nausea, vomiting, fatigue. Wash hands thoroughly after using the toilet. Obtain shellfish from approved sources. Prevent cross-contamination. Do not touch ready-to-eat foods with bare hands.
Norovirus Gastroenteritis Norovirus (also called Norwalk Virus) V	Fecal-oral transmission by contaminated water and foods. Human intestinal tract; feces contaminated drinking water and foods contaminated by ill food handlers. Shellfish, improperly steamed clams, oysters. Raw fruit and vegetables, prepared salads, raw shellfish handled by ill food handlers.	**Onset**: 1-2 days. Nausea, vomiting, abdominal pains, diarrhea, anorexia, headache and sometimes fever. Symptoms usually last about 48 hours. Once the infected persons have recovered, they may pass the disease to others for two or three more days. Proper handwashing ; cook foods thoroughly; use certified shellfish.
Ciguatera Fish Poisoning Ciguatera Toxin ST	Naturally occurring toxin in the intestine of predatory fish after eating smaller fish. Toxin found in algae eaten by small fish. Predatory reef fish; groupers, barracudas, snappers, jacks, mackerel and triggerfish.	**Onset**: 30 minutes - 36 hours: Tingling, numbness, dry mouth, dilated pupils, itching, dizziness, hot/cold flashes, temporary blindness and sometimes hallucinations. In severe cases, neurological symptoms can last weeks to months. TOXIN NOT DESTROYED BY COOKING. Use approved sources.
Scombroid Toxin Histamine ST	Histamine is the toxin produced by the bacteria due to time/temperature abuse. Histamine is a chemical responsible for allergy symptoms; it is produced during decomposition of certain kinds of fish. Implicated Fish: tunas, mahi, bluefish, sardines, mackerel, amberjack and abalone.	Flushing and sweating, a burning or peppery taste, nausea, and headache. Symptoms may include facial rash, hives, edema, diarrhea and abdominal cramps. TOXIN IS NOT DESTROYED BY COOKING. Use approved sources; time and temperature controls.
Trichinosis Trichinella spiralis P	Ingestion of the infected meats containing the larvae invades the small intestines in humans and develops into worms. Infected pork; raw or undercooked pork/pork products; wild game; Raw or undercooked wild game- bear, or walrus meat.	**Onset:** 7 days. Nausea, vomiting, diarrhea, facial swelling. Muscle soreness and pain. Cook pork and game meats thoroughly. Obtain from approved sources. Wash/rinse/sanitize grinders and utensils used in meat preparations.
Anisakisis infection Anisakis worm P	The parasite migrates from intestinal organs into the muscle tissue after the death of the fish. Larval forms are commonly found in the abdominal cavities cold-water fish. Pacific salmon, herring, cod. Sushi, ceviche, lightly-cooked filets. Undercooked fish, improper freezing/refrigeration.	**Onset**: 1 hour – 7 days. Tingling/tickling sensation in the throat, vomiting and cough caused by the attachment of the worm to throat lining followed by extraction of the worms. Severe abdominal pain, diarrhea, nausea. Properly freeze fish for parasite destruction. Cook thoroughly.
Cyclospora Diarrhea Cyclospora P	The parasite is spread by eating or drinking water or food contaminated by infected waste – infects the small intestine. Found in contaminated food/water/intestinal tracts of humans. Transmitted onto berries, lettuce, basil, fresh produce.	**Onset:** 1 week. Severe diarrhea, nausea, muscle ache, fever, weight loss, abdominal discomfort last 3-7 weeks: Sulfa drug for treatment of the infection. Thoroughly wash produce, using sanitary water before eating it.

VIRUSES

Viruses are transmitted person to person, people to food, and from people to food contact surfaces. Viruses do not reproduce or grow on foods. Reproduction is achieved when viruses invade the cells of a living host – human or animal. Hepatitis A and Norovirus are spread to food when a person fails to hand wash after visiting the restroom, coughing, or sneezing onto hands. Viruses may be contracted by consuming shellfish contaminated in sewage-polluted harvesting areas. Sewage backups into sinks and from leaking pipes contacting foods, utensils, and potable water are also sources of viruses.

PARASITES

Parasites are living organisms that live within or feed off another life form. They grow naturally in some animals and fish. Parasites depend on a living host. Humans acquire the parasite by consuming foods such as beef, pork, fish; game meats that have been improperly cooked; and from contaminated or untreated water. Trichinosis is the illness associated from eating undercooked pork and wild game meats. When humans become the new host, the larvae mature into an adult worm. The worm invades the small intestine and discharges new larvae that are carried by blood into muscle tissue and imbedded. Parasites can be killed by freezing and, eliminated through proper cooking.

FUNGI

Fungi are groups of organisms that include mushrooms, microscopic molds, and yeasts. Fungi are found in the soil, air, water, plants, and in some foods such as blue cheese. Not all mushrooms are edible. Some are poisonous which is why it is important to obtain products from approved sources and avoid wild mushrooms.

MOLDS

Molds, primarily spoilage organisms, grow well on all types of food regardless of water activity or pH. Molds grow on breads, fruits, and cheeses. When visible, mold is fuzzy or slimy, causes foods to become discolored, and produce a foul odor or taste. The fuzzy growth on molds can be blown through the air onto other foods. Foods contaminated by mold, must be discarded. Foods containing molds that are part of the natural part of the product such as Gorgonzola, Blue, Brie, and Camembert cheeses are safe to eat.

YEASTS

Yeasts are spoilage organisms used for the production and processing of beer, bread, and wine. Yeasts produce carbon dioxide needed for bread to rise and, alcohol for beer and wine. Yeasts grow well in acidic foods with low water activity such as jams, jellies, fruit juices, sauerkraut, and honey. As yeast slowly consumes food, it produces carbon dioxide and alcohol (the resulting odor), and may appear as a pink discoloration, or slime. Foods containing yeast must be discarded.

BIOLOGICAL AND SEAFOOD TOXINS

Biological toxins are poisons produced by pathogens, plants, or animals. Most occur naturally in seafood, plants, and mushrooms, and are not caused by the presence of microorganisms. Some occur in animals as a result of their diet. When a person consumes the food containing the toxin, foodborne intoxication occurs. Scombroid poisoning occurs when fish such as swordfish, tuna, and mackerel are not maintained at proper temperatures. Plants such as rhubarb leaves, uncooked fava beans, wild mushrooms, or jimsonweed have been responsible for foodborne intoxication. Purchase and use foods from approved sources.

CHEMICAL HAZARDS

Chemical hazards occur when chemical substances are introduced into the foods. This includes pesticides, food additives, preservatives, toxic metals, and chemicals/poisons (cleaning and sanitizing products, polishes, and lubricants). Symptoms of chemical food poisoning occur immediately after ingestion – vomiting, abdominal pain, and diarrhea. With some metals such as lead, the symptoms accumulate slowly after long-term exposure.

PESTICIDES

Pesticides enter the food supply when applied directly to plants/crops to protect them from insects and fungus. When these foods are delivered to the food establishment, they may have toxic levels of pesticide remaining on them. Pesticides utilized improperly in the food establishment may also contaminate both food and equipment.

- Obtain plant foods from approved sources. The federal government regulates the use of pesticides in foods grown and sold for interstate commerce.
- Wash all fruits and vegetables prior to use.
- All pesticides and germicides must be accurately labeled, maintained in their original container, and stored separate from food and food contact materials.
- Utilize pesticides with manufacturers label instructions permitting use of the pesticide in a food establishment.
- Follow laws in accordance to the application of poisonous and toxic materials.
- Utilize a certified applicator for the application of a restricted-use pesticide.

ADDITIVES

Additives are agents used to enhance the flavor of foods or to keep them fresh longer. These additives include sulfites. <u>The application of sulfiting agents to fresh fruits and vegetables intended for raw consumption or, to a food considered to be a good source of vitamin B1 or, to sell/serve fresh fruits and vegetables (except grapes) that have been treated with sulfiting agents before receipt by the food establishment is illegal.</u>

Written notification must be provided by food establishments that serve or sell foods containing any sulfite preservative, by one of the following methods:

- A conspicuously posted sign listing the foods containing any sulfite preservative.
- Listing on a menu or other written notice clearly stating each food containing any sulfite preservative.

Or

- Written notice on a label affixed to the container or wrapper of food containing any sulfite preservative.

TOXIC METALS

Toxic metals such as copper, lead, zinc, brass, and cadmium are sources of chemical contamination. Utensils and equipment contain many of these metals. High acid foods such as fruit juices, sauerkraut, tomatoes, and lemonade that come in contact with these metals during storage or preparation cause the metallic ions to be dissolved by the acids and contaminate the products. Galvanized containers made of zinc make fruit juices, pickles, and other acidic foods poisonous. Refrigeration shelves made of cadmium will contaminate uncovered foods and foods stored directly on shelving. The backflow of acidic carbonated water into the copper water supply line results in copper poisoning into beverages from soft drink dispensing systems. For this reason, <u>backflow prevention devices are required on carbonated beverage dispensers.</u>

Ceramics, China, crystal and decorative utensils such as hand painted ceramic from China that are used in contact with food shall be lead free or contain levels of lead not to exceed 0.5 – 3.0 mg/L (based on the utensil category). Lead poisoning may not cause noticeable symptoms because their effects are subtle until the blood level of lead is high; however, exposure to lead is especially harmful for pregnant women, children, and fetuses. Chronic lead exposure may cause memory loss, learning problems, stomach aches, cramping, diarrhea, headaches, and muscle weakness. Lead poisoning may also cause seizures, paralysis, and coma.

Food establishment operators should utilize the following guidelines to eliminate the use of unsafe lead - based utensils in their operation:

- Acquire, install, and utilize food safe/approved utensils and equipment (NFS approved)
- Imported pottery containing high levels of lead and must not be used for food storage or preparation. If the pottery is imported, check for lead content with a test kit purchased online or at a hardware store.
- Look for safety labels – "Safe for food use"
- Adhere to warning labels on pottery: "Not For Food Use", "Plate May Poison Food" or "For Decorative Use Only".
- Pottery that has a chalky/dusty residue or gray powder on the glaze after washing has been compromised – unsafe for use.
- Pottery with lead contamination can not be made safe by repeated washings or boiling water.

Chemicals utilized as cleaning products, sanitizers, polishes, and lubricants often contaminate foods when stored or used improperly. Use these substances according to the manufacturers label instructions. All chemicals must be properly labeled and stored separate from food, food equipment, and preparation areas. Keep chemicals stored in their original containers and, if transferred to smaller containers or spray bottles, label the new container with the same name. Once these containers or bottles have been designated for chemicals, they may not be reused for the purpose of contact with foods. Some chemicals cause reactions with others and must be kept separate from each other. For example, mixing bleach with ammonia will result in the release of chlorine gas. Do not mix bleach and acids and, do not mix two drain cleaners together. Only food-grade oils and lubricants are to be used on food equipment or utensils. Polishes applied to utensils for detarnishing, must be thoroughly rinsed from the utensils.

PHYSICAL HAZARDS

Physical hazards occur when foreign objects are accidentally introduced into food. These objects include broken glass, equipment/tool parts, fingernails, hair, jewelry, band aids, dust/dirt, can shavings, and staples. Some physical hazards are a natural part of the food such as leaves, twigs, bones, and scale which are expected to be removed prior to service to the consumer. Physical hazards cause injuries such as cuts, bleeding, choking, or broken teeth. The primary sources of physical hazards are the food workers themselves.
Utilizing a glass to scoop ice, wearing a band aid on an unprotected finger or hand, wearing artificial nails/polish/excessively long nails, using worn can openers, worn vent hood filters, unshielded lighting, leaving packing material parts at preparation stations, are examples of physical hazards. Inspect, monitor, and maintain all aspects of the food operation as a safeguard from physical hazards.

POTENTIALLY HAZARDOUS FOODS (PHF/TCS)

In general, any food is subject to contamination. However, certain foods due to their characteristics provide primary vehicles for microorganisms to grow rapidly and cause foodborne illness. These foods are classified as **potentially hazardous foods.**

A food that requires time and temperature control for safety (TCS) to limit pathogen growth or toxin production. Characteristics of potentially hazardous foods include: high protein content, moisture availability, chemical content that is neutral, slightly acidic content. This includes food of animal origin, including fresh shell eggs, that is raw or heat treated; food of plant origin that is heat-treated or consists of raw seed sprouts; any cut melons; and any garlic-and-oil mixtures that are not modified in a way that results in a mixture that do not support growth of pathogens or toxins.

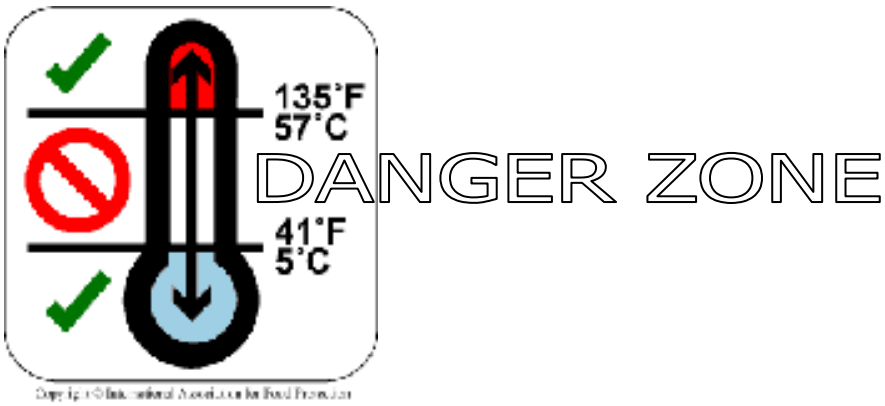
POTENTIALLY HAZARDOUS FOODS

Milk and milk products	Shell eggs	Baked or boiled potatoes
Poultry	Fish	Cooked rice
Tofu	Meats: Beef, Pork, Lamb	Heat treated plant food
Soy - protein foods	Shellfish and crustacea	Garlic and oil mixtures
Raw sprouts and seeds	Cut melons	Cooked beans

NON-POTENTIALLY HAZARDOUS FOODS

Air cooled hard boiled eggs with shell intact, pasteurized egg with shell intact treated to destroy all viable Salmonella.
Food with pH/Aw interaction as designated as non PHF/TCS (see charts in Appendix 1)
Food in an unopened hermetically sealed container that has been commercially processed.
Food that has been demonstrated by product assessment or laboratory evidence that time and temperature control for safety is not required.
Any food that does not support the growth of microorganisms.

If potentially hazardous foods remain at temperatures within the danger zone, rapid bacterial growth and/or toxin production can occur, leading to unsafe food. Therefore, you must limit the time potentially hazardous food is in the danger zone. The temperature danger zone is between 41° F. and 135° F. Keeping the internal temperature of potentially hazardous food below or above this zone slows bacterial growth. Temperatures well below this zone (frozen) can slow or stop bacterial growth, while temperatures well above the danger zone may kill vegetative cells.



LESSON 2

EMPLOYEE PRACTICES

Employee health and hygienic practices have a direct impact on the safety of foods and the spread of microorganisms to co-workers as well as consumers. Bathe daily before work to get rid of some of the bacteria on and in the skin and hair, comb and keep neatly trimmed hair on the scalp and face, and wear clean clothes/uniforms/hair restraints. In the food establishment, food workers are constantly exposed to pathogenic organisms by contact with raw meats, seafood, poultry, packing boxes/crates and packages, unclean equipment, and other sources of filth. Scratching clothing, the body, scalp, nose, mouth, and touching a sore are ways that food workers spread microorganisms to food. Wash hands properly before handling food.

"No person, while infected with a disease in a communicable form that can be transmitted by foods or who is a carrier of organisms that cause disease or while afflicted with a boil, an infected wound, or an acute respiratory infection, shall work in a food establishment in any capacity in which there is a likelihood of the infected or afflicted person contaminating food or food-contact surfaces with pathogenic organisms or transmitting disease to other persons." *Article II. Section 20-21.7*

Communicable disease is an illness spread from person to person or animal to person by direct or indirect contact.

CARRIERS

People who look and feel healthy can harbor infectious disease agents in or on their bodies. A carrier is someone who harbors communicable disease organisms in the body at levels sufficient enough to infect other people, or contaminate food, but does not appear to be sick. People can be temporary carriers of disease organisms during the incubation period of that disease and may, therefore, be unaware of their own health status. A carrier may look healthy, yet be infected with H*epatitis A* virus. This is why it is critical that all employees adhere to good handwashing and other personal hygiene habits.

REPORTING RESPONSIBILITY

In order for the person-in-charge/employer to take appropriate steps to prevent food borne illness transmission, they must require employees and persons to whom a CONDITIONAL OFFER of employment is made to report past and current conditions that might lead to food borne illness. Make copies of the employee reporting agreement form and, have the employee sign it as soon as they are offered the job. Employees are also required to report certain health conditions to the employer: vomiting, diarrhea, jaundice, sore throat with fever. Report lesions containing pus that is open or draining on hands and wrists unless an impermeable finger cot or similar device protects the lesion and, a single use glove is worn over the cover.

- Report any of the foodborne illnesses also known as the "Big 5": Salmonella typhi (typhoid fever), Shigella spp., Escherichia coli 0157:H7 or (E.Coli infection), Hepatitis A virus, and Norovirus.
- Report the following high risk factors (associated with the " BIG 5")
  a) Employee is suspected of causing, or being exposed to, a confirmed disease outbreak; or
  b) Employee lives in the same household as a person diagnosed with a disease; or
  c) Employee lives in the same household as a person who attends or works in a setting where there is a confirmed outbreak.

EXCLUSION OF EMPLOYEE

The infected employee will be **excluded** (prohibit from working as a food employee or entering a food establishment except for areas open to the general public) if the food employee is diagnosed with an illness due to:

- **Salmonella typhi (typhoid fever)**
- **Shigella spp. (shigellosis)**
- **Escherichia coli 0157:H7 or (E.Coli infection)**
- **Hepatitis A virus (infection)**
- **Norovirus**

Also, exclude the food employee serving in a highly susceptible population establishment, who is experiencing gastrointestinal illness symptoms or who meets high-risk conditions described on the previous page.

RESTRICTION OF FOOD EMPLOYEE

Restrict the infected employee to assigned duties away from exposed food and clean utensils if the employee has symptoms of a gastrointestinal illness, diarrhea, vomiting, jaundice or lesions containing pus such as in a boil or infected wound, or if the employee has persistent sneezing, coughing or runny nose that causes discharges from the eyes, nose or mouth. Employees shall not engage in duties, which bring them in
contact with exposed food, clean food equipment/utensils, linens and unwrapped single-service articles and single-use articles.

REINSTATING AN EXCLUDED EMPLOYEE

The person in charge may remove an exclusion of a food employee diagnosed with an infectious agent if:

- an approval from the regulatory authority is provided and;
- the food employee provides written medical documentation from a physician licensed to practice medicine, that the food employee is free of the infectious agent.

NOTIFICATION OF HEALTH OFFICER

The permit holder or person in charge of a food establishment is required to promptly notify the City of Houston health officer whenever a food employee is diagnosed with any of the five illnesses highlighted above.

HANDWASHING

Unwashed hands is a dangerous practice that causes foodborne illness outbreaks. Any activity which may contaminate the hands must be followed by thorough handwashing: It is always best to prepare foods using the least possible manual contact and to effectively wash hands before touching food or food-contact surfaces. Minimize bare hand contact with ready-to-eat foods by using tongs, deli tissue, knives, forks, spoons, spatulas, or other approved food handling devices or procedures. Refer to Bare Hand Contact Procedures in Lesson 3.

WHEN TO WASH HANDS

- before starting work/engaging in food preparation
- during work as often as is necessary to keep them clean
- after touching bare human body parts other than clean hands
- when switching between working with raw foods and ready-to-eat foods
- after handling soiled equipment and utensils
- after handling raw meat, poultry, seafood, or produce
- after coughing and sneezing, using a handkerchief or tissue
- after smoking, eating, drinking, or chewing (gum, tobacco, etc)
- after using the toilet*
- after handling the trash
- after any other activities, that may contaminate employees' hands.

The FDA recommends double handwashing after using the toilet. Human waste is the most dangerous source of contamination. While public health measures protect the drinking water supply from dangerous sewage contamination, only the concerned food handler can protect food from becoming contaminated with human waste (feces).

WASH YOUR HANDS IN A PROPERLY SUPPLIED HAND SINK:

- ✓ Wash hands in hand sinks supplied with hot and cold running water, soap and a hand-drying device or disposable paper towels.
- ✓ Hot and cold running water temperature at a minimum of 100° F.
- ✓ Cleaning compound
- ✓ Disposable paper towels, a continuous towel system that supplies the user with a clean towel, or heated air hand-drying device
- ✓ A waste can for disposable towels
- ✓ A handwashing sign, poster, or icon as a reminder of handwashing at all hand-washing lavatories used by employees.

HANDWASHING REMINDERS

- Food preparation, utensil washing or mop sinks are not approved for handwashing. Hand sinks are to be used for handwashing only (Keep utensils, cloths, foods out of the hand lavatory).
- Employees are more likely to wash their hands when lavatories are equipped.
- Managers are required to train food employees in the proper handwashing procedures, monitor, and enforce handwashing policies.
- Keep fingernails trimmed and without rough edges.

HOW TO WASH HANDS

Food employees must thoroughly wash their hands and the exposed portions or their arms (or prosthetic devices) for at least 20 seconds with a cleaning compound in a lavatory that is fully equipped.

- ✓ Using vigorous friction on the surfaces of the lathered fingers, finger tips, between fingers, hands, and arms for at least 10-15 seconds, then;
- ✓ Thoroughly rinsing under clean, running warm water; followed immediately by
- ✓ Thoroughly drying the hands and arms with disposable towels or a heated air hand-drying device.
- ✓ Turn faucets off with disposable towel to avoid re-contaminating hands.

HAND SANITIZERS

The use of a hand sanitizer following hand washing does not allow bare hand contact with ready-to-eat foods, unless additional measures and documentation are maintained and the food establishment does not serve a highly susceptible population. (See Lesson #3 – Bare Hand Contact). Hand sanitizers must be approved (according to FDA regulations – refer to City of Houston Food Ordinance: Sec. 20-12.8).

- Safe and effective when applied to human skin;
- Safe food additives when applied to bare hands that will come into direct contact with food.

GLOVES

Single-use gloves may be used to avoid bare hand contact with ready-to-eat foods. These gloves must be used for only one task, and then discarded. Gloves must be discarded when removed, damaged, or soiled. The use of gloves does not eliminate the need for handwashing or procedures listed earlier. Slash resistant or cloth gloves may be used for foods that will be cooked before being served such as raw meats. If used with ready-to-eat foods, the gloves must have a smooth, durable and nonabsorbent outer surface.

CLOTHING

The outer clothing (uniform/apron) of all employees must be clean to prevent contamination of food, equipment, utensils, linens, and single use/single service articles. Refrain from wiping hands/utensils on clothing and aprons. Remove aprons before entering the restroom.

HAIR RESTRAINTS

Effective hair restraints shall be used in the partial or complete absence of scalp hair and to any exposed facial hair where there is a potential for contamination of food or food-contact surfaces. Facial hair restraints will not be required when the facial hair is well groomed and trimmed.

Why wear hair restraints?

- To discourage employees from touching hair/scalp.
- Human hair and skin contains Staphylococcus aureus.

JEWELRY

Food employees, while preparing food may not wear fingernail polish, artificial nails or jewelry, <u>including medical identification jewelry</u> on their hands or arms. A plain band style ring is allowed.

EXCEPTIONS

Hair restraint and jewelry requirements do not apply to employees such as counter staff who serve beverages or packaged foods or to host staff and wait staff, if they present a minimal risk of contaminating food, clean equipment, utensils and linens, or unwrapped single service articles.

EMPLOYEE EATING, DRINKING, AND SMOKING

Employees are not allowed to eat, drink, or smoke while engaging in food preparation activities. This includes chewing gum or tobacco.

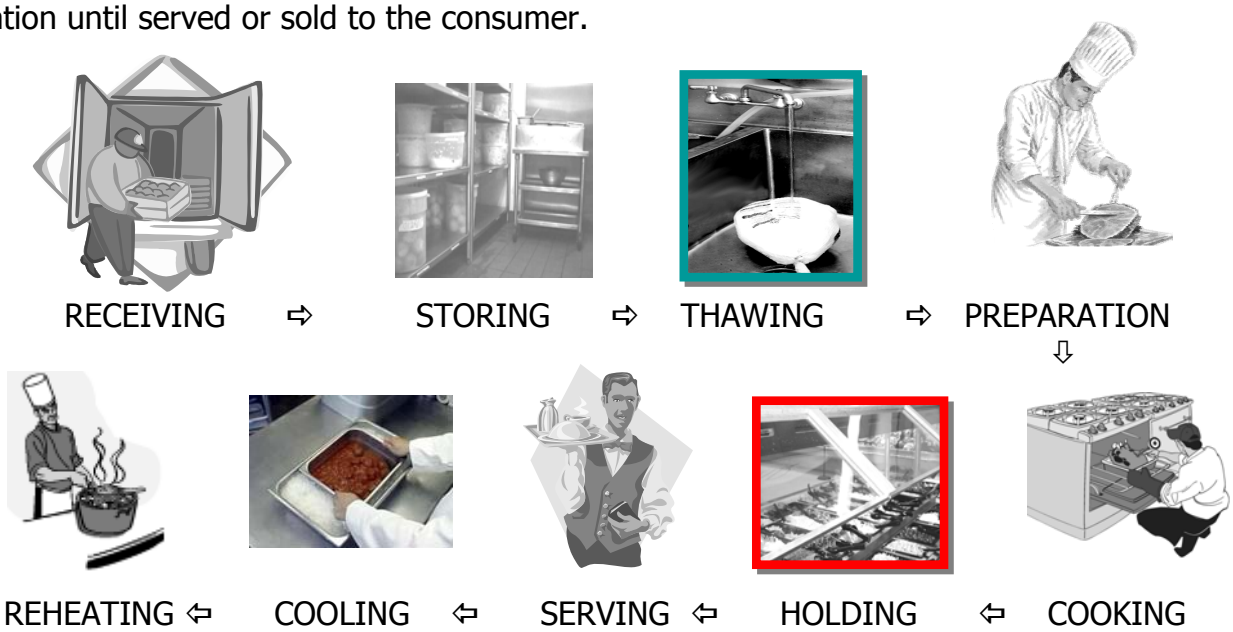
Employees may eat or drink only in a designated dining or break area where there is no possibility of contaminating food, equipment, utensils, or other food-related items. An employee may drink from a closed non-spillable beverage container if the container is handled to prevent contamination of the employee's hands, the container, any exposed food, clean equipment, utensils and linens, or unwrapped single-service articles.

Smoking is prohibited in any enclosed area of a food establishment; including break/lunch rooms. Smoking is prohibited within 25 feet of outside entrances, exits, and wheelchair ramps. Smoking is permitted in outdoor seating areas of bars and restaurants which may have an entrance or exit.

LESSON 3

FOOD FLOW AND FOOD PROTECTION

Steps to ensure that a food establishment provides foods that are safe to eat are based on actions set in motion by the establishment operator. Undetected deficiencies in foods upon receipt and abuses during various stages in the food establishment operation create the potential for foodborne illness. The flow of food is the path that foods take through a food establishment operation until served or sold to the consumer.



⇨ PURCHASING

- Buy all foods from approved sources/vendors.
- Assure that vendors have either local/state/federal licenses.
- Do not purchase or accept foods made in private homes or unregulated facilities – this includes foods from the homes of employees.
- Foods found by the health officer from unapproved sources will be discarded.
- Inspection services provided by the state and federal agencies are designed to ensure that foods are wholesome and properly labeled.
- Foods in hermetically sealed containers must be prepared in a regulated food processing establishment.

⇨ RECEIVING

The person in charge must visibly monitor employees by checking foods as they are received to determine that they are from approved sources, delivered at the required temperatures, protected from contamination, unadulterated, and accurately presented. Routinely monitor the employees, and evaluate foods upon their arrival. Food employees must be trained to recognize the different governmental inspection labels on meats, poultry, eggs, shellfish, and processed foods in addition to recognizing and rejecting compromised foods.

- Products used in food establishments must be obtained from approved sources that comply with federal, state, and local laws.
- Inspect incoming shipments of foods to ensure that they are in sound condition, free from spoilage, filth, or other contamination and, safe for human consumption. Quickly move foods to proper storage areas.

- Food prepared in a private residence or from an unlicensed food facility may not be used or offered for human consumption in a food establishment.
- It is prohibited to use food in hermetically sealed containers that was not prepared in a regulated food-processing establishment.
- Potentially hazardous foods shall be free of evidence of previous temperature abuse.

REJECT

- Broken/cracked eggs
- Potentially hazardous foods received at temperatures in the danger zone
- Thawed or partially thawed frozen foods
- Dented, bulging, rusty, or leaking cans.
- Mold or slime on foods.
- Wet or torn packaged foods
- Products such as meats, eggs, poultry, or shellfish with no inspection tags/stamp.
- Foods with expired code dates.
- Discolored, soured, off-odor foods.

FOOD LABELS

All pre-packaged food labels must include:

1. The common name of the product.
2. Name and address of the manufacturer.
3. List of ingredients in descending order by net weight (Ingredient statements requirements: size of letters 1/16 of an inch or larger, components of ingredients, certified colors identified, and use of preservatives statement).
4. Net quantity of contents (weight).

Labels must be provided in English however, any additional languages on the label must bear the same information.

GOVERNMENTAL INSPECTION

- The United States Department of Agriculture (USDA) is responsible for inspecting all meat and poultry in interstate commerce.
- Meat that is inspected by the State of Texas can only be sold in the State of Texas.
- Poultry must be inspected by either a federal or state agency. Fowl are inspected for disease before slaughter. Inspected products will have a state or federal seal on the meats or boxes.

MILK

Fluid milk and fluid-milk products used or served shall be pasteurized and meet the Grade A quality standards. Milk and products derived from milk are susceptible to contamination with a variety of diseases-causing bacteria such as *Escherichia coli O157:H7*, *Salmonella* and *Listeria monocytogenes*, and provides the rich medium for their growth. Milk and milk products must be received under proper refrigeration.

SHELLFISH

- Temperature

Shellfish may be received at 45°F. or below during shipment from a supplier but must be cooled at 41°F. within 4 hours and be maintained at 41°F. Shucked shellfish must be in compliance with Texas Molluscan Shellfish Rules. Shucked shellfish must be iced down at all times and maintained at 41°F.

- Storage

Shellfish must not be commingled with shellstock from another container with different certification numbers, different harvest dates or different growing areas as indicated on the bag or label or other food products. Shellfish should be stored at least 6" above the floor to prevent contamination from water which might accumulate on the floor, or from splash from foot traffic.

- Product Identification/Approved Source

Fresh and frozen shucked molluscan shellfish must be packed in nonreturnable packages that bear a legible label identified with the name and address of the original shellstock processor or packer and the certification number issued by law. Packages of less than ½ gal. must contain a "sell by" date. Packages of more than ½ gal. must contain the date shucked. Shellstock must be reasonably free of mud, dead shellfish, and broken shells. Discard dead shellstock or shellstock with badly broken shells.

- Records

Retain shellfish tags for 90 days from the date the container is emptied. Keep tags in chronological order correlated to the date when, or dates which the shell stock are sold or served. Information must be made available for inspection or copying by the health officer. Shucked shellfish sales records must be maintained to identify the source; the date sold, and lot identification.

- Retail Display

All shellfish must be maintained under mechanical refrigeration. Shucked shellfish may also be displayed in drained ice. Shell stock shall not be commingled with shell stock from another container unless all tagged or labeled information is identical, before being ordered by the customer, using only one tagged or labeled container at a time.
Molluscan shellfish can be removed from the container in which they were received and held in a display container on drained ice and a quantity specified by a consumer may be removed from the display or display container if the source of the displayed shellfish is identified in accordance with federal law.

FISH

Fish that are received for sale or service must be:

- ✓ Commercially and legally caught or harvested; or
- ✓ Approved for sale or service by the regulatory authority
- ✓ Must be frozen on the premises or by a supplier if intended for consumption in their raw form.

ON-PREMISES FREEZING FOR FISH INTENTED FOR CONSUMPTION IN THEIR RAW FORM

Record the freezing temperature/time and retain the records for 90 calendar days beyond the time of service or sale of fish. Freezing records are not required for fish that will be cooked.

SUPPLIER FREEZING/ON-PREMISES FREEZING TEMPERATURES

A written statement from the supplier must be provided stipulating that the fish supplied have been frozen throughout to -4°F for 7 days in a freezer or -31°F or less for 15 hours in blast freezer.
Except: Molluscan shellfish and certain tuna species may be served or sold in a raw form without freezing.
Reason: Freezing kills the parasite in fish that may be eaten in a raw or undercooked form.

SHELLS

Mollusk and crustacean shells may not be used more than once as serving containers; or if not the original shell, the shell must be sanitized prior to use.

FRUITS AND VEGETABLES

- Produce is to be obtained from approved sources under USDA regulations. This includes produce received from outside the U.S.
- Produce are subject to contaminants from pesticides, soil, irrigated water containing untreated sewage/manure, and contact with animals and humans.
- Washing fruits and vegetables prior to consumption helps remove dirt, bacteria, pests, and residual pesticides. Wash fruits and vegetables under cold – luke warm potable running water. When practical, utilize a scrub brush. Separate the leaves of vegetables such as lettuce, spinach, and cabbage, and rinse individually.

EGGS

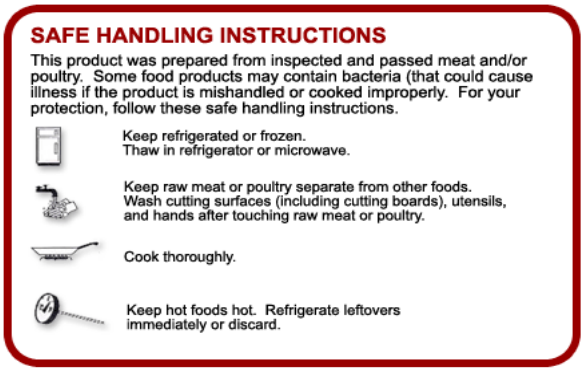
Raw shell eggs must be received and placed in refrigeration at an air temperature of 45° F. or less. Use only clean whole eggs, with shell intact and without cracks or checks. Substitute pasteurized liquid, frozen, or dry eggs or egg products for raw shell eggs in the preparation of:

- ✓ Uncooked foods
- ✓ Caesar salad, hollandaise/béarnaise sauce, non-commercial mayonnaise, eggnog, ice cream and egg fortified beverages;
- ✓ Raw shell eggs used in a highly susceptible population establishment if the eggs are broken, combined in a container, and not immediately cooked or if the eggs are held before service after cooking.

SAFE HANDLING INSTRUCTIONS FOR EGGS, MEAT, AND POULTRY

Eggs that have not been specifically treated to destroy all viable Salmonella shall be labeled to include safe handling instructions.
⇨ Safe Handling Instructions: "To prevent illness from bacteria: keep eggs refrigerated, cook eggs until yolks are firm, and cook foods containing eggs thoroughly".

Meat and poultry that is not in a ready-to-eat form and is in a packaged form when offered for sale shall be labeled to include safe handling instructions.



Protect foods at all times including while being received, stored, prepared, displayed, served, or transported. Sources of potential contamination include: improper temperatures, improper storage/preparation/cooking of raw and ready-to-eat foods, poor hygienic practices, toxic materials, dust, cross-contamination or spoiled products, distressed merchandise, recalled products, insects, rodents, unclean equipment, bare hand contact with ready-to-eat foods, unnecessary handling, coughs and sneezes, overhead drip page from condensation and flooding.

CROSS CONTAMINATION

Cross contamination occurs when a food is exposed to a contaminant from another source. It is the transfer of microorganisms from one food to another; from people to foods; or from equipment to foods.

Examples:

Storing raw meats/poultry above ready-to-eat foods, including fruits and vegetables.

Food worker handling trash and then foods with bare hands.

Slicing raw poultry on a cutting board followed by a ready-to-eat food without washing and sanitizing both the knife and cutting board prior to contact with the ready-to-eat food.

PREVENT CROSS CONTAMINATION BY:

- Washing, rinsing and sanitizing food-contact surfaces of utensils and equipment after each use and following any interruption of operations;
- Storing food in packages, containers or wrappings;
- Cleaning sealed container lids before opening;
- Separating raw meats/poultry/seafood/produce from ready-to-eat foods
- Separating raw animal foods from each other during the flow of food <u>except</u> when combined as ingredients.

READY-TO-EAT FOODS (RTE)

Ready-to-eat foods pose the highest risks to consumers if precautions are not taken to prevent contamination. These foods are more vulnerable to contamination by bare hand contact, causing foodborne illness. Ready-to-eat foods are edible without any further washing or cooking. Examples include sushi, washed whole or cut fruits and vegetables; deli meats, and fully cooked foods.

FOOD PROTECTION DURING STORAGE

- Store containers of food at least 6" above the floor <u>except</u> metal pressurized or boxed beverage containers, milk containers in plastic crates, cased food packaged in cans, glass or other waterproof containers can be stored on a clean floor if the food container is not exposed to floor moisture.
- <u>Containers of food may be stored on dollies, racks, pallets, or skids less than 6 inches above the floor provided that equipment such as pallet jacks or forklift trucks are on the premises</u>. Shipping containers for milk or produce crates as storage racks or shelf supports, is prohibited.
- Store bulk packaged foods in warehouses 6 inches away from the walls and 6 inches above the floor.

DO NOT store food:

- Under exposed or unprotected sewer or water lines; under open stairwells.
- Outside of the establishment (including outdoor refrigeration and walk-in units).
- In locker, dressing room, garbage room or mechanical rooms.
- In toilet rooms or vestibules.

TEMPERATURE AND MEASURING DEVICES

Food temperature measuring devices used to measure internal temperatures of cooking, holding, or refrigeration of potentially hazardous foods, if scaled in Fahrenheit only must be accurate to +/- 2°F. <u>If the temperature measuring device is only scaled in Celsius, it must be accurate to +/- 1°C.</u>

<u>Small - diameter probes must be provided to measure the temperatures of thin foods such as meat patties and fish fillets.</u>

<u>Ambient air and water temperature measuring devices scaled in Fahrenheit must be accurate to +/- 3° F. or if scaled only in Celsius, must be accurate to +/- 1.5° C.</u>

MEASURING INTERNAL TEMPERATURES

Measure all final cooking and reheating temperatures by means of a dial or digital pocket metal-stem indicating thermometer or thermocouple.

Wash, rinse, sanitize and air dry product thermometers before and after each use to eliminate any potential cross-contamination. Insert metal stem into the geometric center of the food (the center or the thickest part of the food). Wait 10-60 seconds for the indicator to stabilize before reading the temperature of the food. Record the reading on a time and temperature log form.

CALIBRATION OF A DIAL TYPE STEM THERMOMETER

- Ice Point Method

  Obtain a glass of crushed ice, and add cold water to make ice water. Insert the thermometer and shake or stir in the glass, making sure more ice is inserted as needed. Adjust the thermometer calibration nut with a tool so it reads 32° F.

- Boiling Point Method

  In boiling water (when water bubbles) insert the thermometer - it should read 212° F.

REFRIGERATED STORAGE

Each mechanically-refrigerated unit storing potentially hazardous food must have a numerically-scaled indicating thermometer accurate to +/- 3°F if scaled in Fahrenheit only or if thermometer is dually scaled in Celsius and Fahrenheit, accurate to +/- 2.7° F. in the intended range of use.

COLD HOLDING

All long term refrigerated storage units (walk-in or reach-in coolers) used for holding bulk refrigerated foods must be in compliance with a unit that maintains internal food temperatures at 41° F. or below.

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In-line refrigeration that maintains internal temperatures of foods at a minimum of 45° F. may be used for the life of the unit. Once the unit is replaced due to repair or, change of ownership, the unit must maintain temperatures of 41° F. or below.

HOT HOLDING

The internal temperature of potentially hazardous foods requiring hot storage shall be 135°F or above except during necessary periods of preparation. Hot food storage facilities should be conveniently located. Each hot food facility storing potentially hazardous food must be provided with a numerically scaled indicating thermometer, accurate to +/- 3°F if scaled in Fahrenheit only. Thermometers dually scaled in Celsius and Fahrenheit, are to be accurate to +/- 2.7°F. A numerically scaled product thermometer must be provided and used to monitor internal food temperatures being stored in hot food storage facilities.

FROZEN STORAGE

Keep frozen foods at 0°F or less. Freezing does not kill microorganisms but prevents microbial growth. Once thawed, food may not be refrozen; unless it is fully cooked after thawing. Ice, which will be consumed, must never be used as a cooling medium for food, food containers or food utensils. Never allow packaged or unpackaged potentially hazardous foods to be stored in water or undrained ice **except** whole raw fruits or vegetables, and tofu may be immersed in ice or cold water. Shipping containers of raw fish and chicken received immersed in ice may remain in drained ice during storage while awaiting preparation, display, service or sale.

SLACKING

Frozen potentially hazardous food that is slacked to moderate the temperature (gradually increase from -10°F to 25°F) in preparation for deep fat frying or to facilitate even heat penetration during cooking of previously block-frozen food shall be held:

- under refrigeration at 41°F or 45°F
- at any temperature if the food is kept frozen

THAWING POTENTIALLY HAZARDOUS FOODS

- In refrigerated units not to exceed 45° F. or 41° F.; **or**
- Completely submerged under potable running water at a temperature of 70° F. or below, with sufficient water velocity to float off loose food particles. <u>The temperature of the thawed portions of potentially hazardous food must not rise above 45° F. for more than 4 hours;</u> **or**
- As part of the conventional cooking process; **or**
- In a microwave oven only when food will be transferred to continuous conventional cooking; or when the entire, uninterrupted cooking process takes place in the microwave oven **or**
- Using any other safe procedure that thaws a portion of frozen ready-to-eat food that is prepared for immediate service in response to an individual consumer's order.

HAZARD**: Never thaw potentially hazardous food at room temperature. Improper thawing provides the right environment for surviving pathogens to grow to dangerous levels and/or produce toxins.**

FOOD PROTECTION DURING PREPARATION AND COOKING

All potentially hazardous food including fruits and vegetables shall be cooked to heat all parts of the food to a temperature of at least 135° F. except**:** raw animal foods such as meat, fish, poultry, unpasteurized eggs, and foods containing these raw animal foods must be cooked to a temperature and for a time according to the chart on the next page.

COOKING POTENTIALLY HAZARDOUS FOODS

FOOD	**COOKING** Temperature & Time	**REHEATING** Minimum Temperature & Time (minimum temperature to be reached within 2 hours)
. Fruits and vegetables for hot holding	135° F. (57° C.)	165° F. (74° C.) for 15 seconds
• A raw or undercooked whole muscle, intact beef steak, not served in a food establishment serving a highly susceptible population and labeled to indicate that it meets the definition of whole muscle intact beef as specified in section 20-21.1(b)(11) of this Code	Shall be cooked on both the top and bottom to a surface temperature of 145°F (63° C) or above and a cooked color change is achieved on all external surfaces.	
• Raw animals foods not specified below • Raw shell eggs that are broken and prepared for immediate service • Fish, meat, game animals and exotic animals commercially raised for food, and game animals and exotic animals subject to a voluntary inspection program that are not specified below • Pork	145°F (63°C) for 15 seconds	165° F. (74° C.) for 15 seconds
• Ratites • Injected meats • Any of the following if they are comminuted: fish, meat, game animals and exotic animals commercially raised for food, and game animals and exotic animals subject to a voluntary inspection program • Raw shell eggs not prepared as specified above	155°F (68°C) for 15 seconds; or 150°F (66°C) for 60 seconds; or 145°F (63°C) for 180 seconds; or 158° F (70°C) for less than 1 second (instantaneous)	165°F (74°C) for 15 seconds
• Poultry other than ratites • Game animals and exotic animals that are live caught and are subjected to a voluntary inspection program • Stuffed fish/meat/ poultry/pasta/ratites • Stuffing containing fish/meat/poultry/ratites	165°F (74°C) for 15 seconds	165°F (74°C) for 15 seconds
• Whole beef roast, • Whole corned beef roast • Whole pork roast and cured pork roast	Shall be cooked in an oven that is preheated to and held at the temperature specified for the roast's weight and the type of oven, as applicable, in Table 20-21.4-2 of this Code and shall be cooked so that all parts of the roast are heated to the temperature and for the holding time that corresponds to that temperature in Table 20-21.4-3 of this Code.	
• Raw animal foods cooked in a microwave oven and allowed to stand for two minutes	165° F. (74°C.) and allowed to stand for two minutes.	165° F. (74° C.) for 15 seconds
. Ready-to-eat food taken from hermetically-sealed container or intact package from inspected food processing plant.	_____	135° F. (57° C.) without time duration.

MICROWAVE COOKING

Microwave raw animal foods to 165°F or above.

- Cover, rotate or stir throughout or midway through cooking to compensate for uneven heat distribution, and
- Allow 2 minutes stand time to obtain temperature equilibrium once heated.

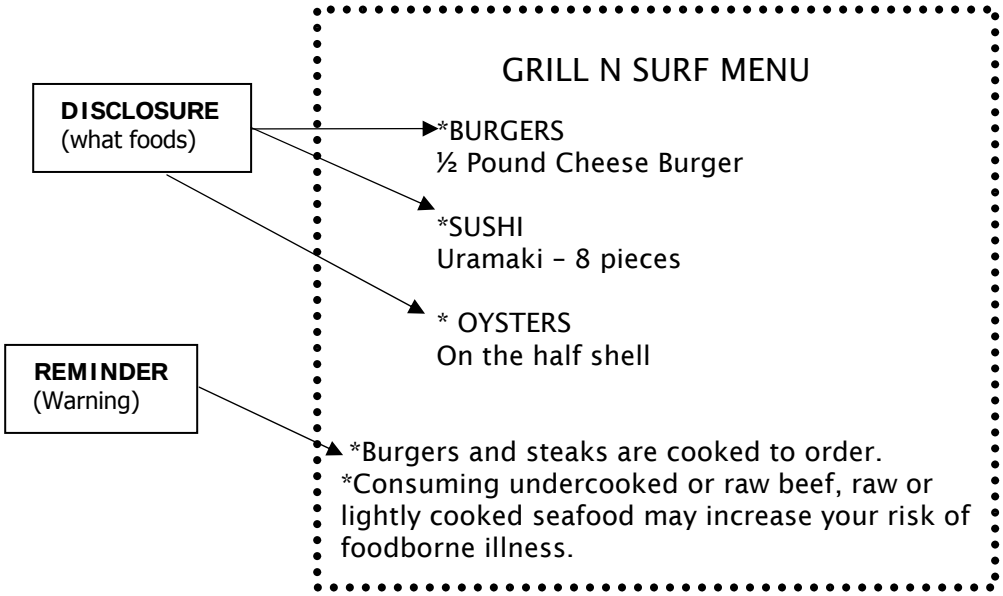
CONSUMER ADVISORY

A consumer advisory is a public notification informing consumers of the risk of eating raw or undercooked foods. It is required if an animal food such as beef, eggs, fish, milk, pork, poultry, or shellfish is served or sold raw, undercooked or without otherwise being processed to eliminate pathogens, either in a ready-to-eat form or as an ingredient in another ready-to-eat food.
The advisory consists of two parts – disclosure and reminder.

- **Disclosure** must include a description of the foods that are raw or undercooked; or identification of the animal-derived foods by an asterisk(*) to a footnote that states that the items are served raw or undercooked, or contain raw or undercooked ingredients.
- **Reminder** is the written statement regarding the health risk of consuming raw or undercooked animal foods. The reminder must include by an asterisk(*) of the animal derived foods that require a disclosure that states:
  "Written information regarding the safety of these items is available upon request"; or
  "Consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase your risk for foodborne illness"; or
  "Consuming raw or undercooked meats, poultry, seafood, shellfish, or eggs may increase your risk for foodborne illness, especially if you have certain medical conditions".

The advisory may be placed on a menu, brochure, deli case, label statements, table tents, placards, or other effective written means.

SAMPLE MENU



BARE HAND CONTACT WITH READY-TO-EAT FOODS

"The CDC (Center for Disease Control) now estimates that Norovirus is the leading cause of foodborne illness in the United States. Contaminated hands are a significant factor in the transmission of Norovirus and hepatitis A. Contamination of food by an infected food worker is the most common mode of transportation of hepatitis A in foodborne disease outbreaks."

Bare hand contact with ready-to-eat foods may be done only at food establishments not serving a highly susceptible population. Unless a bare-hand contact with ready-to-eat foods procedure is in place, food workers may not contact exposed, ready-to-eat foods with their bare hands and shall use single-use gloves, tongs, forks, deli paper, or other approved utensils.

The procedure for practicing bare hand contact with ready-to-eat foods involves three steps.
Step No. 1: Documentation is maintained at the food establishment that the food employees acknowledge they have received training in the following areas:

1) risk of contacting the specific ready-to-eat foods with their bare hands;
2) proper handwashing methods
3) when to wash their hands;
4) where to wash their hands
5) proper fingernail maintenance;
6) prohibition of jewelry;
7) good hygienic practices
8) employee health policies (employee illness, exclusions, restrictions) The Houston Food Ordinance does not address who can conduct the training. Training providers may include:
    i) food handler training classes;
    ii) local regulatory agencies;
    iii) private training companies;
    iv) food establishment owner/permit holder.

The training has to include all of the listed elements. Training providers design their own curriculums. Reference materials are readily available from regulatory agencies, libraries, universities, and the internet. The employee has to sign the acknowledgement of receiving the training and, the documentation must be maintained at the food establishment.

Step No. 2: Documentation is maintained at the food establishment that food employees contacting ready-to-eat foods with bare hands utilize two or more of the following control measures to provide additional safeguards:

1.double handwashing; 2. nail brushes; 3. a hand sanitizer after handwashing;
4. incentive programs that assist or encourage food employees not to work when they are ill;
5.other control measures approved by the regulatory agency.

The documentation in step no. 2 designates what measures are to be used, not whether the employees are using the measures. **NOTE:** These safeguards are in addition to proper handwashing.

Step No. 3: Documentation is maintained at the food establishment that corrective actions are taken when steps 1 and 2 are not followed. The documentation has to include the plan for corrective action. The documentation has to be written, but may be included as part of the establishment's HACCP monitoring logs.

TIME AS A PUBLIC HEALTH CONTROL

The use of time only, rather than time in conjunction with temperature as a public health control may be utilized to offer potentially hazardous foods for service. Because there is no significant bacterial growth or toxin production in such limited time, potentially hazardous foods may be held out of temperature control for up to four hours. Make sure that all food is properly cooked and/or cooled before using time as a public health control. Once time is used instead of time and temperature control, the food cannot be placed under temperature control again for further use.

- The use of time only may apply to ready to-eat potentially hazardous food that is displayed or held for service for immediate consumption;
- The use of time only may also apply to a working supply of potentially hazardous food held before cooking;
- The food is clearly marked or otherwise unmistakably identified with the time within which it must be cooked, served or discarded;
- The food is served or discarded within 4 hours from the point in time when the food is removed from temperature control;
- Food in unmarked containers or packages, or for which the time has expired, must be discarded;
- Written procedures are maintained and made available to the regulatory authority upon request to ensure compliance; (records/log books should be kept for 30 days)
- The procedures shall be in English and available in translations to any other language used in lieu of English by the food employees;
- All employees are properly trained about the procedure.
- A food establishment that serves a highly susceptible population may not use time only, as a public health control for raw eggs.

PROTECTION OF FOOD DURING DISPLAY AND SERVICE

Potentially hazardous food must be kept at an internal temperature of 41°F or lower or at a temperature of 135°F or above during display and service, except that rare roast beef can be held for service at a temperature of at least 130° F.

FOOD ON DISPLAY

Food on display must be protected from consumer contamination by the use of sneeze guards, display cases, packaging, or salad bar protective devices. Nuts in the shell, whole raw fruits and vegetables that are intended for hulling, peeling or washing by the consumer before consumption are not required to have protective devices when displayed. A food dispensing utensil must be available for each container displayed as a consumer self-service unit such as a buffet or salad bar.

LEFTOVER FOODS

- Portions of leftover food on a customer's table can not be re-served.
- Packaged non - potentially hazardous foods such as crackers and condiments, that are unopened and, are in sound condition, may be re-served, except in a highly susceptible population food service establishment.
- Packaged or unpackaged foods, once served, can not be donated.

ICE

- Ice for consumer use must be dispensed only by employees using scoops, tongs or through an automatic ice dispensing machine. Ice scoops and other food dispensing utensils are to be

stored on a clean surface or in the ice or food, with the handle extended out.

BULK FOODS DISPLAY/SERVICE

Bulk unpackaged food displayed and sold from a self-service container is authorized under the following provisions:

- The self service container must be provided with a tight-fitting lid that is securely attached to the container and kept closed except during service or refill;
- The container's lid and other utensils are constructed of easily cleanable material; kept clean and in good repair;
- A utensil with handle is provided and used for dispensing of food; and
- A conspicuous sign must be posted in the immediate display area that instructs the customer on the proper dispensing procedure.
- Raw, unpackaged animal food, such as beef, lamb, fish, poultry may not be offered for consumer self-service.
- Consumer self-service operations should be provided with suitable dispensing utensils that protects the food from contamination and monitored by food handlers trained in safe operating procedures.

REUSE OF TABLEWARE

- Food employees may *not* reuse soiled tableware including single-service articles to provide second portions or refills to the consumer.
- Self-service consumers may *not* reuse soiled tableware when returning to salad bar or buffet for additional food. A card, sign, or other effective means of notification must be displayed to notify consumers that clean tableware is to be used upon return to self-service areas such as salad bars or buffets.
- Beverage cups and glasses are exempt from this requirement **if refilling is a contamination-free process**. Consumers cannot refill beverage cups and glasses except by using self-service automatic beverage dispensing equipment.

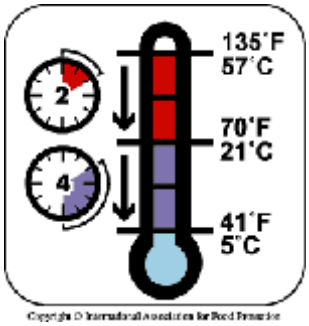
COOLING POTENTIALLY HAZARDOUS FOODS

Rapid cooling after cooking is essential for potentially hazardous foods, especially when prepared in large volume. Cooling potentially hazardous food does not kill the *Clostridium perfringens* spores that multiply rapidly when temperature/time is abused, but discourages them from germinating when the food reaches the right temperature. Cooked potentially hazardous food, requiring refrigeration, must be rapidly cooled from 135 ^{o} F. to 70° F. within 2 hours; and from 135 ^{o} F. to 41° F. or less within a total of 6 hours.

6 HOURS FOR COOLING

135$^{o\ F.}$ to 70$^{o\ F.}$ in 2 HOURS

135 $^{o\ F.}$ to 41$^{o\ F.}$ in 6 HOURS



- First, the food temperature must be lowered rapidly from 135°F to 70° F. in 2 hours because disease-causing pathogens multiply rapidly between these temperatures.
- Then, an additional 4 hours can be allowed to cool the food down to a safe temperature of 41°F. This cooling standard should keep disease pathogens in the lag phase.

COOLING METHODS

- Place foods in shallow pans with food depth of 2 inches or less.
- Separate large quantities of heated foods into smaller or thinner portions.
- Use ice water bath to quick chill; stirring every 15 minutes.
- Use blast chiller equipment.
- Withhold some of the water during cooking from stews or soups; and then add clean ice as an ingredient at the end to replace the water.
- Use containers that facilitate heat transfer: aluminum – excellent; stainless steel – good; plastic or glass – poor
- Using food grade plastic bags - divide food into bags, seal, surround bags with ice to cool rapidly
- Cooling paddles, rapid cooling sticks (food grade).

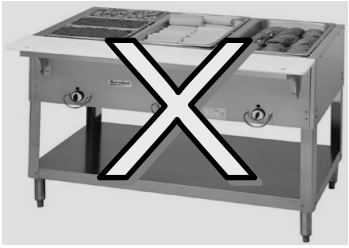
Potentially hazardous foods prepared from ingredients at room temperature must be cooled to 41° F. within 4 hours after preparation. Example: After opening a can of tuna used for sandwich/salad must be cooled to 41° F. within 4 hours.

REHEATING FOR HOT HOLDING

Use stoves, grills, steamers, or microwave oven **as the primary heating devices** to rapidly reheat to minimum temperature within 2 hours.

FOOD	REHEATING TEMPERATURES
Potentially hazardous foods including fruits and vegetables	165° F. (74° C.) for 15 seconds
Ready-to-eat food taken from hermetically sealed container or intact package from an inspected food-processing plant.	135° F. (57° C.) without time duration
Raw animal foods cooked in microwave	165° F. (74° C.) for 15 seconds
Cooked and refrigerated food that is prepared for immediate service to an individual consumer order.	Prepare for consumer as ordered. No temperature requirement.

HAZARD: Do not use **secondary heating or hot holding devices such as** steamtables, warmers, bainmaries, and crock-pots, for the rapid reheating of potentially hazardous foods.



REMEMBER!!!!

Improper cooling and reheating of potentially hazardous food provides favorable conditions allowing **Clostridium perfringens** spores to activate and grow into vegetative cells. Rapid

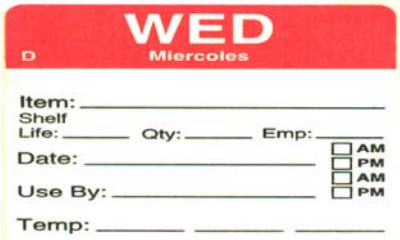
cooling/reheating is required to control the growth of Clostridium perfringens.

DATE MARKING

Date marking is utilized to ensure food safety. Refrigerated potentially hazardous foods kept for extended periods of time are subject to bacterial growth, especially Listeria monocytogenes. Date marking is the monitoring tool that the operator must utilize to ensure the consumption or disposal of Ready-to-eat/Potentially Hazardous Foods (RTE/PHF) within four or seven days.

Foods must be date marked based on all of the following conditions:

- the food is potentially hazardous
- the food is ready-to-eat
- the food requires refrigeration
- the food is held for more that 24 hours
- prepared on premises or commercially processed and opened.



1. On-premises preparation

Ready-to-eat potentially hazardous foods, prepared (cooked or raw) and refrigerated for more than 24 hours; and

Ready-to-eat potentially hazardous foods must be marked with the date of preparation - <u>counted as DAY 1</u>

- A total of 7 calendar days or less if kept at 41°F or below the food must be consumed or discarded.
- A total of no more than 4 days if kept at 45°F. or below the food must be consumed or discarded.

Refrigerated ready-to-eat potentially hazardous food prepared and frozen in the food establishment must be marked:

- When the food is thawed, to show that the food must be consumed within 24 hours; **or**
- When the food is placed into the freezer and date marked to show the refrigeration time before freezing which is, including the day of preparation.
    1. 7 calendar days or less from the day of preparation, if kept at 41° F. or less
    2. 4 calendar days or less from the day of preparation, if kept at 45°F. or below

2. Commercially processed food

A container of refrigerated, ready-to-eat potentially hazardous food prepared and packaged in a food processing plant must be date marked at the time the original container is opened <u>counted as DAY 1</u> in the food establishment, to show the opening date and disposition date (discard date/consume-by date) which is:

- A total of 7 calendar days or less from the day the food is prepared or after the original container is opened if kept at 41°F. or less, counting the opening date
- A total of no more than 4 days from the day the food is prepared or after the original container is opened, if kept at 45°F. or below counting the opening date.

DISPOSITION

Food not consumed by the disposition date must be discarded.

PREPARE/COLD-HOLD/FREEZE/THAW

Refrigerated ready-to-eat potentially hazardous food prepared, frozen, and thawed in the food establishment must be: Consumed within 24 hours of thawing or the food can be held thawed under refrigeration for a total of 7 calendar days or less if kept at 41° F. or less. The refrigerated time it was held before freezing must be marked on the container. Thawed food held refrigerated

must not exceed a 7 day shelf life.

DISPOSITION: Food must be discarded if not consumed on or before the most recent date marked on the food container or package if the food is not consumed by that date.
Freezing does not extend the refrigerated shelf life of the ready-to-eat potentially hazardous food.

DATE MARKING EXCEPTIONS:
- Individual meal portions served or repackaged for immediate sale from a bulk container
- upon a consumer's request.
- Whole, unsliced portions of a cured and processed product with original casing maintained on the remaining portion, such as bologna, salami or other sausage in a cellulose casing.

****CHART 4-C SUMMARY CHART READY-TO-EAT, POTENTIALLY HAZARDOUS FOOD (TIME/TEMPERATURE, CONTROL FOR SAFETY FOOD)**
DATE MARKING § 3-501.17(A) – (E) AND DISPOSITION § 3-501.18

	"IF"	→	"THEN"
(A) or (B)	On site preparation and held > 24 hours, or Commercial container is opened	→	@ ≤ 41°F for < 7 days
		or	
(A) or (B)	Remove from freezer	→	@ ≤ 41°F 7 days minus*

*Time from preparation, or opening commercial container, to freezing.

Example: The morning of October 1, a chicken was cooked, then cooled, refrigerated for 2 days at 41°F and then frozen. If the chicken is thawed October 10, the food must be consumed or discarded no later than midnight of October 14.

Date	Shelf Life Day	Action
Oct. 1	1	cook/cool
Oct. 2	2	cold hold at 41°F
Oct. 3		freeze
Oct. 10	3	thaw to 41°F
Oct. 11	4	cold hold
Oct. 12	5	cold hold
Oct. 13	6	cold hold
Oct. 14	7	consume or discard

**** Food Code 2009**

FOOD DONATIONS

Foods previously served to a consumer or foods in heavily rim or seam-dented cans without the manufacturer's complete label shall not be donated. Donated food shall be labeled with the name of the food, the source of the food, and the preparation date of the food.

A potentially hazardous food can be donated if:

- The donated food has been kept at the required temperatures, and
- The shelf life of the donated foods do not exceed the disposition date of 4 or 7 days and,
- The donor can substantiate that the recipient has the required facilities to meet the proper storage, holding and reheating requirements of the Food Ordinance.
- The temperature of the food is at or below 41°F at the time of donation and protected from contamination. Hot food must be properly cooled before the time of donation.

FOOD PROTECTION DURING TRANSPORTATION

- During transportation, food and food utensils must be kept in covered containers or completely wrapped or packaged.
- During transportation, to another location for service or catering operations, food must be kept at 41°F or below or 135°F or above.

LESSON 4

H. A. C. C. P.
HAZARD ANALYSIS CRITICAL CONTROL POINTS AND VARIANCES

Hazard analysis critical control point (HACCP) is a systematic approach to the identification, evaluation, and control of food safety hazards used to develop a food process based, food safety plan. The HACCP process identifies critical control points and aids in the development of food process safety control measures. A HACCP plan is a written document that delineates the formal procedures for following the Hazard Analysis Critical Control principles developed by the National Advisory Committee on Microbiological Criteria for Foods.
HACCP-based food safety systems are designed to help you evaluate and monitor the flow of food from receiving to serving.

A HACCP PLAN CONSISTS OF SEVEN STEPS:

1. IDENTIFY POTENTIAL HAZARDS
Prepare a checklist of steps in the process where significant hazards occur and describe preventative measures to control the hazards. Review recipes, complete flowchart(s). Remember from Lesson 1, the hazards may be biological, physical, or chemical. Review menus and recipes to identify the potentially hazardous foods served.
2. IDENTIFY CRITICAL CONTROL POINTS (CCP)
CCP: A critical control points is any step or procedure at which action can be applied and a food safety hazard prevented, eliminated, or reduced to acceptable levels. CCP is usually a preparation step that involves time/temperature or human contact with food.
3. ESTABLISH CRITICAL LIMITS FOR PREVENTATIVE MEASURES
Establish critical limits for preventative measures associated with each identified CCP. There may be several standards for each CCP based on: Houston Food Ordinance and TFER; time/temperature standards; measurable or observable (handwashing).
4. ESTABLISH MONITORING PROCEDURES FOR CONTROL POINTS
Establish procedures for monitoring to adjust the process and maintain control. Check to see that the established criteria at each CCP is met. Focus on the CCP's throughout the entire flow of food; establish what actions must be applied to ensure that critical limits are met; monitor employees carrying out the procedures. For example: Observe that a calibrated, sanitized thermometer is used and inserted into the thickest part of the food.
5. ESTABLISH CORRECTIVE ACTIONS
Establish corrective actions when monitoring indicates that there is a deviation from an established critical limit. Determine corrective actions to be utilized if the criteria are not met for each CCP. Corrective actions may include; continuing with the cooking process, to actions that may reduce the hazard to an acceptable level. Discard the product if at unacceptable levels.
6. ESTABLISH EFFECTIVE RECORD KEEPING SYSTEMS
Establish effective record-keeping procedures that document the HACCP system. Document all CCP's that are monitored, all critical limits, all occasions when criteria are not met and all corrective actions taken. Records should be simple to use and can be maintained easily; develop a record system that may be valuable if a foodborne illness outbreak should occur.
7. ESTABLISH PROCEDURES FOR VERIFICATION THAT HACCP IS WORKING
HACCP plan verification involves periodic review and update. Update the HACCP plan when there are changes in the operation, supplies, menu items, facilities, when new menu items are added and worked into the HACCP plan.

A **variance** is a written document issued by the regulatory authority that authorizes a modification or waiver of one or more requirements of the Houston Food Ordinance if in the opinion of the regulatory authority, a health hazard or nuisance will not result from the modification or waiver.

Variances and HACCP plans are required for some types of specialized food processes or specialized food processing methods such as smoking and curing of food and reduced oxygen packaging of food. Requests for variances and HACCP plans are both required to be submitted for a specialized food processing methods. For other processes or deviations from Houston Food Ordinance, only a variance or a HACCP Plan is required. This page will help you decide if you need to submit both a request for a variance and a HACCP plan to the department for approval--or if an approved variance or an approved HACCP plan will suffice.

Processes that require a formal HACCP plan but not a variance:

- Pooling of eggs in a food establishment that serves a highly susceptible population (nursing home, hospital, day care.) as outlined in section 20-21.1 (b)(4)(b)(c) of the Houston Food Ordinance.
- Preparation of juice packaged in a food establishment must follow the HACCP guidelines in the Houston Food Ordinance as found in section 20-21.1(b) (10) (b) (c).
- Preparation of non-packaged juice in a food establishment that serves a highly susceptible population must follow HACCP guidelines in the Houston Food Ordinance as described in section 20-21.1(b)(10)(c).
- Reduced oxygen packaging (where Clostridium botulinum is a concern and more than one barrier exists) as describe in section 20-21.4 (m) (2).

Specialized Food Processing Methods that require a variance and a HACCP plan:

- Smoking of food as a method of preservation-but not if smoking is for flavor enhancement.
- Curing of food such as ham, sausages, etc.
- Using food additives to preserve food such as vinegar to render sushi rice so that it is not potentially hazardous.
- Operating molluscan shellfish tanks that store/display shellfish that are offered for human consumption.
- Removing the tags from shellstock.
- Undercooking of food other than "whole muscle intact beef" and not wanting to use a consumer advisory.
- Custom processing of animals for personal use in a food establishment.
- Sprouting of seeds or beans
- Reduced oxygen packaging (including cook-chill bagging), where Clostridium botulinum is a concern and only one barrier, i.e., refrigeration exists.
- Preparing, serving or transporting food by another method that is determined by the department to require a variance or HACCP plan.

Contents of HACCP PLAN for methods that require a variance or a formal HACCP Plan

1) A categorization of the types of potentially hazardous foods that are covered by the plan.
2) A flow diagram by specific food or category type identifying critical control point and providing information on the following:
   a) Ingredients, materials, and equipment used in the preparation of a food; and
   b) Formulations or recipes that delineate methods and procedural control measures that address the food safety concerns involved;
3) A statement of standard operating procedures for the plan under consideration including clearly identifying:
   a) Each critical control point;
   b) The critical limits for each critical control point;
   c) the method and frequency for monitoring and controlling each critical control point by the food employee designated by the person-in- charge;
   d) The method and frequency for the person in charge to routinely verify that the food employee is following standard operating procedures and monitoring critical control points;
   e) Action to be taken by the person in charge if the critical limits for each critical control point are not met; and
   f) Records to be maintained by the person in charge to demonstrate that the HACCP plan is properly operated and managed; and
4) Additional scientific data or other information if requested.

Use a "Keep Food Safe" Quality Control Checklist

- ❑ RECEIVED - 41˚F/135˚F
- ❑ STORED - 41˚F. OR BELOW ; PROTECTED FROM CONTAMINATION
- ❑ THAWED – USING PROPER PROCEDURES
- ❑ COOKED – TO PROPER TEMPERATURES
- ❑ HOT HOLDING - 135˚F. OR ABOVE
- ❑ COOLED – USE PROPER PROCEDURES
- ❑ DATE MARKED - 41˚F. / 7 DAYS
- ❑ REHEATED - 165˚F. OR ABOVE

LESSON 5
EQUIPMENT AND FACILITIES

Multi-use equipment, food contact and non-food contact surfaces must be: located in a manner that facilitates easy cleaning and prevents contamination, constructed and repaired with safe materials, corrosion-resistant and non-absorbent, smooth, easily cleanable.

NON FOOD-CONTACT SURFACES
Surfaces of equipment not intended for contact with food, but which are exposed to splash or food debris must be designed and fabricated to be smooth, easily cleanable, free of unnecessary ledges or crevices, and be maintained in a clean and sanitary condition.

EQUIPMENT AND UTENSIL HANDLING SAFETY
Employees should be trained on proper and safe operations of all equipment to avoid possible accidents. Electrical equipment should be unplugged before cleaning.

AISLES AND WORKING SPACES
Aisles and working spaces must be unobstructed and of sufficient width to permit employees to perform their duties without contamination of food or food-contact surfaces.

WOOD
Hard maple wood or equivalently nonabsorbent material may be used for chopping blocks, cutting boards, salad bowls or bakers tables and shall be maintained smooth, easily cleanable, and in good repair. Wooden paddles used in confectionery operations or confectionery preparation at high temperatures are permitted. Wooden wicker baskets may be used for proofing of bread, provided that the product is fully baked after proofing.

EQUIPMENT AND UTENSIL CLEANING AND SANITATION

CLEANING FREQUENCY
Where equipment and utensils are used for the preparation of potentially hazardous foods on a continuous or production line basis, utensils and food-contact surfaces of equipment shall be washed, rinsed, and sanitized at intervals throughout the day or as scheduled based on type and temperature of food and amount of food particle accumulation.

Cleaning and sanitizing must also take place:

- At intervals throughout the day or as scheduled based on type and temperature of food served.
- Before each use with a different type of raw animal food (beef, fish, pork, or poultry) unless raw animal foods that require higher cooking temperatures are prepared after foods that require lower cooking temperatures.
- Each time there is a change from working with raw foods to working with ready-to-eat foods.
- Between the use of raw fruits or vegetables and potentially hazardous foods.

Food-contact surfaces and nonfood-contact surfaces, door seals, and cavities of all cooking equipment shall be free of encrusted grease deposits, accumulated soil, dust, dirt, food particles and other debris.

Clean spoons, knives and forks must be touched only by their handles.

Clean cups, glasses, and bowls, plates and similar items must be handled without contact with the inside surfaces or surfaces that will contact the user's mouth.

MANUAL CLEANING AND SANITIZING

Each food establishment shall have a three-compartment sink with rounded internal angles, and free of sharp corners or crevices.

A mobile food unit may have either a two or three-compartment sink.

A utensil-washing sink is not required in a packaged-food-only food establishment.

SINK DIMENSIONS

Each compartment of a utensil washing sink is required to be a minimum size of:

15 inches in WIDTH X **15** inches in LENGTH X **12** inches in DEPTH

WASH/RINSE/SANITIZING PROCEDURES

Clean the sinks prior to use and provide hot and cold running water. Each two or three compartment sink shall be large enough to manually permit the complete immersions of all equipment and utensils. Equipment and utensils should be properly pre-flushed, scraped, or pre-soaked to remove gross particles and soil.

- **Wash** in first compartment with hot water and detergent solution at a temperature of at least 110° F. or the temperature specified on the cleaning agent manufacturer's label instructions.
- **Rinse** in the second compartment with clear hot water to remove detergent
- **Sanitize** in the third compartment with water temperature 55°F.-120°F. based on sanitizing solution
- **Air dry** utensils and equipment

Drain boards or easily removable dish tables of adequate size shall be provided for proper handling of soiled utensils prior to washing and for cleaned utensils following sanitizing.

HOT WATER FOR SANITIZING IN A 3 COMPARTMENT SINK

When hot water is used for sanitizing, an integral heating device or fixture installed in or under the sanitizing compartment capable of maintaining the water at 171° F. A dish basket of such size and design shall be provided to permit complete immersion of equipment and utensils.

CHEMICAL SANITIZERS

NAME	STRENGTH	IN PLACE	IMMERSION TIME	WATER TEMPERATURE			
				pH 10 or less		pH 8 or less	
				F°	C°	F°	C°
Chlorine	25 ppm	25 ppm	10 seconds	120°	49°	120°	49°
Chlorine	50 ppm	50 ppm	7 seconds	100°	38°	100°	24°
Chlorine	100 ppm	100 ppm	10 seconds	55°.	13°	55°	13°
Iodine	12.5- 25 ppm	12.5- 25 ppm	30 seconds	75°	24°	75°	24°
QAC *	Per Label	Per Label	Per Label	75°	24°		
Chlorine and Bromine	25 ppm/ 12.5 ppm	25 ppm/ 12.5 ppm	If strength is below 12.5 ppm, do not use				
Hot water	N/A	N/A	30 seconds	171° F.			

*(Quaternary Ammonium Compound)

When chemicals are used for sanitization, a test kit or devices that accurately measure the parts per million (ppm) concentration of the solution shall be provided.

For in-place cleaning of large equipment, rinsing, spraying or swabbing use a sanitizing strength solution for that particular sanitizing solution as described above. If a detergent sanitizer is used to sanitize in a cleaning and sanitizing procedure where there is no distinct rinse between washing and sanitizing steps, the agent applied in the sanitizing step shall be the same agent used in the washing step. Those food establishments using a two-compartment sink as approved, shall use a detergent sanitizer or shall sanitize food-contact surfaces using hot water.

WIPING CLOTHS

Moist cloths used for wiping food spills on countertops, tables, food-contact and non food-contact surfaces of equipment shall be clean and rinsed frequently. Store wiping cloths in one of the approved sanitizing solutions between uses.

MECHANICAL CLEANING AND SANITIZING

Cleaning and sanitizing may be done by spray-type or immersion dishwashing or by other types of machines, if it demonstrates that it thoroughly cleans and sanitizes equipment and utensils. Machines and devices shall be properly installed, maintained in good repair. Dishmachines are to be provided with an easily accessible and readable data plate affixed to the machine by the manufacturer to indicate the design and operating specifications.

Dishmachines installed after November 11, 2007 must be equipped to automatically dispense detergents and sanitizers. A visual or audible alarm signal shall be incorporated to verify if the detergents and sanitizers are delivered or not.

Machines using hot water for sanitizing and spray-type dishmachine may be used if the wash water and the pumped rinse water is kept clean and the water is maintained as indicated in the table below:

MACHINE TYPE	WASH TEMPERATURE	FINAL RINSE TEMPERATURE	FINAL RINSE AT DISH LEVEL TEMPERATURE
Single-tank, stationary-rack, dual-temperature	150°F(66°C)	180°F(82°C)	160°F(71°C)
Single-tank, stationary-rack, single-temperature	165°F(74°C)	165° F(74°C)	165° F(74°C)
Single-tank, conveyor	160°F(71°C)	180°F(82°C)	160°F(71°C)
Multiple-tank, conveyor	150°F(66°C)	---	160°F(71°C)
Single-tank, pot, pan, and utensil washer	140°F(60°C)	180°F(82°C)	160°F(71°C)

TESTING DEVICES

Test kits are required to measure the concentration of sanitizer in the final rinse at dish level in a chemical sanitizing dishmachine.
A maximum registering thermometer or heat sensitive indicating paper is required to test the final rinse temperature at dish level in a heat sanitizing dishmachine. Both must travel through the final rinse chamber in the same manner as utensils.

DRYING

After sanitizing, all equipment and utensils shall be air-dried or stored in a self-draining position. The use of towels for drying equipment or utensils is prohibited.

EQUIPMENT AND UTENSIL STORAGE

Cleaned and sanitized utensils and equipment shall be stored at least six inches above the floor in a clean, dry location protected from contamination.
Utensils and equipment shall be:

- Air-dried before being stored or placed in a self-draining position
- Glasses and cups inverted
- Covered or inverted wherever practical
- Stored to present the handle of knives, forks, and spoons to the employee or consumer
- Washed and sanitized once used for tasting
- Washed and sanitized in case of unprotected and unused preset tableware

WATER SUPPLY

Enough potable water for the needs of the food establishment must be provided from an approved source constructed and operated according to all applicable laws. Potable water is water from an approved source that is suitable for human consumption. An adequate supply of hot and cold running water is essential for food safety and sanitization.

WATER UNDER PRESSURE

Water under pressure is required to be provided at all fixtures and equipment that use water in

the food establishment. Hot water is required to be at a minimum temperature of 110° F (43°C).
No food establishment shall operate without hot and cold running water !!!!

SEWAGE

All sewage, including liquid waste, shall be disposed of by a public sewage system or by a sewage disposal system constructed and operated according to all applicable laws. Non-water carried sewage disposal facilities are prohibited.

PLUMBING

Plumbing shall be sized, installed, and maintained according to all applicable laws. There shall be no cross-connection between the potable water supply and any nonpotable or questionable water supply, or any other source of pollution through which the potable water supply might become contaminated.

BACKFLOW

The potable water system shall be installed to preclude the possibility of backflow. Devices shall be installed to protect against backflow and backsiphonage at all fixtures and equipment with an air gap at least twice the diameter of the water supply line. A hose shall not be attached to a faucet unless a backflow prevention device is installed.

DRAINS

Except for existing properly trapped open sinks, there shall be no direct connection between the sewage system and any drains originating from equipment in which food, portable equipment or utensils are placed.

AIR GAP

An air gap is a physical separation of the potable and non-potable systems (e.g. ice machine, sinks, dishwashing machine, and hand washing sinks) by an air space. The vertical distance between the supply pipe and flood-level rim should be two times (2x) the diameter of the pipe. Drain tubing shall not extend into the floor drain.

ICE MANUFACTURING

An ice-making machine shall be located, installed, operated, cleaned and maintained to prevent contamination of ice. Ice manufacturing is classified as food preparation and requires that the ice machine be located and operated in compliance with relevant sections of the ordinance.

SINGLE SERVICE ARTICLES: STORAGE AND DISPENSING

Single service articles shall be stored six inches above the floor in closed cartons or containers, which protect them from contamination.

- The storage of single service articles in toilet rooms, vestibules, or under water lines, is prohibited.
- Handle and dispense single service articles in a manner that prevents the contamination of food contact surfaces.

Single service knives, forks, and spoons packaged in bulk must be:

- Wrapped by an employee who has washed his/her hands immediately prior to sorting or wrapping the articles.
- Protected from contamination in a holder and presented to the consumer handle first, if not prewrapped or prepackaged.

Single service articles shall be used only once.

TOILET FACILITIES

Install conveniently located, easily cleanable, and accessible toilets for employees at all times. Toilet rooms and vestibules must be completely enclosed, have tight-fitting, self-closing solid doors, kept closed except during cleaning or maintenance, kept in good repair, free of objectionable odors, and not open directly into any room, in which food is prepared or utensils are washed. Toilet rooms shall have at least one covered waste receptacle. Handwashing signs are required in each toilet room used by employees.

HANDWASHING SINKS

Food establishments are required to provide at least the minimum number of hand washing sinks in accordance with all applicable laws. Handwashing sinks shall be installed and located to permit convenience use by all employees in food preparation and utensil washing areas, and shall be accessible at all times. Hand washing sinks are required in toilet rooms or vestibules. The food preparation, utensil-washing, and utility sinks are prohibited for handwashing. Handwashing sinks in facilities providing custodial care for pre-school age children that are used only by the children may be provided with cold running water only. If employees use the same lavatory as the children, then both hot and cold running water are required.

SUPPLIES AT THE HANDWASHING SINKS

Each handwashing sink is required to be provided with hot and cold running water tempered by a mixing valve or combination faucet. The minimum temperature of hot water at the hand lavatory is 100° F. Provide handwashing soap or detergent, a supply of sanitary paper towels or a hand-drying device providing heated air. Any slow closing or metering faucet used shall be designed to provide a flow of water for at least 20 seconds without the need to reactivate the faucet. Automated hand-washing equipment is acceptable, but steam-mixing valves are prohibited. Common towels are prohibited. If disposable towels are used, easily cleanable waste receptacles shall be conveniently located near the sinks. Sinks, dispensers, and drying devices are to be kept clean and in good repair.

FLOORS

Floors and floor coverings of all food preparation, food storage, and utensil-washing areas, and the floors of all walk-in refrigeration units, dressing rooms, toilet rooms and vestibules are required to be: Constructed of smooth durable material such as sealed concrete, terrazzo, ceramic tile, flooring of plastic or tight wood impregnated with plastic; non-absorbent and easily cleanable; maintained in good repair; kept clean.

- Carpeting is prohibited in food preparation and utensil/equipment-washing areas, storage rooms, toilet rooms. The use of sawdust, wood shavings, peanut hulls or other similar materials as a floor covering is prohibited.

FLOOR DRAINS

Properly installed, trapped floor drains shall be provided in floors that are water flushed for cleaning or that receive discharges of water or other fluid waste from equipment, or in areas where pressure spray methods for cleaning equipment are used. Drain covers are to remain securely anchored in place.

WALLS AND CEILINGS

The walls and ceilings of food preparation, food storage, equipment/utensil washing, toilet rooms, vestibules, and consumer display areas where only packaged containerized food products and

single service articles are stored and displayed, and bulk food storage areas of warehouses and retail stores must be: Light in color, smooth, easily cleanable, non absorbent, in good repair and kept clean.
The walls within water closet compartments, walls within two feet of the front and sides of urinals, handwashing sinks, utensil-washing sinks, food sinks, mop or utility sinks and walls subject to damage from moisture shall be provided to a height of at least four feet above the finished floor with a smooth, light colored, impervious surface of a type not adversely affected by moisture or grease. The walls behind or adjacent to cooking equipment utilizing a ventilation hood must have the same type of material as indicated above and extended from the floor to the bottom of the vent hood.
Materials utilized for wall protection shall be fiberglass-reinforced plastic (FRP), non-ferrous metal, ceramic tile, plastic laminate or the equivalent for the purpose intended.

LIGHTING
At least 50 foot-candles of light (540 lux): at a surface where a food employee may be working with food or with utensils or equipment such as knives, slicers, grinders, or saws where employee safety is a factor.
At least 20 foot-candles (220 lux) of light shall be provided at a surface where food is provided for consumer self-service, such as buffets and salad bars, or where fresh produce or packaged foods are sold or offered for consumption and inside equipment such as reach-in and under-counter refrigerators and at a distance of 30 inches (75 mm) above the floor in areas used for hand-washing, utensil-washing, and equipment and utensil storage and in toilet rooms. At least 10 foot candles (110 lux) of light shall be provided at a distance of 30 inches (75 cm) above the floor in walk-in refrigeration units and dry food storage areas and in other areas and rooms during periods of cleaning.
Protective shielding (including silicon-coated bulbs) to prevent broken glass from falling onto food, equipment, utensils and single service articles is provided for all artificial lighting fixtures located over/by/or within food storage, preparation, service, display facilities and facilities where utensils and equipment are cleaned/stored.
Infrared or other heat lamps shall be protected against breakage by a shield surrounding and extending beyond the bulb, leaving only the face of the bulb exposed.

VENTILATION
All rooms shall have sufficient ventilation to keep them free of excessive heat, steam, condensation, vapors, obnoxious odors, smoke and fumes. Heating, ventilation and air conditioning systems shall be designed and installed so that make up air intake and exhaust vents do not cause contamination of food, food contact surfaces, utensils and equipment. Ventilation systems shall be installed according to all applicable laws and when vented to the outside, shall not create unsightly/harmful/unlawful discharge. In new or extensively remodeled establishments, all rooms from which obnoxious odors, vapors or fumes originate shall be mechanically vented to the outside. Ventilation hoods and the ventilation equipment shall be equipped with effective, easily cleanable, easily removable metal filters. Filters must be cleaned as often as necessary.

Ventilation hoods which require filters are classified as Type 1.
Except for dishwashing machines installed under countertops, all commercial dishwashing machines using hot water for sanitizing shall be provided with a ventilation hood and installed according to all applicable laws. **Ventilation hoods which do not require filters are classified as Type 2.**
All cooking equipment except microwave ovens, electric convection ovens, electric rice cookers

and ovens of approved type shall be provided with a ventilation hood.

Dressing Rooms and Locker Areas

If employees routinely change clothes within the establishment, rooms or areas shall be designated and provided for that purpose. Lockers or other suitable facilities may be located only in food storage rooms containing completely packaged food/single-service articles.

Linens and Clothes Storage

Clean clothes and linens shall be stored in a clean place and protected from contamination until used. Soiled clothes and linens shall be stored in nonabsorbent containers or washable laundry bags until removed for laundering.

Laundry Facilities

Laundry facilities in a food establishment shall be restricted to the washing and drying of linens, cloths, uniforms and aprons necessary to the operation of the food establishment. If such items are laundered on the premises, a dryer shall be provided and used.

Cleaning Equipment and Storage

Maintenance and cleaning tools such as mops, brooms, vacuum cleaners and similar equipment shall be maintained and stored in a manner that does not contaminate food, utensils, equipment, single service articles or linens.

Animals and unnecessary traffic

Live animals are not permitted on the premises of a food service establishment.
Live animals are allowed in the following situations if the contamination of food, clean equipment, utensils, and single-use articles cannot result:

- Edible fish, or decorative fish in aquariums, shell fish or crustacean on ice or under refrigeration, and shellfish and crustacean in display tank systems;
- Patrol dogs accompanying security or police officers in dining, sales, and storage areas, and sentry dogs running loose in outside fenced areas;
- Service animals controlled by a person with a disability or in training when accompanied by an approved trainer shall be permitted in dining areas and sales areas.
- Pets in common dining areas of institutional care facilities such as nursing homes, assisted living facilities, or residential care facilities at times other than during meals.

The traffic of unnecessary persons through the food preparation, cooking, and utensil washing areas is prohibited.

Premises

Food service establishments and all parts of the property used in connection with operations of the establishment shall be kept free of litter.

- Walking and driving surfaces of all exterior areas are made from concrete, asphalt, gravel, or similar material and graded to prevent the pooling of water.

Living Areas

No operation of a food establishment shall be conducted in a private home. Food service operations shall be completely separated from any living/sleeping quarters by partitioning and solid, self-closing doors.

GARBAGE AND REFUSE

CONTAINERS

- Garbage, refuse, returnables, and recyclables shall be kept in durable, easily cleanable, insect/rodent proof containers that do not leak and do not absorb liquids.
- Containers used in food preparation and utensil washing areas must be kept covered after they are filled and while not in use.
- Containers stored outside the establishment, and dumpsters, and compactor systems shall be easily cleanable, provided with tight-fitting lids/doors/covers and kept covered/closed when not in actual use. The area shall be kept clean and free of garbage. In containers with drains, drain plugs shall be in place, except during cleaning. Dumpsters must be stored on concrete or machine laid asphalt.

STORAGE

- Construct garbage or refuse storage rooms with easily cleanable, nonabsorbent, washable materials; keep clean, insect and rodent proof, and large enough to store garbage and refuse containers that accumulate.
- Dispose of garbage and refuse often enough to prevent the development of odor and attraction of insects and rodents.
- Utilize effective measures and, maintain the premises in such condition to minimize the presence, harborage, and feeding of rodents, flies, cockroaches and other pests.

- In operations where dumpsters or compactors are used; cleaning and the facilities to conduct such cleaning may be provided by the contractor, on or off the premises. However, it is the responsibility of the operator, manager, or person-in-charge to ensure that the containers are in compliance and to see that the contractor fulfills their obligations to the operator.

POISONOUS AND TOXIC MATERIALS

Use approved poisonous or toxic materials necessary for the maintenance of the establishment; cleaning and sanitizing of equipment and utensils, and for the control of insects and rodents shall be present in the food establishment. Containers of poisonous and toxic materials must be prominently and distinctly labeled for easy identification of the contents, including the manufacturer's instructions for use. Store and locate poisonous and toxic materials physically separated from each other and stored in cabinets used for no other purpose. Do not store above food, food equipment, utensils or single-service articles, or clean linens.
Store and locate insecticides, rodenticides, detergents, sanitizers, and related cleaning or drying agents, caustics, acids, polishes, and other chemicals, physically separated from each other and stored in cabinets used for no other purpose. Do not store these materials above or near food, food equipment, utensils or single-service articles. Keep for convenient availability, detergent or sanitizers at utensil or dishwashing stations.

If rodenticides are used in areas where food is handled, prepared, or packaged then approved bait boxes shall be used. Tracking powder pesticides may not be used in a food establishment.

Personal medications shall not be stored in food storage, preparation or food service areas. Medicines belonging to employees or to children in day care facilities that require refrigeration must be stored properly. Store it in a package or container and keep it inside a covered leak-proof container that is identified as the individual's container for the storage of the employee/child's

medicines. Medicines must be inaccessible to children.

LESSON 6
GREASE TRAP MANAGEMENT AND RESPONSIBILITY

WHAT IS A GREASE TRAP?
A grease trap is a device that prevents oil, grease and undesirable matter from being discharged into the city sanitary sewer system. Automatic dishwashers, 2 or 3 compartment sinks, mop sinks, and floor drains are the plumbing fixtures that flow into the grease trap. A grease trap may also be referred to as an interceptor. ***(Fig. 1) (Fig.2)***

WHAT IS A SAMPLE WELL?
A sample well is located downstream from a grease trap and provides city inspectors access to sample the outflow from the grease trap. ***(Fig. 2)***

WHAT IS A GENERATOR?
ANY PERSON WHOSE ACTIVITIES OR PROCESS GENERATE CITY-REGULATED WASTE WITHIN THE CITY OR WHO STORES CITY-REGULATED WASTE WITHIN THE CITY.

WHAT IS A TRANSPORTER?
A TRANSPORTER IS A COMPANY THAT IS RESPONSIBLE FOR CLEANING, TRANSPORTING, AND DISPOSING OF ANY CITY-REGULATED WASTE. A TRANSPORTER MUST HAVE A CURRENT AND VALID PERMIT; AND VEHICLE REGISTRATION **BEFORE** THE GREASE TRAP IS CLEANED.

WHAT IS A GENERATOR REGISRATION CERTIFICATE?
A certificate issued to a food service establishment. It may also be referred to as Fats, Oils, and Grease (FOG) certificate. ***(FIG. 3)***

What is a Generator number?
A unique identification number on the certificate and can also be referred to as a TCEQ number (**T**exas **C**ommission on **E**nvironmental **Q**uality). ***(FIG. 3)***

What is a Manifest?
A manifest is a form approved by the health officer to document the collection, transportation, and disposal of city-regulated waste.

WHO NEEDS GREASE TRAP?
All establishments that prepare and serve food to the public regardless of size are required to have a grease trap and a sample well. Some establishments may have multiple grease traps. This is dependent on the size of the business, type of food served and size of each trap. Grease traps are usually located outside the building near the kitchen area; some smaller traps may be located inside the kitchen. Those traps inside the kitchen must be fitted with gaskets to prevent leakage of sewer gas.

REGISTRATION REQUIREMENT
All grease traps located in the city limits of Houston must be registered annually with the City of Houston Department of Health and Human Services (HDHHS). It is unlawful for any person operating a food service establishment to act as a generator at any site for which a current and valid generator registration certificate has not been issued. All applicable food service establishments are responsible for obtaining an annual certificate(s) for their grease trap(s). A $50 non-refundable fee per grease trap is required and can be purchased at 8000 N. Stadium by

mail or walk-in. Some certificates maybe purchased at 7411 Park Place based on the generator's operation but this will be determined by FOG investigator. Both Food Dealer's permit and Registration Certificate must be purchased simultaneously, if applicable, to operate any food establishment. To obtain your grease trap certificate, call (832) 393-5100. The Replacement cost for a lost or misplaced registration certificate is $25.00 per certificate. The registration certificate is not transferable and it is valid only for the site to which it is issued.

The certificate must be conspicuously posted at the site in public view to which it pertains. The generator MUST make it available for verification upon request of the transporter or regulatory authority.

Additionally, a notarized copy of the holding capacity for the grease trap is required. This measurement MUST be submitted to HDHHS during ALL pre-opening inspections or existing locations that have capacity discrepancies.

GENERATOR'S RESPONSIBILITIES

All grease traps must be maintained to prevent excessive oil, grease and other contaminates from flowing into the sanitary sewer system. The limit set by the city council for free-floating or emulsified oil or grease is 400 parts per million (PPM). It is the responsibility of the generator to devise a maintenance schedule that consist of cleaning the grease trap at least once every **90 days** with their selected permitted transporter to ensure that the set limit is not exceeded. A Notice of Waiver (NOW) may be submitted to reduce the frequency to **180 days** but the generator must be in compliance with the 90 day cleaning frequency for one year. In addition, the generator must not have any major violations or citations issued within that year. Failure to comply will result in a citation being issued. ***(Fig. 4)***

GREASE TRAP MAINTENANCE METHODS

Only two methods are currently approved for maintenance of a grease trap; physical removal of the waste by **City-Regulated Waste transporters** and on-site treatment by **biological pretreatment companies.**

CITY-REGULATED WASTE TRANSPORTER:

All transporters that operate within the city limits of Houston must be permitted with the City. It is the **responsibility** of the generator to select a permitted transporter and verify that the vehicle displays current and valid City issued registration decals **before** the grease trap is cleaned. Drivers of City-regulated waste trucks must carry identification cards issued by the City. The restaurant owner or manager may verify the ID card of the driver to ensure that it is current and valid. Any questions or concerns regarding transporters can be addressed by calling (832)393-5688. You may also submit complaints online at the following link:
http://www.houstontx.gov/health/Environmental/specialwastecomplaint.html

Pressure Washers

All Pressure Washing transporters that operate within the city limits of Houston must be permitted with the City. Drivers of City-regulated waste vehicles must carry identification cards issued by the City. The restaurant owner or manager may verify the ID card of the driver to ensure that it is current and valid. It is the ***responsibility*** of the generator to select a permitted pressure washing company and verify that the vehicle displays current and valid City issued registration decals ***before*** any food service equipment or area of the restaurant is cleaned. This includes vent hoods, mats, and parking lots.

In addition, the generator is ***responsible*** for ensuring that all food service equipment is washed properly ***inside*** the facility. The designated areas such as 3 compartment sinks, floor drains, and mop drains should be used to prevent any discharge into the storm drains located outside the establishment. ***Note: No pressure washing by employees or non permitted pressure washing companies is acceptable.***

BIOLOGICAL PRETREATMENT SERVICE COMPANIES

BIOLOGICAL PRETREATMENT companies are required to be permitted by the City to treat grease trap waste on site. Additives such as enzymes or microbes are used to digest waste in the grease trap. All owners and operators of these companies are issued identification cards annually. Restaurant owners, managers, and/or operators must verify this identification card before allowing any biological pretreatment service to begin servicing their grease trap. The generator must keep an invoice for services rendered at the location from the biological pretreatment company***. Note: ALL Biological Pretreatment permits expire every year on January 31st.***

WASTE MANIFEST

The Waste Manifest is a five-part pre-numbered form used to document the collection, transportation, and disposal of City-regulated waste. All permitted City-regulated transporters are supplied with manifests by HDHHS as needed. A Company representative must sign the manifest ledger to acknowledge the receipt of issued manifests. Manifest accountability is one of the tools utilized for monitoring the collection, transportation, and disposal processes. Only manifest approved by the City are acceptable to be used by transporters. Waste Control Tickets are not acceptable. ***(Fig. 5-7)***

It is the Generator's responsibility to keep the white and yellow copies onsite for period of (5) years.

Each of the manifests' five parts is color-coded: (3) Whites, Yellow, and Goldenrod.

1st White The transporter submits this copy to the Health Department

2nd White- Transporter's copy/ Secondary Transporter's copy. The transporter keeps this copy for the purpose of compiling monthly activity reports. Transporters must submit this copy to HDHHS as part of their monthly report. The designated officer reviews the manifests for violations. Information on the manifests is entered in the manifest database. The manifests are returned to the transporters who must keep them for a minimum of five (5) years.

3rd White - Generator's copy. This copy must be given to the **generator** by the transporter after the waste is removed from the grease trap and the manifest is completed, and signed by both the generator and the transporter.

Yellow — Generator's Return copy. This copy must be returned to the generator by the transporter within 15 Calendar days from the date the waste was removed from the site. This copy must show disposal information.

Goldenrod - Disposal Copy. The disposal site retains this copy.

MAINTENANCE OF GREASE TRAP

As of May 2007, the City of Houston Code of Ordinances mandates that every interceptor located within the incorporated City limits **MUST** be fully evacuated at least once on a quarterly basis (every 90 days).

Before the grease trap is cleaned, please conduct the following:

1. Verify that your establishment has a current and valid registration certificate (FOG).
2. Verify that the transporter's truck has current and valid City issued registration decals. It is the responsibility of all generators to ensure that no unpermitted transporter removes waste from the site. ***(Fig. 8)***

After the grease trap is cleaned, please conduct the following:

1. Inspect the grease trap to ensure that is has been completely emptied before the manifest is signed.
2. Verify all information including the trap capacity on the Generator's portion of the manifest for accuracy. Information that is on the registration certificate and manifest should match at all times. Pay close attention to your TCEQ number.
3. Sign the "Generator" portion of the manifest. Both the waste generator and the transporter must complete and sign the appropriate sections of the manifest before the transporter leaves the generator site with the waste. The 3rd **white** copy is left with the generator at the time the waste is collected.
4. Remind the transporter to return the **yellow** copy of the waste manifest to your location within fifteen (15) calendar days of date waste was picked to ensure proper disposal. This copy shall have all required information completed in its entirety.
5. Generators must call (832) 393-5688 if the yellow copy is not received within 15 calendar days.

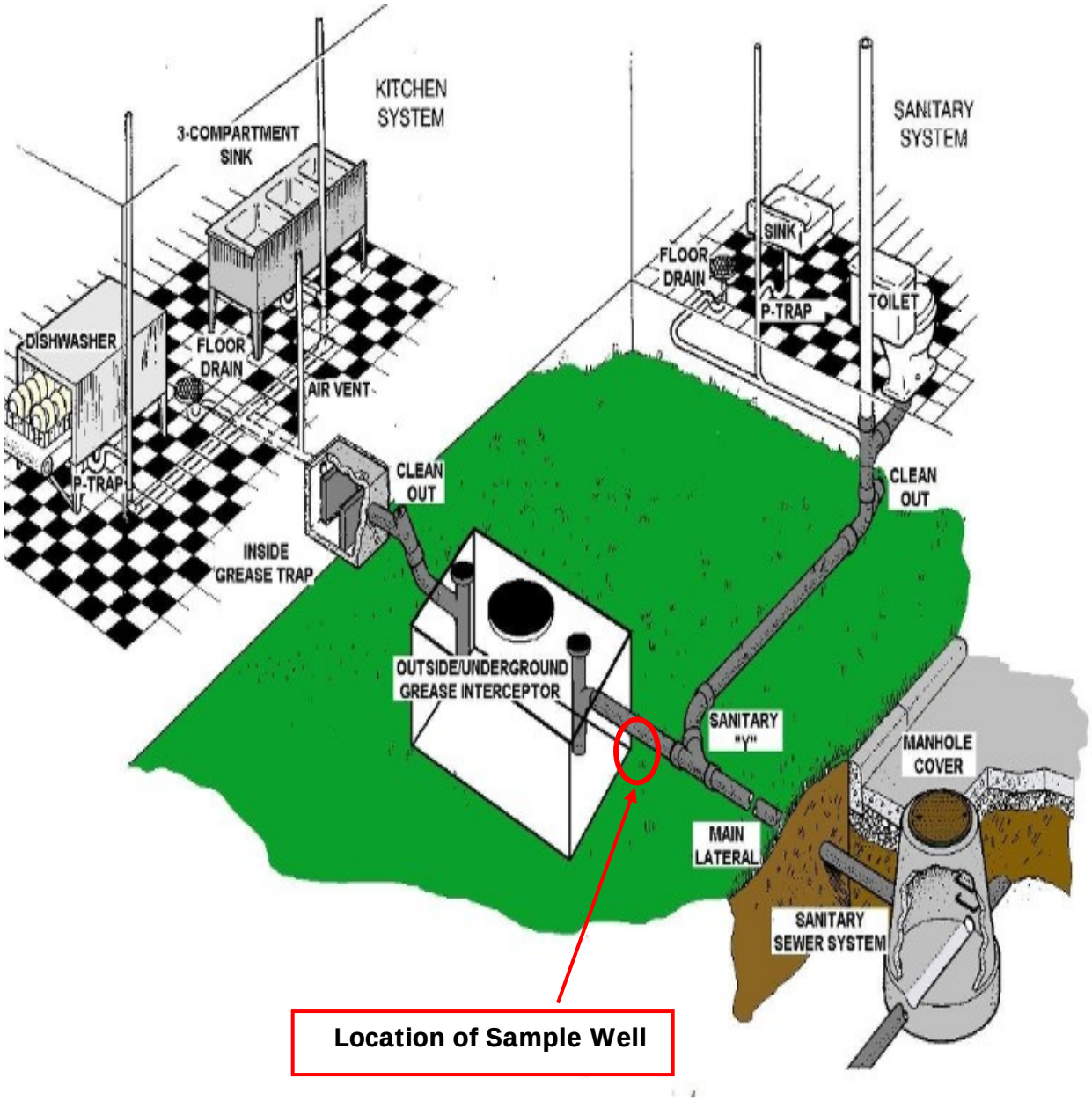
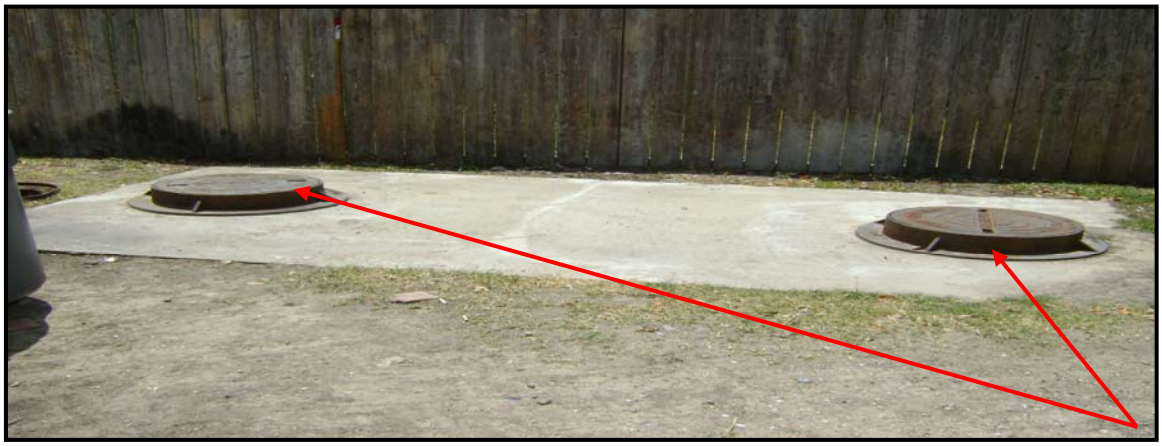

KITCHEN SYSTEM
3-COMPARTMENT SINK
DISHWASHER
FLOOR DRAIN
AIR VENT
P-TRAP
CLEAN OUT
INSIDE GREASE TRAP
OUTSIDE/UNDERGROUND GREASE INTERCEPTOR
SANITARY SYSTEM
SINK
FLOOR DRAIN
P-TRAP
TOILET
CLEAN OUT
SANITARY "Y"
MAN LATERAL
MANHOLE COVER
SANITARY SEWER SYSTEM
Location of Sample Well

FIG. 1

Sample Well



Grease Trap

FIG. 2

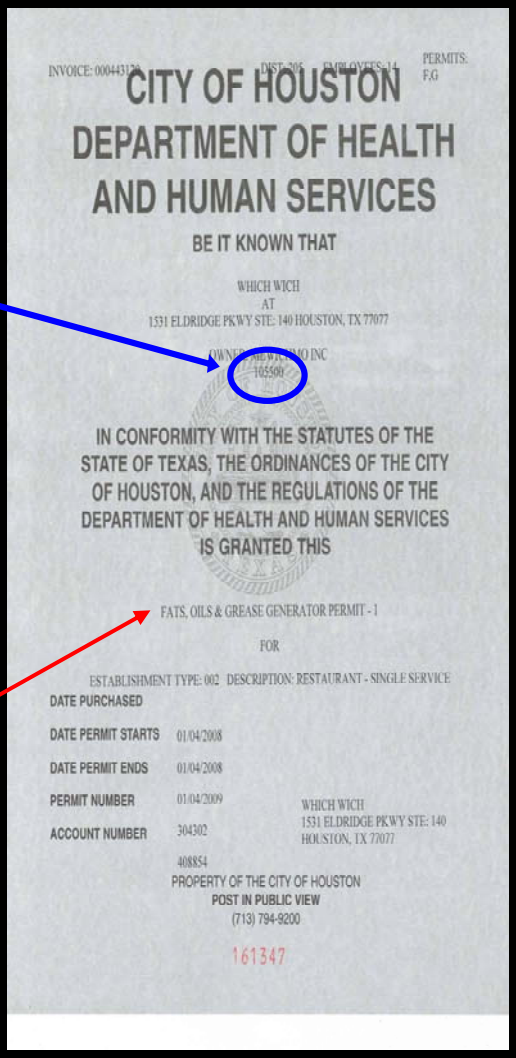
Generator Registration Certificates

TCEQ Number - unique identification number on the generator registration certificate

This number should be present on all waste manifest onsite

In cases of community grease traps the main parent TCEQ number will be listed on the manifest.

Fats, Oils, & Grease



INVOICE: 000443128 DIST: 205 EMPLOYEES: 14 PERMITS: F,G

CITY OF HOUSTON
DEPARTMENT OF HEALTH AND HUMAN SERVICES

BE IT KNOWN THAT

WHICH WICH
AT
1531 ELDRIDGE PKWY STE: 140 HOUSTON, TX 77077

OWNER: NEWWICHO INC
105500

IN CONFORMITY WITH THE STATUTES OF THE STATE OF TEXAS, THE ORDINANCES OF THE CITY OF HOUSTON, AND THE REGULATIONS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES IS GRANTED THIS

FATS, OILS & GREASE GENERATOR PERMIT - 1

FOR

ESTABLISHMENT TYPE: 002 DESCRIPTION: RESTAURANT - SINGLE SERVICE

DATE PURCHASED

DATE PERMIT STARTS 01/04/2008

DATE PERMIT ENDS 01/04/2008

PERMIT NUMBER 01/04/2009

ACCOUNT NUMBER 304302

WHICH WICH
1531 ELDRIDGE PKWY STE: 140
HOUSTON, TX 77077

408854

PROPERTY OF THE CITY OF HOUSTON
POST IN PUBLIC VIEW
(713) 794-9200

161347

FIG. 3

NOTICE OF WAIVER CERTIFICATE

NOTICE OF WAIVER

In the name and by the authority of

City of Houston
Department of Health and Human Services

Name of Establishment :

Address :

In accordance with the City Code of Ordinances Chapter 47, Article XI, this is a notification that the said establishment has been granted this Notice of Waiver for the reduced frequency of cleaning of specified site interceptor to minimum of 180 days.

City/TCEQ No :

Reviewer : _____

POST IN PUBLIC VIEW

This notice of waiver shall remain in effect until such time that: Ownership has changed and permit is no longer valid, or Interceptor fails to meet discharge parameters specified by Chapter 47-514 of the Code of Ordinances with the reduced frequency, or Interceptor contains more than 25% of floating materials, sediment, oils, or grease at any time during the reduced cleaning frequency.

FIG. 4

GREASE TRAP MUST BE CLEANED A MINIMUM OF 180 DAYS (2 TIMES A YEAR) WITH NOTICE OF WAIVER. IF THE GENERATOR IS NOT IN COMPLIANCE WITH NOTICE OF WAIVER, THE WAIVER WILL BE REVOKED.

NEW MANIFEST (ACCEPTABLE)

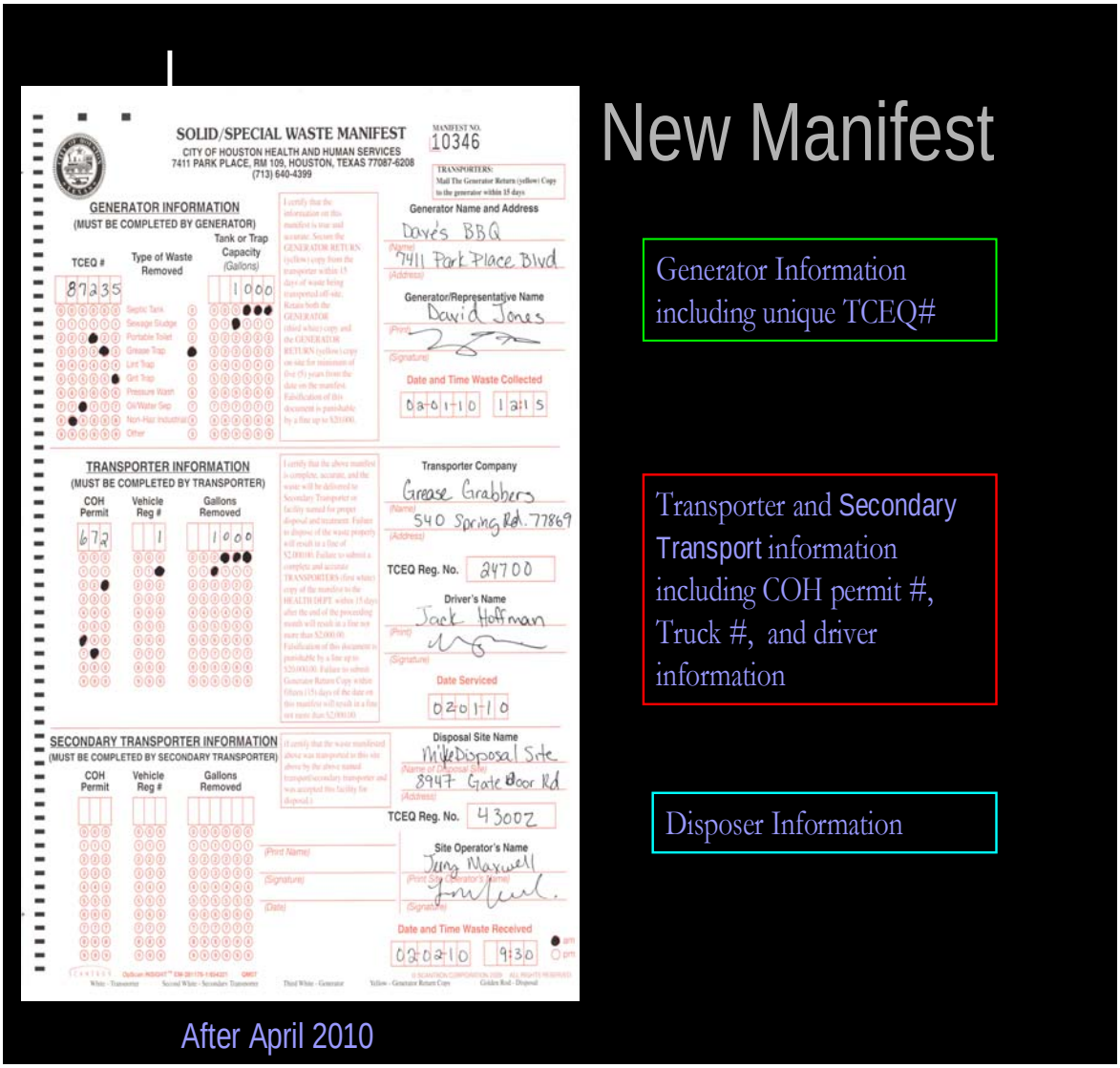


FIG. 5

GENERATOR COPY (3RD WHITE) AND GENERATOR RETURN COPY (YELLOW) SHOULD BE KEPT ONSITE FOR A PERIOD OF (5) YEARS. THE YELLOW COPY WILL BE SENT TO GENERATOR WITHIN (15) DAYS AND WILL BE STAMPED BY THE DISPOSAL SITE.

WASTE MANIFEST (ACCEPTABLE)

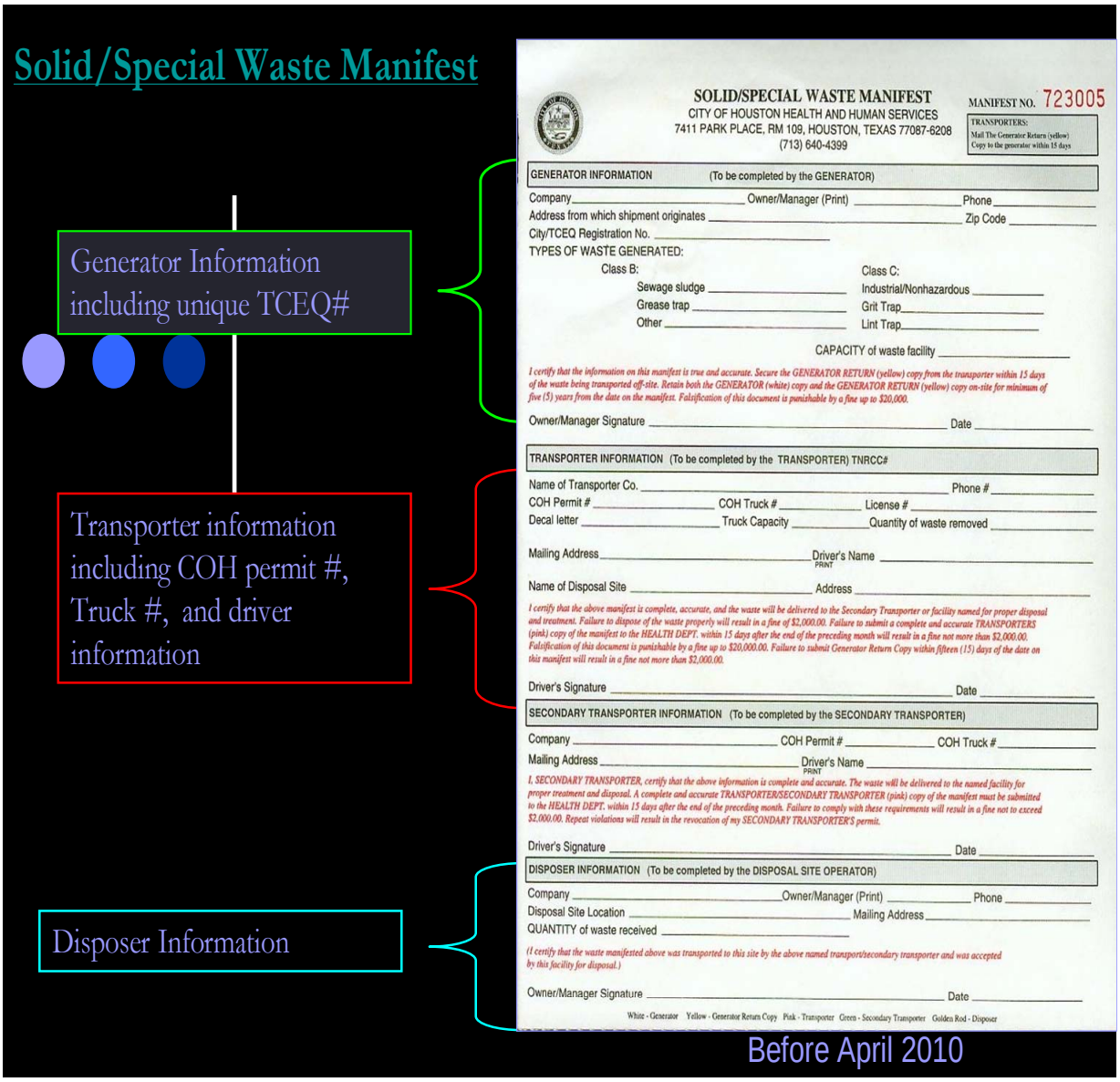


FIG. 6

GENERATOR COPY (WHITE) AND GENERATOR RETURN COPY (YELLOW) SHOULD BE ONSITE FOR A PERIOD OF (5) YEARS. THE YELLOW COPY WILL BE SENT TO GENERATOR WITHIN (15) DAYS AND WILL BE STAMPED BY THE DISPOSAL SITE.

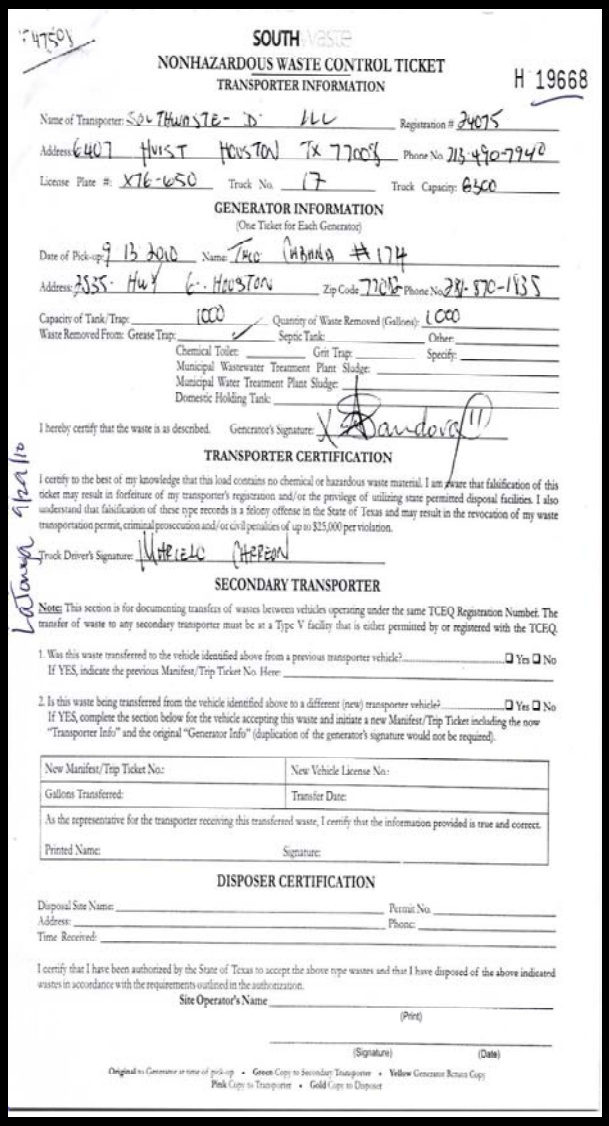
WASTE CONTROL TICKET (NOT ACCEPTABLE)

Waste Control Ticket

NOT Authorized for use in COH

Could indicate:

- Failure to report waste
- Not permitted as a transporter



SOUTH

NONHAZARDOUS WASTE CONTROL TICKET

TRANSPORTER INFORMATION

H 19668

Name of Transporter: SOUTHWASTE-D LLC Registration # 24075

Address: 6407 HUIST HOUSTON TX 77005 Phone No. 713-490-7940

License Plate #: X76-650 Truck No. 17 Truck Capacity: 6500

GENERATOR INFORMATION

(One Ticket for Each Generator)

Date of Pick-up: 9 13 2010 Name: TACO CABANA #174

Address: 3535 HWY 6 HOUSTON Zip Code 77082 Phone No. 281-870-1135

Capacity of Tank/Trap: 1000 Quantity of Waste Removed (Gallons): 1000

Waste Removed From: Grease Trap: ✓ Septic Tank: Other:

Chemical Toilet: Grit Trap: Specify:

Municipal Wastewater Treatment Plant Sludge:

Municipal Water Treatment Plant Sludge:

Domestic Holding Tank:

I hereby certify that the waste is as described. Generator's Signature: X Sandoval

TRANSPORTER CERTIFICATION

I certify to the best of my knowledge that this load contains no chemical or hazardous waste material. I am aware that falsification of this ticket may result in forfeiture of my transporter's registration and/or the privilege of utilizing state permitted disposal facilities. I also understand that falsification of these type records is a felony offense in the State of Texas and may result in the revocation of my waste transportation permit, criminal prosecution and/or civil penalties of up to $25,000 per violation.

Truck Driver's Signature: MARIELO CHEPEN

SECONDARY TRANSPORTER

Note: This section is for documenting transfers of wastes between vehicles operating under the same TCEQ Registration Number. The transfer of waste to any secondary transporter must be at a Type V facility that is either permitted by or registered with the TCEQ.

1. Was this waste transferred to the vehicle identified above from a previous transporter vehicle? ☐ Yes ☐ No
   If YES, indicate the previous Manifest/Trip Ticket No. Here:

2. Is this waste being transferred from the vehicle identified above to a different (new) transporter vehicle? ☐ Yes ☐ No
   If YES, complete the section below for the vehicle accepting this waste and initiate a new Manifest/Trip Ticket including the new "Transporter Info" and the original "Generator Info" (duplication of the generator's signature would not be required).

New Manifest/Trip Ticket No.:	New Vehicle License No.:
Gallons Transferred:	Transfer Date:
As the representative for the transporter receiving this transferred waste, I certify that the information provided is true and correct.	
Printed Name:	Signature:

DISPOSER CERTIFICATION

Disposal Site Name: Permit No.

Address: Phone:

Time Received:

I certify that I have been authorized by the State of Texas to accept the above type wastes and that I have disposed of the above indicated wastes in accordance with the requirements outlined in the authorization.

Site Operator's Name (Print)

(Signature) (Date)

Original to Generator at time of pick-up • Green Copy to Secondary Transporter • Yellow Generator Return Copy
Pink Copy to Transporter • Gold Copy to Disposer

FIG. 7

PLEASE *DO NOT* ACCEPT WASTE CONTROL TICKETS AND REPORT TO THE HEALTH DEPARTMENT IMMEDIATELY. A CITATION WILL BE ISSUED IF CONTROL TICKETS ARE PRESENT AT YOUR LOCATION.

Current Waste Transporter Decal

FIG. 8

THE COLOR CODED STICKER SHOWS THE CURRENT PERMIT YEAR. THE COLOR AND YEAR OF THE DECAL CHANGES ANNUALLY AND SHOULD BE VERIFIED BY THE GENERATOR WHENEVER THE TRAP IS SERVICED. ALL TRANSPORTERS' PERMITS EXPIRE EVERY YEAR ON JANUARY 31ST. IT IS THE GENERATOR'S RESONSIBILITY TO VERIFY THAT THE TRANSPORTER'S TRUCK HAS A CURRENT AND VALID CITY ISSUED REGISTRATION DECALS TO AVOID ENFORCEMENT ACTIONS.

Contact Name & Numbers

Grease Trap Information and Emergency Pump outs

LaNiece Blue

832-393-5674

LaNiece.Blue@houstontx.gov

Transporter Information:

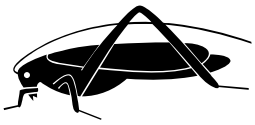
Almika Millage

832-393-5688

Almika.Millage@houstontx.gov

The following link contains additional information and Frequently Asked Questions:

http://www.houstontx.gov/health/Environmental/specialwastegenerators.html



LESSON 7

PEST CONTROL

Pests, an animal or insect that damages or contaminates foods causes health and economic problems. Pests infestations must be prevented because they spread foodborne diseases, damage property, and contaminate food supplies. The pests which are of greatest concern in a food establishment are flies, cockroaches, rodents, pantry pests, and birds.

FLIES

Flies carry pathogens such as E. coli, Salmonella, and Shigella. They pick up the bacteria from garbage, spoiled foods, animal remains, and feces which stick to their bodies, legs, and hairs. Some of the bacteria are transferred when they land on the food.

- Housefly's vomits stomach fluid containing pathogen onto its food then sucks up the dissolved nutrients.
- Blow flies have a shiny blue-green color and are larger than the housefly. They are attracted to the smell of foods and garbage and, are usually found feeding on feces and animal carcasses.
- Fruit flies are smaller than house flies and have a yellow-brown color. They are attracted to the smell of rotting fruits and vegetables.

Preventive/Control Measures

- ✓ Eliminate food sources; discard rotted foods.
- ✓ Restrict entry into the food establishment by installing and maintaining self-closing doors; screened windows/doors; properly designed and installed air curtains. Electrocuting type traps or adherence type traps for flies must be designed to have "escape resistant" trays for flying insects, so that dead insects and body fragments cannot fall onto exposed food and equipment. The device shall not be located over exposed food, clean equipment, utensils, linens, and unwrapped single-service articles.
- ✓ Keep lids on garbage containers; close dumpster doors and lids/provide installed drain plugs; keep area around garbage/dumpster clean.

COCKROACHES

Cockroaches transmit foodborne pathogens such as Salmonella, Vibrio cholera, and Staphylococcus areaus found in their gut and outer body. Cockroaches live in areas where food and water are provided and, are very active at night. The German cockroach is the most common cockroach found in food establishments. Other cockroach types are the American, Oriental, and, Brownbanded.

- German cockroach is found most everywhere; likes warmth, moisture, and dark hiding places.
- Hides in spaces in walls, ceilings, and food equipment. Cardboard boxes provide harborages and means of transport from one place to another.
- Acquires water from sinks, counters, floors, pipes, refrigerator drain pans and gaskets.
- German cockroach eats most everything.
- Reproduce rapidly; egg case contains multiple eggs (30 - 40).
- Infestation is evident when cockroaches are seen during the day.
- Signs include capsule-shaped egg casings; droppings that look like black pepper grains.

PREVENTIVE/CONTROL MEASURES

- ✓ Cover foods in tight containers. Do not leave foods out overnight.
- ✓ Clean surfaces and equipment thoroughly and regularly; no dirty dishes left overnight.
- ✓ Eliminate standing water; repair leaks; seal openings around pipes; repair holes.
- ✓ Discard cardboard boxes as soon as possible; empty and clean indoor garbage containers. Eliminate harborages. Inspect facility and equipment - seal all cracks and crevices.

RODENTS

Rodents cause extensive damages to the food supply, property, and buildings. They gnaw through containers of foods, walls, floors, and wiring (materials that are softer than steel) to keep their teeth short and sharp. Rodents carry mites and fleas, and spread diseases such as Salmonella, Trichinosis, Swine dysentery, and Hantavirus. Rodents urinate and leave droppings on foods, food packages, equipment, in, and around buildings. Fresh droppings are shiny, black, and rubberlike. Rodents are excellent swimmers, night animals, have poor eyesight, and prefer narrow concealed routes when traveling. The most common rodents found in food establishments are house mouse, roof rat, and Norway rat.

- House mouse is the smallest of the three rodents are found inside of buildings especially during the winter seeking warmth, shelter, and food. Mice roam areas 10- 30 feet away from their nests; makes nests in walls, boxes, cabinets, and equipment. Mice breed quickly; feeds primarily on grains and cereals; can crawl through openings ¼ inch in diameter.
- Roof rat's habitat and travel above ground – prefer trees, attics, and roof spaces. Their exceptional balance allows the roof rat to run on pipes, utility lines, and, their claws aids in climbing objects they can hold onto. They have a black-gray fur, slimmer than the Norway rat and have a longer tail. The roof rat maintains their nesting area in a range of 100-500 feet from the food source; prefers vegetables, fruits, and nuts; can enter through openings ½ inch in diameter.
- Norway rats are the largest of the three types and burrows under buildings, concrete slabs, and garbage piles where food, water, and shelter for nesting are present. They maintain an area between 50-150 feet from their nests. The Norway rat is heavy-set, reddish-brown fur, blunt nose, and tail shorter that the roof rat. They eat all food types preferring meats, fish, fruit, and cereal grains; can enter through openings ½ inch in diameter.

PREVENTIVE/CONTROL MEASURES

- ✓ Deny access to the food establishment
- ✓ Keep the kitchen clean and sanitary – eliminate food and water sources
- ✓ Cover floor drains; protect pipes and ducts with screening;
- ✓ Check deliveries for rodent gnawing, droppings
- ✓ Eliminate harborages inside and outside the food establishment
- ✓ Store foods properly above the floor and away from walls
- ✓ Seal all cracks and openings

REQUIRED CONTROL MEASURES FOR PESTS AND RODENTS

(1) Routinely inspecting incoming shipments of food and supplies;
(2) Routinely inspecting the premises for the evidence of pests;
(3) Using appropriate methods of pest control, such as trapping devices or other means of pest control in accordance to the Ordinance requirements for poisonous or toxic materials use, if pests are found; and
(4) Eliminating harborage conditions.

Protect outside by filling or closing holes and other gaps along floors, walls, and ceilings; tight-fitting, self-closing doors, kept closed, closed windows, screening, properly designed and installed air curtains to control flying insects, or other means. Screen doors shall be self-closing, and screens for windows, doors, skylights, transoms, intake and exhaust air ducts and other openings to the outside shall be tight-fitting and free of breaks. Screening materials shall not be less than sixteen mesh to the inch (16 mesh to 25.4 mm). Exterior doors used as exits need not be self-closing if they are: solid and tight-fitting; designated by the fire protection authority that has jurisdiction over the food
establishment for use only when an emergency exists; and limited-use so they are not used for entrance or exit from the building for purposes other that the designated emergency exit use. Perimeter walls and roofs of a food establishment shall effectively protect the establishment from the weather and the entry of insects, rodents, and other animals.

The use of electrocuting type traps or adherence type traps for flies shall be designed to have "escape resistant" trays for flying insects, so that dead insects and body fragments cannot fall onto exposed food and equipment. The device shall not be located over exposed food, clean equipment, utensils, linens, and unwrapped single-service articles.

STORED GRAIN INSECTS/PANTRY PESTS

Weevils, moths, and beetles are stored grain pests and create food waste in addition to being a nuisance. Signs of infestation include food spillage, webbing, pinholes, and insects in packages. Their eggs are found in almost all grain products and flour products. These eggs will eventually hatch with enough heat and time.

- A clean environment inhibits growth and reduces egg laying
- Control spills and destroy all infected products
- Examine incoming products for any live insects and reject pest-infested deliveries
- Rotate stock using first in, first out (FIFO) - inventory control.
- Keep dry goods at a temperature of 50°F - 60°F if possible (cool air keeps eggs from hatching)
- Eliminate foods that are damp and moldy (some pests feed on the mold rather than the food products)

Dead or trapped birds, insects, rodents, and other pests shall be removed from control devices and the premises at a frequency that prevents the accumulation or attraction of pests and minimizes exposure to decomposing remains.

LESSON 8
MOBILE FOOD SERVICE UNITS AND TEMPORARY FOOD SERVICE ESTABLISHMENTS

Mobile food unit means a food service establishment that is designed to be readily movable or a food cart that is movable and maneuverable by one person when the unit is fully loaded and is operated at a fixed location. Only trucks, vehicles, or tricycles exclusively selling prepackaged ice cream products may operate on city streets.

- ✓ RESTRICTED CONVENTIONAL MOBILE FOOD UNIT. A truck or trailer limited to serving only prepackaged foods from approved sources that require no further preparation except warming for immediate service. These units may also dispense non-potentially hazardous beverages from protected equipment.
- ✓ UNRESTRICTED CONVENTIONAL MOBILE FOOD UNIT. An enclosed truck or trailer preparing or serving food that is not prepackaged or does not meet the requirements for a restricted conventional mobile food unit. Unrestricted conventional mobile food units must utilize services from an approved commissary on a daily basis. These units operate on private property at one or more location.
- ✓ RESTRICTED FIXED LOCATION MOBILE FOOD UNIT**.** A mobile food unit limited in size and service serving only prepackaged foods from approved sources that require no further preparation except warming for immediate service. These units may also dispense non-potentially hazardous beverages from protected equipment. These units are limited to operation on the premises of a licensed food establishment that serves as the commissary for the unit or to a specific assigned location in a City of Houston park.
- ✓ UNRESTRICTED FIXED LOCATION MOBILE FOOD UNIT. A mobile food unit limited in size and service serving food that is not prepackaged or does not meet the requirements for a restricted fixed location mobile food unit. Unrestricted fixed location mobile food units must operate from an approved commissary on a daily basis. These units are limited to operation on the premises of a licensed food establishment that serves as the commissary for the unit or to a specific assigned location in a City of Houston park.

All mobile units must demonstrate mobility.

GENERAL INFORMATION

The food service facilities on a mobile food unit are extremely limited therefore, food preparation is restricted. Requirements are based on the menu and preparation procedures on the mobile food unit. A definite menu and operational procedures must be set.

COMMISSARIES

The commissary, or base of operations, is an essential part of a mobile unit's operation. All mobile food units must operate from a commissary or other licensed food establishment where food and supplies are received. All unrestricted conventional and fixed location mobile food units must return to the commissary at least once during the preceding 24 hours of operation for the performance of all servicing operations. All unrestricted fixed location mobile food units must return to the commissary at least once per day for the performance of servicing operations unless alternate arrangements have been approved by the Houston Health Department. Upon request, the operator of a mobile food unit must be able to provide written proof that the mobile food unit has been serviced at an approved commissary on a daily basis. Servicing receipts from the commissary must be kept on the unit for a period of one year from the date of servicing.

PLAN AND SPECIFICATION REQUIREMENTS

All new operations for unrestricted conventional and fixed location mobile food units require the submission of two sets of complete plans and specifications for review. A plan review fee of $35.00 for each submission is to be paid when plans are submitted. A fee of $60.00 is charged for resubmitted plans. Utilize the mobile food unit plans checklist as a guide to preparing plans. The checklist may be obtained from 7411 Park Place – mobile unit office or 8000 N. Stadium Drive - 2nd floor.

PLANS INLUDE: Ownership information, menu, design of unit, and standard operating procedures. Plans must be drawn to include a floor plan, plumbing diagram, finish schedule and equipment details. A finish schedule for the floors, walls and ceilings including material, finish and color must be included. A plumbing system diagram including all tanks, pumps, fixtures and piping showing the hot and cold water flow. A two-compartment sink is required, however a three-compartment sink is recommended. Each compartment of the utensil-washing sink must be at least 15"x l5"x 12" with compartments having rounded internal angles and be free of sharp corners or crevices. A fresh water tank, minimum 30 gallons in capacity must be installed in addition to a wastewater tank at least 35 gallons or 115% of the capacity of the fresh water tanks whichever is greater. A hand sink separate from the two or three-compartment sink is required.

ROUTE LISTS, ITINERARIES AND SITE LOCATIONS

Unrestricted conventional mobile food units must submit to the department a list of locations where the unit will be in operation. The mobile unit operator must also give written notice within 48 hours of any location added to the list of locations where the unit will be in operation. Restricted and unrestricted fixed location units must have an exact location for their operation. A site map must be provided that shows the unit location in relationship to streets, buildings, etc.

MOBILE FOOD UNIT REQUIREMENTS

The following requirements may not apply to all mobile food unit types. Contact the Bureau of Consumer Health Services for the mobile unit information packet for your specific type operation.

- Notarized property letter to be posted in the mobile unit
- Notarized restroom use letter posted in the mobile unit (restroom for food workers only must be located within 500 feet of the mobile food unit at the available business)
- Houston Fire Department LP-Gas permit (for mobile units using propane gas)
- State of Texas Sales Tax Permit
- Mobile food units must comply with the requirements of the food ordinance including food supplies, storage, protection, service, handling, employee practices, equipment cleaning and sanitation and establishment sanitation.
- The operator of a mobile food unit must serve, store and display food and beverages on or in the mobile food unit itself and cannot attach, set up or use any other device or equipment intended to increase the selling, serving or display capacity of the mobile food unit including but not limited to counters, counter extensions, tables, ice chests, freezers or refrigerators.
- Mobile food unit shall not provide any dining area for the customers within 100 feet of the unit.
- Utility connections are limited to quick-connect electrical and telephone services (Water, gas, or sewerage utility connections are prohibited).
- Awnings or coverings must be attached to or part of the mobile unit, and solely supported by the mobile food unit.
- Outdoor grills or similar cooking devices are not permitted for use at mobile food unit operations. All preparations must be conducted inside the mobile unit.

- Water samples are taken on all new and renewal medallions for unrestricted mobile food units.

REQUIREMENTS FOR ICE CREAM ONLY TRUCKS, TRICYCLES AND CARTS

- A person may sell ice cream products upon a street or right of way from a restricted mobile food unit with a current /valid medallion provided that;
- The ice cream products are fully wrapped, enclosed and contained in individual wrappers or containers, obtained from an approved source, and correctly labeled;
- The driver of the vehicle drives to the side of the street, as close as practicable to the curb or edge of the paved portion of the street before making a sale, and;
- The vehicle remains stopped, standing or parked only as long as necessary to make the immediate sale, and;
- Any truck used to sell packaged ice cream products in this manner must be equipped with a sign clearly visible from both the front and rear bearing the warning **"CAUTION CHILDREN**", and;
- The lettering for this sign must be six inch black block style on a yellow background, and;
- Flasher-type warning lights displaying yellow to the front and red to the rear must be installed at each end of the sign.
- Additionally, packaged ice cream products may be sold upon the sidewalks from non-motorized pushcarts. These carts are licensed as restricted conventional mobile food units.
- The operator of a vehicle selling ice cream products upon the street, right of way or sidewalk may not operate within a school zone during the times that a reduced speed limit is applicable.

SELL OF FROZEN DESSERTS WITHIN A SCHOOL CROSSING ZONE

Frozen dessert vehicles may not operate within a "school crossing zone".
A "school crossing zone" means a reduced-speed zone that is designated on a street by ordinance to facilitate safe crossing of the street by children going to or leaving a public or private elementary school during the times that the reduced speed limit is applicable, provided that the school crossing zone is duly posted by reduced speed signage in accordance with the ordinance applicable to its creation.

TEMPORARY FOOD SERVICE ESTABLISHMENTS

Temporary food service establishment operates at a fixed location for a period of time not more than 21 consecutive days in conjunction with a single event or celebration. Each physically separated stand or booth shall constitute a temporary food service establishment that requires a permit. For the purpose of this definition, an "event" shall mean a gathering of persons at a festival, bazaar, carnival, circus, public exhibition or sporting event. A **Temporary Food Dealer's Permit** is required in order to operate. Temporary food service establishments are charged a non-refundable fee of $60.00 for each day that the permit is valid. Additionally, a $10.00 administrative tech fee is charged for each permit purchased. Only cash, money orders, and cashier's checks are accepted for payment of temporary permits.

GENERAL REQUIREMENTS

All temporary permits must be purchased 7 days in advance of the event. The operator must meet with the health officer prior to the event to provide information regarding the sources of the food supplies, type of foods prepared/served; provide the property owner's agreement regarding the use of the property and clean-up responsibilities. Additionally, the operator must submit a diagram of each temporary booth set up. The health officer will determine, based on the type of operation and pre-event consultation with the operator what restrictions may be imposed on the temporary food service establishment.

Pre-Operational Statement/Event Diagram/Owner Property Agreement for Proposed Temporary Food Establishments

1. PRE-OPERATIONAL STATEMENT

The purpose of the pre-operational statement is to confirm operation dates and finalize which foods will be served at the temporary event. The pre-operational statement must include the dates and times of the operation, number of booths, name, address, and telephone number of the operator, listing of all foods (including beverages) to be served, names of food suppliers, and list of foods prepared on site and at other locations.

2. EVENT DIAGRAM

The event diagram is a drawing of the temporary food service establishment. Each booth serving food/beverages must be identified. Describe all equipment used in the facility used for: cooking and cold/hot holding, hand washing, worktables, dishwashing, food and single service storage, garbage containers, and customer service areas. Show where barriers will be placed between customers and the foods.

Include location of refrigerated trucks and additional cooking areas, if used. FAILURE TO COMPLY WITH ALL REQUIREMENTS DURING OPERATION WILL REQUIRE THAT THE PERSON IN CHARGE IMMEDIATELY CEASE FOOD SERVICE OPERATIONS.

3. OWNER/APPLICANT PROPERTY AGREEMENT

The operator of the temporary food service establishment must obtain from the owner of the property; a signed agreement to utilize the property on which the activity will be held (includes location and dates). The letter must also indicate who will be responsible for the disposal of all trash and garbage and for maintaining the property free from litter and nuisance during the event period and, the time required to remove all trash/garbage. The form is available in the Food Inspection office, or the owner may provide a similar document.

GUIDELINES FOR FOOD HANDLING AT TEMPORARY EVENTS

ITEM 1: Ice used for consumption must be from an approved source. Ice shall be held in bags until used and dispensed properly.

ITEM 2: Food contact surfaces of equipment shall be protected from contamination by consumers by using separating counters, tables, sneeze guards, etc.

ITEM 3: Provide only single-service articles (plates, forks, cups, etc.) for customer's use.

ITEM 4: Provide potable water for cleaning and sanitizing utensils. Provide a heating facility capable of producing hot water.

- Use three (3) containers for WASHING, RINSING and SANITIZING e.g. plastic buckets, or plastic food containers.
- Use a gravity-type water dispenser for employee hand washing e.g. drink dispenser with a spout or spigot. Do not forget hand washing soap, paper towels and catch basin.
- Unless suitable utensils are used to handle ready-to-eat foods, single-use gloves are required for all food handlers. (Section 20-21.8)

ITEM 5: Do not store any food in contact with water /undrained ice.

ITEM 6: Dispose of all liquid and solid waste properly.

ITEM 7: Provide cleanable floors in food preparation and service areas e.g. concrete/ light wood/asphalt.

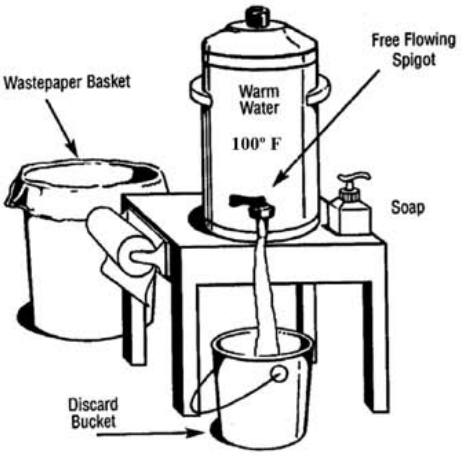
ITEM 8: Provide a ceiling in food preparation and service areas e.g. wood, canvas or other material that protects the interior of the establishment from the weather and other agents.

ITEM 9: Protect food that is served:
Keep HOT foods at 135° F or above and keep COLD foods at 41° F or below. Wear an effective hair restraint e.g. cap or hair net. No hair spray or visors will be acceptable. Use packaged foods or provide sneeze guards at display area. All food, equipment and paper products shall be stored at least 6 inches above the floor. No eating, drinking, smoking is allowed in the food booth.

SERVE FOODS THAT ARE PREPARED / OBTAINED ONLY FROM AN APPROVED SOURCE.

The Health Officer may impose additional requirements to protect against health hazards related to the conduct of the temporary food establishments and may prohibit the sale of some or all potentially hazardous foods.

EXAMPLE OF HANDWASHING SET UP



LESSON 9
HEALTH DEPARTMENT PROCEDURES, POLICIES, PERMITS, AND COMPLIANCE

The Food Inspection Program of the Bureau of Consumer Health Services is responsible for the regulation of all food establishments within the corporate limits of the City of Houston. The establishments involved are those providing foods and or drink to the public regardless of whether there is a charge or membership. This chapter is an overview of some of the general policies and procedures utilized to enforce the Food Ordinance in the City of Houston.

CHARITY BAKE SALES

Food prepared in a private home kitchen for a charity bake sale can be offered for sale for human consumption if:

- the food is baked food products that are not potentially hazardous;
- the items are offered for sale at a function conducted by or under the auspices of a sponsoring organization, which must be a religious or charitable organization;
- the sale is not conducted in a food establishment, except that if the sponsoring organization is a food establishment, then the sale may be conducted on it's premises, provided the sale is conducted separately and apart from the sponsoring organization's food sales or service; and
- the consumer is informed by a clearly visible placard at the sale or service location which states the food was prepared in a kitchen that is not subject to regulation and inspection by the City of Houston or any other health inspection agency.

EMERGENCY OCCURRENCES

The person in charge of the food establishment must immediately discontinue operations and contact the health officer in case of an emergency occurrence. Emergency occurrences include: fire, flood, power outage, sewage water back-flow, extended interruption of water service, no hot water, acts of terrorism/product tampering, etc.

DEMONSTRATION OF KNOWLEDGE

Upon request during inspections the designated person in charge or the certified manager must demonstrate to the sanitarian knowledge of:

- Foodborne disease prevention
- Application of HACCP principles
- Requirements of the Food Ordinance

The person in charge can demonstrate such knowledge by:

- Being in compliance with the Food Ordinance and TFER
- Satisfactorily completing the Food Service Manager's Certification course of instruction in Section 20.54; 20.55; and 20.63 of the Houston Food Ordinance
- Responding correctly to the sanitarian's questions as they relate to the specific food establishment/mobile food unit operation

CONDEMNATION

The Food Ordinance provides the health officer the authority to condemn or initiate the condemnation of any food that is suspected of being adulterated, from an unapproved source, or expired pursuant to applicable ordinances of state or federal laws, rules and regulations. Condemnation of expired ready-to-eat potentially hazardous foods shall be determined from the required date markings.

COURT CITATIONS

The court citation may be issued by the health officer to the owner, operator, person-in-charge, or any employee at the food establishment as an enforcement tool to ensure compliance with the ordinance. Municipal court fine not less than $50.00 or more than $2,000.00. Each day a violation of this article continues shall constitute a separate offense. The citation is a notice (summons) to appear in court.

INSPECTION REPORTS

The health officer has the right to inspect any food establishment or mobile food unit at any reasonable time and make as many additional inspections as are necessary for the enforcement of the Food Ordinance. Whenever an inspection is conducted at the food establishment, all violations observed are documented on an inspection report form along with a specified time by which each violation must be corrected. Critical items are violations that are more likely than other violations to contribute to food contamination, illness, or environmental health hazard. Timely correction of critical violations may be implemented immediately or a time frame not to exceed 10 days.

RED TAGS AND EQUIPMENT QUARANTINES

Red tags are used to quarantine food suspected of being adulterated or detrimental to the public's health. The equipment quarantine notice is used to remove from service or, to prevent the use of unacceptable/inadequately maintained equipment. Once affixed, the tag can only be removed by a health officer when it has been determined that the equipment is repaired/in compliance or held for the officer to verify condemnation/disposal.

TEMPORARY CEASE FOOD SERVICE OPERATIONS (VOLUNTARY CLOSURES)

When the health officer has determined upon inspection that a situation exists that endangers the public's health, he/she may ask the owner/operator/person-in-charge to discontinue food service operations. This procedure may be necessary regardless of whether the establishment is "open" for customers or not. The food establishment may not resume operations until the health officer has performed a reinspection to determine if the conditions responsible for the closure no longer exist.

RE-INSPECTION FEE

The permit holder shall pay a reinspection fee of $110.00, whenever a reinspection is required by the health officer to determine that conditions responsible for the reinspection no longer exist. The reinspection will be conducted by the health officer within a reasonable period of time. The permit or permits shall not be renewed until the permit holder has paid any outstanding reinspection fees.

REQUIRED SIGNS

- **HEIMLICH MANEUVER POSTER -** if space is provided for customers' eating purposes. This graphical sign depicts the procedure for dislodging food from a choking person.
- **SANITATION POSTER-** posted within each kitchen of a food establishment. This poster describes basic required sanitation methods for employees.
- **SULFITE WARNINGS** -if food containing a sulfite preservative is sold or served. Informing customers by a sign, menu listing, product label listing or other effective means is acceptable.
- **PRESENCE OF FOOD SERVICE MANGER -** indicates that a certified manager is required to be on duty at all times.
- **HANDWASHING SIGN/POSTER/ICON –** posted in a clearly visible location in all toilet rooms used by employees and at all hand-washing sinks used by food employees.
- **PROPER DISPENSING PROCEDURES** sign must be conspicuously posted in the immediate display area instructing customers on proper dispensing procedures for bulk food from a self-service counter or buffet. For example, this sign is required for bulk candies and nuts display area, gourmet snack items display area, etc.
- **NOTIFICATION TO OBTAIN CLEAN TABLEWARE –** a card or sign must be displayed to notify customers that clean tableware is to be used upon return to self-service areas such as salad bars and buffets.

INFORMAL ENFORCEMENT HEARINGS

Informal hearings are conducted by the Consumer Health Services Division Manager or Chief Sanitarian in an effort to discuss with the owner/operator the unacceptable existing violations at the food establishment. It is a step in the enforcement tools process that provides the operator the opportunity to discuss with the field sanitarian, area supervisor, and hearing officer what actions they intend to commit to in an effort to bring the establishment into compliance on a consistent basis. The hearing officer may require additional FSMC managers to be on duty, food handler training for the employees, bilingual assistance, and follow-up reinspections. The informal hearing generally is the predicate to the revocation of the Food Dealer's Permit and Food Service Manager's Certificate.

PERMIT SUSPENSION

If there exists a substantial hazard to the public's health, a Food Dealer's Permit/Medallion can be suspended. There may be up to 10 days between the suspension notification and the actual hearing. In a suspension, the health officer removes the Food Dealer's Permit during the inspection and, all food service operations immediately cease. The hearing officer will determine when the permit is to be reinstated at the conclusion of the hearing.

PERMIT REVOCATION

A food service establishment may have the Food Dealer's Permit/Medallion revoked if the permit holder or his employees interferes with an inspection of the food establishment by the health officer; there are repeated or serious violations of the Food Ordinance; there are repeated or serious violations of federal or state laws regulating food establishments; and in the case of a mobile food unit, if the permit holder or agent fails to report an accident to the health officer within 24 hours of the time the accident occurred if there is damage to the water system, waste retention tank, food service equipment, that may result in the contamination of the food carried. The permit remains at the establishment until the hearing. At that time the hearing officer will determine if the permit/medallion is to be revoked and removed from the establishment by the

health officer. The food dealer's permit or medallion may be revoked for up to 180 days.

PERMITS

All food service establishments that sell or give to the public, food or beverage, must possess a current and valid permit issued by the City of Houston. Such a permit is a **Food Dealer's Permit.** Each permit must be posted in public view. The Food Dealer's Permit is valid for one year and must be renewed on or before the expiration date.

FROZEN DESSERT PERMIT

Any establishment or mobile food unit engaged in the production of frozen desserts must purchase a frozen dessert permit. This permit is not needed for sno-cones, ice cream scooping, or blending shakes but for machines that manufacture frozen desserts such as icee, slurpee, milk shake, soft-serve ice cream and yogurt, etc.

PRODUCE DEALER'S PERMIT

Required for any person engaging in the distribution of produce (peddler) or sales from a produce stand where farm produce in its natural state is the only food handled.

CERTIFIED FARMER'S MARKET PERMIT

Required for any person operating a farmer's market which has been certified by the Texas Department of Agriculture pursuant to Subchapter D of Title 4 of the Texas Administrative Code. The only foods Certified Farmers Markets may sell are farm produce and farm products. A certified manager must be on duty during sampling operations.

FOOD SERVICE MANAGERS CERTIFICATION

A certified manager is required to be on duty and present in each food service establishment during make-ready, food preparation, cleanup, processing, packaging, manufacturing, or production and have in her/his possession a valid and current food service manager's certification issued by the City of Houston.

- The applicant must complete the required 15-hour (2-day) course and, pass the examination with a score of 70 or above. Fee= $70.00
- The certificate of a current City of Houston FSMC is renewed by completing the 7-hour (1-day) course and passing the examination with a score of 70 or above. Fee=$55.00 The renewal class or optional examination must be attended on or before 60 days after expiration of the current certificate.
- An optional examination session is available. Fee= $50.00
- The certificate is valid for five years and must be renewed by attending the renewal course on or before 60 days after expiration of the current certificate.
- The wall certificate is required to be posted in public view.
- The wallet card is required to be on his/her person while on duty as proof of certification.
- Failure to make the passing score on either the initial or renewal course requires the applicant to reapply and complete the initial course and examination.
- Food service establishments that are required to have certified managers must post the following notice in a conspicuous place, easily accessible to all employees:
  "OPERATION WITHOUT A FOOD SERVICE MANAGER PRESENT IS UNLAWFUL"
- The Food Service Manager's Certificate may be revoked if:
  The food service manager interferes with an inspection by the health officer.
  There are repeated or serious violations of the Food Ordinance at the time the food service manager is employed by the establishment.
  There are repeated or serious violations of federal or state laws relating to the operation at the time the certified manager is employed by the establishment.
- The City of Houston provides the courses in English, Spanish, Vietnamese, Chinese, and Asian languages (India, Pakistan, and Bangladesh).
- Classes are conducted at the various multi-service centers throughout the city. Call for class location.
- Reservations for all classes are required. Call the Consumer Health Service Bureau at 832-393-5100. Payment is required at least 2 days prior to class.
- Some food service establishments (packaged-food-only retail store, restricted bar, restricted warehouse), may be exempt from the certification requirement. This can only be verified by an inspection conducted by the field sanitarian to confirm the operation type. You may call the Food Inspection Program at 832-393-5100 for assistance.
- Courses may be conducted at your establishment (or other location) however, a required attendance of 20 or more students is necessary. Call 832-393-5100 for information.

Persons who have written proof of having completed a training program accredited by the State of Texas or, similar food safety courses offered by the International Food Safety Council must obtain a City of Houston Food Service Managers Certification by reciprocity. An application must be submitted with the current credentials, and a driver's license or state identification card. The card will be issued to expire up to five years from the date the applicant completed the accredited or

other training program. Fee = $35.00.

City Health Department Implements New Food Safety Ordinance

Houston Department of Health and Human Services inspectors will soon be inspecting retail food businesses, including mobile food units using ordinances recently approved by City Council. The ordinance is based on 2006 Texas Food Establishment Rule. Implementation began on November 12, 2007.
The new regulations incorporate current scientific knowledge on food safety and protection. Owners and managers will have to comply with stricter regulations regarding bare hand contact with food and employee health. Food service personnel must demonstrate knowledge based on the risks of food borne illness inherent to the food operation during the inspection and upon request by the inspector. Personnel may also demonstrate knowledge by complying with the ordinance and by having no critical violations during the current inspection. Other changes include:

1. Potentially hazardous foods: Refers to time/temperature control for safety (TCS). Excludes shell eggs treated to destroy Salmonellae.
2. Date marking: The use-by/consume-by date (no more than 7 days) must be labeled on all ready-to-eat TCS/potentially hazardous foods held over 24 hours. Day 1 is the day the food is opened or prepared.
3. Thermometers: Food establishments must use small-diameter probes to measure temperatures of thin foods (i.e. hamburger patties, fish fillets).
4. Cook Temperature/Time: The cooking temperature for whole muscle pork (chops, loin, etc.) is now 145ºF for 15 seconds to destroy parasites such as Trichinella spiralis.
5. Hot holding temperature: The hot holding temperature for potentially hazardous foods has been lowered to 135ºF.
6. Consumer Advisory: Food establishments serving raw or undercooked food items are now required to disclose raw or undercooked food items, and remind consumers concerning the health risks to customers.
7. Sick Employees: The illness due to Norovirus has been added to the list that requires exclusion from a food establishment. Employees that have sudden onset of vomiting and diarrhea must also be excluded from the food establishment. The person in charge must also contact the health department if an employee is confirmed with an illness requiring exclusion. Excluded employees must not enter a food establishment except for those areas open to the general public. Examples of the applicant and food employee interview form, the food employee reporting agreement and the medical referral form are available from the Department of Health and Human Services.
8. Bare hand contact with ready-to-eat foods: Bare hand contact with ready-to-eat foods is not allowed unless written procedures are in place. Inspectors will check the documentation during inspections. The procedures include documented training of all employees and two approved safeguards against the hazards associated with bare hand contact. Establishments serving highly susceptible populations are prohibited from handling ready-to-eat foods with bare hands. Examples of the documentation required are available from the Department of Health and Human Services.
9. Water temperature: Minimum hot water temperature at hand sinks is now 100ºF.
10. Certified Food Manager: The Department is now providing an exam-only option for certifying food service managers. The fee for this service is $50.00.
11. Additional Fees: A technology and administrative fee of $10 will be added to each permit. A $110.00 fee will be charged to the food establishment for re-inspections.

For inquires about the Food Ordinance, call 832-393-5100. Copies of the Houston Code of Ordinances, Chapter 20 may be obtained from the Internet at http://www.houstontx.gov.

For additional information regarding the Consumer Health Services Bureau, feel free to contact **(832.393.5100)**

- ❑ Bureau Chief **Patrick Key, RS**
- ❑ Food Protection and Training **Renee L. Beckham, RS**
  (Food Service Manager's Certification,
  Food handler training, public presentations,
  mobile units)
- ❑ Retail Food Inspections
  (food establishments, festivals, etc.) **Carolyn Gray, RS**
- ❑ Specialized Food Inspections **David McCoy, RS**
  (wholesalers, construction,
  plan checking, new equipment, etc.)
- ❑ Administration **Conrad Janus, RS**
  (permit fees/invoices)

RESOURCES AND WEB SITES

For specific questions about the Texas Food Establishment Rules (TFER), contact the Texas Department of Health (TDH) at 512-719-0232, or
Visit the web page at http://www.tdh.state.tx.us/bfds/retail/rfdmain.htm

Other helpful web sites:

- Federal Food and Drug Administration (FDA)
www.fda.gov

- United States Dept. of Agriculture Food Safety and Inspection Services (FSIS)
www.usda.gov/fsis

- National Food Safety Database
www.foodsafety.org

- Food and Nutrition Information Center
www.nal.usda.gov/fnic

- Purdue University
www.agcom.purdue.edu/

- National Restaurant Association
www.ServSafe.com

- University of Iowa State Food Safety Program
www.exnet.iastate.edu/

- International Food Safety Council
www.foodsafetycouncil.org

- Centers for Disease Control and Prevention (CDC)
www.cdc.gov

- FDA's The Bad Bug Book
www.cfsan.fda.gov/~mow/intro.html

- NSF International
www.nsf.org

- NEHA Training LLC
www.nehatraining.com

- Houston's Food Ordinance:
www.houston.tx.gov

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FOOD SERVICE MANAGER'S CERTIFICATION MANUAL

CITY OF HOUSTON
Department of Health and Human Services
Bureau of Consumer Health Services
8000 N. Stadium Drive
Suite # 200
Houston, Texas 77054
832-393-5100
832-393-5208 (Fax)
www.houstontx.gov/health