

# Emergency Readiness FOR FOOD WORKERS

## Trainer Guide



Developed by:

the Twin Cities Metro Advanced Practice Center

# Emergency Readiness

**For Food Workers**

## *Trainer Guide*

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# Goals & Preparation

The *Emergency Readiness For Food Workers Trainer Guide* offers a short, two-hour course to acquaint food service workers with the basics of emergency preparedness.

The Trainer Guide is intended for food trainers to instill a familiarity with the fundamentals that will help food workers to prevent or mitigate impacts to the safety of food and people in the mayhem of an emergency. Each lesson begins with a page overview for a trainer that includes length, the lesson concepts, objectives and where applicable, materials needed. The overview is immediately followed by the lesson with a script and answer keys for a trainer.

Recent global events have taught us that emergency preparedness is now an essential element of food safety in our changing world. Integration of food safety, food security and emergency preparedness are becoming key components for equipping food establishments to meet the comprehensive needs of the communities they serve. The community expectation is that their food supply will continue uninterrupted and safe regardless of current events.

"Emergency Readiness for Food Workers" serve as the basis for this training. The lessons are meant to be referred to and used by food workers as a guide in the event of an actual emergency. Participants should leave this training having referred to several topics in the "Emergency Readiness for Food Workers" for answers, ensuring that they will be comfortable utilizing this resource in an emergency once back at work.

The Trainer Guide has been developed for a two-hour course at the request of food managers familiar with what is workable for staff training. They felt that a longer staff training session would be prohibitively long for many food establishments. The level of course material is geared for food service staff, but the emergency fundamentals are appropriate as well for food managers.

## Course Goals

The main goals of this training are to:

- 1 Familiarize participants with the fundamentals of emergency readiness, and
- 2 Familiarize participants with the "Emergency Readiness for Food Workers".

## Materials You Will Need

- \* "Emergency Readiness for Food Workers". Prior to the training event, know your audience. Check with participants for which language versions are needed (available: English, Spanish, and Chinese).
- \* Course certificates of completion for participants (template at Appendix A).
- \* Copies of the Pre- and Post-Quizzes for participants (see Appendix B for quiz originals).
- \* Additional course materials (provided at Appendix B).

For Lesson Activities You Will Also Need:

- \* 20-second hand washing technique for Lesson 2 (Hand Washing Song available at Appendix B).
- \* Visual illustration for Lesson 3 of a thermometer showing the Temperature Danger Zone.
- \* Props for emergency scenario exercise at Lesson 7, including a thermometer, flashlight, "Closed" sign, and a menu of foods at various stages of preparation to fit the Situation Description.

## Course Outline

Lessons	Subjects & Activities	Photo Lesson
<b>Lesson 1 Introduction to Emergency Readiness</b> 10 mn.	<ul style="list-style-type: none"> <li>• Pre-training quiz</li> <li>• Introductory lecture – scope</li> <li>• Activity: If lights go out at dinner time</li> </ul>	
<b>Lesson 2 Stop the Spread</b> 20 mn.	<ul style="list-style-type: none"> <li>• Importance of knowing how to stop the spread of contaminants in a range of emergency situations</li> <li>• Contaminant info by emergency situation</li> <li>• What to do to stop the spread by type of emergency (sewage, fire, chemical, bio tampering, etc.)</li> <li>• Importance of hand washing with activity</li> </ul>	
<b>Lesson 3 Temperature Danger Zone</b> 10 mn.	<ul style="list-style-type: none"> <li>• Food temperature danger in a power outage</li> <li>• 4-hour rule &amp; when to log with activity</li> <li>• Refrigerated food</li> <li>• Partially cooked food</li> <li>• Let's Review</li> </ul>	1
<b>Lesson 4 Food Security</b> 10 mn.	<ul style="list-style-type: none"> <li>• Food security definition &amp; risk reduction</li> <li>• Activity: Steps to stop criminal tampering</li> <li>• Activity: Assess measures at your establishment</li> </ul>	11
<b>Lesson 5 Stay Safe</b> 15 mn.	<ul style="list-style-type: none"> <li>• Chemical incident story with activity</li> <li>• Activity: Identify symptoms to exposure</li> <li>• Causes &amp; expert advice to clean</li> <li>• Cover mouth &amp; nose</li> <li>• Exit plan</li> <li>• Protective gear with activity</li> </ul>	7 2
<b>Lesson 6 After: Discard &amp; Sanitize</b> 15 mn.	<ul style="list-style-type: none"> <li>• Importance of cleanup &amp; recovery to keep food safe</li> <li>• What to discard &amp; why with activity</li> <li>• Wash, rinse then sanitize</li> <li>• Hand wash twice</li> </ul>	
<b>Lesson 7 Scenario Exercise</b> 30 mn.	<ul style="list-style-type: none"> <li>• Group exercise to practice fundamentals: Power outage scenario with several situation descriptions, 4 roles, with questions to address (other scenarios may be substituted)</li> </ul>	1, 10
<b>Lesson 8 Wrap Up</b> 10 mn.	<ul style="list-style-type: none"> <li>• Wrap up: emergency preparedness &amp; training back at work</li> <li>• Post-training quiz</li> </ul>	

# Lesson 1: Pre-Training Quiz & Introduction to Emergency Readiness

**Lesson Time: 10 minutes**

## Evaluate Participant Learning

The completed pre-training quizzes will serve as a baseline measurement of participant understanding for use in conjunction with the post-quiz administered at the end of the course to evaluate participant learning.

## Lesson Concepts

This lesson introduces the scope of emergencies that pose a threat to food safety and public health.

Food safety concerns, business consequences and the additional problems that can arise in a disaster are presented. A disaster is an emergency that is widespread and /or has long-term impacts (days or longer).

The following three fundamentals will help to keep food safe in the mayhem of an emergency:

- 1 Stick to the basic principles of food safety
- 2 Stop the spread of any contamination
- 3 Check in with the person in charge to report information and for direction

## Learning Objectives for Participants

- 1 Demonstrate awareness of emergencies that pose a threat to food safety and public health (the scope of this Emergency Readiness training).
- 2 Describe how reducing threats in an emergency can help keep employees and customers safe, prevent illness and reduce the likelihood of costly liability for a food establishment.
- 3 Identify sticking to the basic principles of food safety, ways to stop the spread of contamination and the importance of clear communication through the person in charge as fundamental steps for ensuring food safety in an emergency.
- 4 Define “disaster” as an emergency that is widespread with longer term impacts, and understand that extraordinary problems arise in a disaster.

## Pre-Quiz

- 1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?
  - A Alert your manager to close down the restaurant
  - B Try to repair the problem
  - C Plug the drain with absorbent towels or rags
  - D Close and lock that rest room, and alert your manager to call a plumber
  
- 2 For food security, why would you need to monitor food and condiment carts or buffets?
  - A To replace spoiling food
  - B To keep food containers filled
  - C To notice a customer adding a powder
  - D To fill ice containers so they won't run low
  
- 3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:
  - A Place a wet cloth over your mouth and nose
  - B Boil water before using it for cooking
  - C Offer customers plenty of drinking water
  - D Call the American Red Cross

# Lesson 1

## Teaching Points Introduction to Emergency Readiness

When the power went out over several states and Canada in the Northeast blackout of August 2003, 50 million people were left in the dark. In New York City, thousands of commuters without transport headed for the nearest bar or restaurant. Of course, those food establishments were without power and in the dark too.

Power outages often happen during storms that bring other emergency problems such as flooding, wind damage, sewage backup and, as occurred in the damage caused by Hurricane Katrina in 2005 along the gulf coast, chemical contamination of the water supply.

All of these emergency events pose threats to food safety and public health at food establishments. Damage and food-borne illnesses that can result from unsafe practices in an emergency can be crippling to a food establishment in liability and loss of business. In the panic and disruption of an emergency, it is important to:

- 1 Stick to the basic principles of food safety
- 2 Stop the spread of any contamination to keep food safe
- 3 Check in with the person in charge, for clear communication and direction to stay safe

Food emergencies are sometimes caused deliberately, by tampering or by acts of terror.

- In a small Oregon town in 1984, local cult members spiked buffet food with Salmonella bacteria at 10 area restaurants on purpose. About 750 people suffered food poisoning as a result, and the fear that spread through town drained the economy of the local businesses.<sup>1</sup>
- In 2003 Kamel Bourgass, an Al Queda operative, was captured in London. When they raided his home they found recipes, with ingredients and equipment to produce poisons such as ricin, botulism, cyanide and other poisons, all possible food-borne contaminants. As a result of his capture a real and deadly threat was avoided. Yet another reminder that we need to be vigilant concerning the security of our food supply.<sup>2</sup>

At some point, food establishments everywhere are faced with the challenges of keeping food and people safe in emergencies, whether natural or deliberate. If an emergency lasts for days or longer, or if it is widespread affecting many establishments, it becomes a disaster.

In 1998 a tornado damaged much of the town in St. Peter, Minnesota, introducing extraordinary challenges to food establishments. In a disaster such as this, you may face supply and service shortages, makeshift operation, loss of regular municipal services or unusual pest problems.

Today's training will familiarize you with the fundamentals of emergency readiness for food service, and introduce you to Emergency Readiness For Food Workers, a photo lesson tool to keep on hand and refer to when you are back at work.

<sup>1</sup> *Oregon Town Never Recovered From Scare*, Glaccus, Gillian, The Associated Press release, 10/19/2001.

<sup>2</sup> *Asylum Chaos Left Al-Qa'eda Man Free To Plot Ricin Terror In Britain*, Steele, John and Bunyan, Nigel, The Telegraph UK release, 04/14/2005.



## Activity

### Ask

You are at work around dinner time and the lights go out, appliances stop working, the heat or air conditioning has gone out, and it is difficult to see in the dark. What would you do?

(Seek 5 or so responses from the participants.)

### Ask as Prompts if Needed

- How would you assist customers?
- What would you do with the food that is being prepared or had been being held hot?
- The refrigerator is full of food and no longer operating. Is there anything you can do?

### Responses to Review

- **Stop operating until power is restored.** It is dangerous to operate without lights, ventilation, dishwashing machine and water heater.
- **Notify customers and employees, and assist them to safety.** Prevent tripping and accidents.
- **Locate a flashlight, food thermometer and note the time the power outage started.** Keeping track of time and food temperatures is the only way to know whether food has sat for too long at unsafe temperatures that could make people sick.
- **BONUS POINTS if a participant refers to the first Photo Lesson on Power Outage.**

# Lesson 2: Stop the Spread

**Lesson Time: 20 minutes**

## Lesson Concepts

In an emergency, it is important to contain contamination and stop the spread of bacterial, viral, radiological or chemical contaminants, even when normal conditions are disrupted. Three fundamentals that underscore this lesson are:

- 1 How to stop the spread of germs or other contaminants in a range of emergency situations
- 2 Stick to the basic principles of food safety as a way to stop the spread of contaminants
- 3 Monitor for suspicious substances or activities to prevent tampering

Introduce participants to practices they can use to stop the spread of contamination, and thus mitigate the impacts of an emergency to public health. Reinforce the importance of thorough and frequent hand washing to stop the spread of contamination.

## Learning Objectives for Participants

- 1 Know how to stop the spread of germs or other contaminants to keep food and people safe in an emergency.
- 2 Know to stop food and beverage service and to alert the manager if there is a contamination risk to a food preparation, storage or service area.
- 3 Know NOT to wipe up and clean in the event of biological, chemical or radiological agents until direction from health officials has been given, as wiping may spread the contamination further.
- 4 Know to report suspicious substances, activity or unusual illnesses to the manager as indicators of possible spread of contaminants by food tampering.
- 5 Demonstrate how to wash hands properly to stop the spread of germs or other contaminants as a critical way to keep food safe in an emergency.

## Materials Needed

- ✓ Song or other technique for teaching 20-second hand washing  
(the *Hand Washing Song* is available at Appendix B)

## Lesson 2

### Teaching Points

In an emergency, it is important to stop the spread of food contaminants, such as germs, chemicals, and any other contamination that may make people sick. In this lesson, we will examine a variety of emergency situations and identify how to stop the spread of contamination.

### Activity with Teaching Points

#### Teaching Points

#### Sewage Back Up

Sewage contains human and animal wastes that may carry a range of disease-causing germs and eggs of parasites. Illnesses such as hepatitis and norovirus are transmitted in sewage. Similarly, floodwater can carry raw sewage, silt, oil or chemicals that can make storm-damaged foods unsafe to eat.

#### Ask

**What could you do to stop the spread of disease if sewage backed up?**

- **Take the problem sink, drain, toilet or machine out of service.**
- **Keep food workers and customers away** from the contaminated area to stop the spread. Block any use and barricade the area if needed to keep foot traffic out of the area. Alert your manager.
- **Remove any soiled clothing for cleaning and sanitizing** so that you do not spread germs.
- **Hand wash twice** so that you do not spread germs or viruses.
- **Alert your manager** if any food storage, prep or service area is at risk of contamination from raw sewage, because it is unsafe to operate.

#### Teaching Points

#### Fire

Keeping people safe from smoke and toxic fumes in a fire is the first priority. If it is safe to do so for a small, contained fire, it may be possible to turn off the fuel to the fire such as the gas valve and to put out the flames.

The smoke, heat, toxic fumes and chemicals used in putting out a fire can seep into and contaminate food, food packaging and equipment that are exposed. Contaminated food, packaging and equipment must be discarded to keep people safe.

Even food in cans, jars or cardboard boxes that were close to the heat of the fire are not safe to eat. Equipment that cannot be fully sanitized must be replaced. Your local health department can help the person in charge on a safe cleanup after a fire.

## Ask

### What could you do to stop the spread in a fire?

- If safe to do so, turn off any gas valves and use a fire extinguisher or suppression system to put out a small, contained fire.
- Assist customers and fellow workers in a safe and orderly exit of the building. Once fire fighters are called to the scene, there is not much more that can be done by you. After a fire, you can stop the spread of disease during clean up, by discarding contaminated and exposed food and by sanitizing.

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## Teaching Points

### Release of a Hazardous Chemical

Chemicals released to the air and water can contaminate food and surfaces that people contact. Chemical releases can occur from industrial accidents, train or truck spills, a deliberate release in an act of terror or from improper storage or mixing of chemicals at work.

Symptoms of toxic chemical exposure may include eye or skin irritation or burning, nausea, disorientation, difficulty breathing and convulsions. If you are working with cleaning or other chemicals on the job, you should be trained in the proper use, labeling and storage of them.

If contamination is caused by a chemical, biological or radioactive agent, wiping food service areas may actually spread the contamination.

If you leave the area without waiting for agent-specific directions from health officials on personal clean-up procedures, you may be spreading the contamination.

## Ask

### What could you do to stop the spread if a chemical were released nearby?

- **Stop serving food and water, and alert your manager** to report the spill to officials. Food and water can become contaminated by the airborne chemical.
- **Stop cleaning food areas or equipment.** Depending on the type of chemical substance, you may only be spreading the contamination. Wait for direction from health officials.
- **Cover mouth and nose with a wet cloth** while exiting the impacted area to help reduce the spread of the chemical to the lungs.
- **Follow chemical-specific directions from health officials on personal clean-up** procedures to stop any further spread. This may involve removing clothes, showering and other decontamination procedures.

## Teaching Points

A wet cloth over the mouth and nose will help to stop the spread of a chemical into the lungs. In an explosion or a fire, this will also help to stop smoke, ash or other debris from being breathed into your lungs.

## Teaching Points

### Suspicious Powder or Liquid on Food

Food tampering or an act of terror can spread a biological agent of infectious viruses, bacteria or toxins in food, water or the air. Being alert to suspicious deliveries and activities can help prevent acts of tampering with food and the illness this may cause in people.

Biological agents that may be used to contaminate food include *Salmonella*, Anthrax, and Ricin Toxin among others.

#### Ask

**What could you do to stop the spread of a suspicious powder or liquid on a food delivery?**

- **Be on the lookout for signs of tampering in food deliveries.**  
If you spot a suspicious powder or liquid, or a package that has been opened, tampered with or came unexpected, report it to your manager.
- **Report sudden illnesses of employees and customers to your manager**  
as they may be an early warning sign that food tampering has occurred.

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### Hand Washing to Stop the Spread

#### Ask

**What Is the Best Thing You Can Do to Stop the Spread of Contaminants?**

#### Hint

You all know the answer.

- **Wash your hands well and often!** You don't want to be the cause of spreading germs or other contamination..
- **Wash your hands and forearms well for 20 seconds working up a lather with soap** that covers your hands and forearms:
  - Wet hands and forearms with warm water.
  - Lather with soap and rub hands vigorously for 20 seconds.
  - Make sure to wash palms, back of hands, under fingernails using nail brush and between fingers.
  - Rinse with clean water.
  - Dry vigorously with a clean towel.

## Teaching Points

The skin on our hands and forearms holds millions of tiny bacteria, viruses and other contaminants that can be passed to food and other people. According to the Minnesota Department of Health, if everybody washed their hands before touching food and after using the restroom, nearly half of all food-borne illness outbreaks could be avoided.

In an emergency where normal routines are disrupted and contamination already puts food safety at a higher risk, it is very important to wash well and often to keep food and people safe.

## Ask

**What techniques do you use to make sure you wash well for a full 20 seconds?** [Teach one technique unless the group of participants is already well versed in one (have them demonstrate if so).]

- ♪ HAND WASHING SONG (see Appendix B), or
- ♪ HAPPY BIRTHDAY SONG TWICE, or
- ♪ Recite the ABCs, or
- ♪ Other technique

## Let's Review

In an emergency when normal conditions are disrupted:

- 1 Stop the spread** of germs or other contamination
- 2 Stick to food safety basics**, including frequent hand washing
- 3 Be on the lookout for suspicious substances or activities** to help prevent the deliberate and malicious spread of contaminants

## Additional Activity

Select a photo lesson from *Emergency Readiness For Food Workers*, and ask participants to identify at least three ways they can see to help stop the spread of food contamination.

# Lesson 3: Temperature Danger Zone

**Lesson Time: 10 minutes**

## Lesson Concepts

A power outage is probably the most common emergency that food establishments face, putting hot and cold food safety at risk.

The dangers of food-borne illnesses from potentially hazardous foods (PHFs) that sit too long in the Temperature Danger Zone are addressed in use of the 4-hour rule, ways to keep refrigerated food cold longer and how to deal with partially-cooked food. Convey the importance of:

- Recording time of outage onset
- Monitoring food temperatures in a power outage and applying the 4-hour rule
- Steps that can be taken to help keep food and people safe during a power outage

**Note to Trainer:** The temperature limits of the Danger Zone represent current requirements of state law where this was written, which differ from the 2005 FDA regulations. Check the required Temperature Danger Zone limits of your jurisdiction.

## Learning Objectives for Participants

- 1 Stop serving food and beverages.
- 2 Write down the time power is lost, and the temperatures of food.
- 3 Check and log temperatures every hour for hot food, every 2 hours for cold food.
- 4 Afterward, throw out hot and cold foods if they've sat in the Danger Zone for more than 4 hours. If in doubt, throw the food out.

## Materials Needed

- ✓ Thermometer showing the Temperature Danger Zone

## Lesson 3

### Teaching Points

Losing power puts hot and cold food at risk of sitting too long in the Temperature Danger Zone. We know from food safety training and experience that hot and cold foods are in the Danger Zone if food temperature is within the range of 41°F to 135 F.

### Show Visual

#### Thermometer Illustration of the Danger Zone

If foods remain in the Danger Zone – that is, if hot foods are not kept hot and cold foods are not kept cold, disease-causing organisms grow. Bacteria thrive and multiply on food left in the Temperature Danger Zone, into colonies. Colonies of bacteria multiply rapidly to harmful levels that cause food poisoning and make people sick.

### Activity

#### Ask

How many of you have worked when a power outage occurred?  
Is there anything you would do differently if it happens again?

#### Ask

In a power outage, how long do you think food can sit in the Temperature Danger Zone before it must be thrown out as too dangerous to allow the public to eat?

- **4 hours. Follow the 4-Hour Rule**, and ‘if in doubt, throw it out.’

#### Ask

If the power is out for 3 hours 50 minutes and you return an item of cold-held food to refrigeration within 4 hours, is the food safe to eat?

- **It depends** on how long it takes once the power is back on to cool the food to at least 41 °F. Remember, the 4-Hour Rule means the length of time food sits within the Temperature Danger Zone.



## Ask

After a power outage, how do you know whether hot and cold foods are safe to eat?

- Once the power goes out:
    - **Write down the time of onset**, and
    - **Log food temperatures.**  
Continue to take regular time and temperature readings:
      - ◆ **Hot food temperatures every hour**
      - ◆ **Cold food temperatures every 2 hours**  
(less frequently to help keep food cold)
  - **When power returns, use the log** to figure out how long each food was in the Temperature Danger Zone, and discard all food in the Danger Zone for longer than 4 hours.
  - **If in doubt, throw it out.**
- 

## Teaching Points

### Refrigerated Food

A challenge in a power outage is to keep cold foods that are stored in refrigerators chilled for as long as possible. You want to keep the cold inside, since refrigeration units are insulated storage boxes. Steps you can take to help keep refrigerated foods cold longer are:

- **Keep refrigerator doors closed** except for taking temperatures every 2 hours.
- **Do not add any hot foods** into the refrigeration unit, and cancel food shipments.
- **Cover open freezers with a tarp** or blanket.
- **Keep an offsite cold storage contact on hand** (e.g., a refrigerated warehouse or truck).

## Teaching Points

### Partially Cooked Food

For food that is being cooked when the power goes out, here is the rule of thumb:

- If power is out for **longer than ONE HOUR, the food must be discarded.**
- If power returns **within one hour, rapidly reheat the food to 165 °F.**

## Let's Review

Open your *Emergency Readiness* Photo Lessons to Lesson 1 for a summary of what you have just learned. If the power goes out, what should you do?:

- 1 **Stop serving food and beverages**
- 2 **Write down the time power is lost, and the temperatures of food**
- 3 **Check and log temperatures** every hour for hot food, every 2 hours for cold food.
- 4 **Afterward, use your logs to determine which foods meet the 4-hour rule, and if in doubt throw it out.**

## Additional Activity

Power outage problems of refrigerated foods for group solution – ask “What action should you take if:

- 1 The power is off for 2 hours. Refrigerated food never got above 41°F. [ Food is safe for serving. ]
- 2 The power is off for 3 hours. Refrigerated food was above 41°F for 3 hours while the power was off. Then when power returned it took 2 more hours for food to cool back down to 41°F.” [ Discard food because 5 hours is more than 4-hour limit. ]

# Lesson 4: Food Security

**Lesson Time: 10 minutes**

## Lesson Concepts

Food Security (also referred to as Food Defense and Food Protection) are preventative measures taken to minimize the risk that food will be subject to tampering or other malicious criminal or terrorist acts. These measures are also taken to increase the chance of discovering and reporting malicious criminal or terrorist acts.<sup>3</sup>

A food security program is emergency prevention that will help protect customers and employees from criminal acts of food tampering or terror. Food has been used to spread food poisoning in the past, and agencies including the FDA, WHO and USDA have pointed out the vulnerability of food to tampering from 'the farm to the fork.'

In a global food system, food workers and managers are at the front line of detection and prevention of intentional acts of food tampering. Improving food security can prevent food tampering, thereby helping to keep food safe. It can reduce deliberate threats to public health, business liability and serious economic consequences for a business.

Workers should become familiar with food security measures, know how to be on the lookout for suspicious substances or activities and know when to report any suspicious activity or illnesses to the person in charge.

## Learning Objectives for Participants

- 1 Understand a working definition of food security, that reporting suspicious substances, activities or unusual illnesses to the manager can prevent or detect possible food tampering.
- 2 Identify these three food security basics:
  - Restrict visitor, vendor and customer access to business records and to food preparation and storage areas.
  - Keep doors locked into loading, kitchen and storage areas.
  - Check for identification of any vendor or supplier who is unknown to you.
- 3 Routinely check deliveries for suspicious powders or liquids, or packages that were not ordered as these may be signs of tampering.
- 4 Routinely monitor buffet tables and food carts to prevent food tampering.

## Materials Needed

- ✓ *Emergency Readiness* Photo Lesson 11, "Food Security"

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<sup>4</sup> *The Emergency Handbook For Food Managers* (Twin Cities Metro APC, 2005) contains a Food Security Self-Inspection Checklist for food service establishments, updated and in ten languages at: <http://www.naccho.org/topics/demonstration/APC/documents/FoodSecurityChecklist-Translations.pdf>

## Lesson 4

### Teaching Points

Food security is about preventing criminal acts of tampering with food to make people sick and to do damage to a business. By building simple steps into your daily routine and staying alert, acts of tampering can be prevented.

Tampering with food to cause harm is done by contaminating foods with biological or chemical agents. These agents may be in liquid or powder form.

An unusual number or type of flu-like illnesses, skin rash, slurred speech or vision problems may be early warning signs that food has been tampered with. The person in charge is required to record employee illnesses, and reporting illnesses may help detect tampering sooner if it has occurred.

A criminal who wants to tamper with food will usually learn the layout and routines of a business, and may try to steal business records, keys or visitor badges. To keep food secure, be on the lookout for these suspicious activities.

Where tampering has occurred and resulted in food illnesses, establishments have lost business afterward due to customer fear. Prevention and early detection will help safeguard your business.

### Activity

#### Trainer Note

Summarize and discuss participant responses to the three discussion prompts, and add points as needed to teach each of the following food security basics.

#### Ask

What examples or steps do you think would keep food secure from criminal or terrorist tampering?

- **Restrict access** to food areas, business records (i.e., “Employees Only,” visitor badges, locked storage areas, etc.)
- **Check for identification** of any vendor or supplier who is unknown to you
- **Inspect deliveries for signs of tampering**, such as an unexpected package, opened jars or boxes, or suspicious liquid or powder residue
- **Monitor buffets and food carts** for suspicious activity and any tampering with food
- **Adequately light passageways outside and in**, to prevent dark access ways
- **Keep doors locked** and have a system for key or keyless code management
- **Report suspicious activity or illnesses to your manager**, and take appropriate action as directed. Management needs all information from all employees to have the full picture

## Instruction

Open to Photo Lesson 11 on Food Security.

### Ask

What food security measures does your establishment take that compare to those you see in the photos?

### Ask

Where do you see vulnerability at your establishment, where a person with bad intent could get around security (whether pictured or not)?

## Additional Activity

Facilitate the group to formulate the steps it will take and protocol it will establish to develop a food security program.

A one-page Food Security Checklist appears at Section 13 of the *Emergency Handbook For Food Managers* (Twin Cities Metro APC, Sept. 2005), and is kept updated and available in 10 languages at <http://www.naccho.org/Equiph/detail.cfm?id=282>.

# Lesson 5: Stay Safe

**Lesson Time: 15 minutes**

## Lesson Concepts

This lesson introduces steps to protect workers and customers in an emergency. A chemical release to the air is described through storytelling with instructional Q&A, addressing symptoms of exposure, and safety steps to take. Through analogies, clean up and steps for responding to a dirty bomb and biological tampering are identified as well.

Exit planning is introduced with discussion on participant awareness of the protocols and practices in place, or that need to be in place, at their place of work.

Personal safety gear is identified so that workers will know to wear protective gear if they are asked to perform cleanup in the recovery phase of an emergency.

## Learning Objectives for Participants

- 1 Familiarity with safety steps for a chemical incident and a dirty bomb.
- 2 Know to cover mouth and nose with a damp cloth to protect against breathing in a chemical release, smoke, ash, or other particles.
- 3 Know to keep passageways clear and to have an exit plan.
- 4 Identify protective gear to wear for clean up after an emergency.

## Materials Needed

- ✓ *Emergency Readiness For Food Workers* Photo Lessons 2, “Flood or Sewage Back-Up,” and 7, “Chemical Incident”

## Lesson 5

### Tell A Chemical Incidence Story

Several kitchen employees at a catering business became dizzy and nauseous over a 20-minute period (true story). The crew wondered what could be wrong. The employees grew more ill, and headed outdoors to get some air.

### Activity

#### Ask

What could be causing this illness?

[Give participants a chance to come up with several ideas, e.g., they drank or ate something spoiled. If nobody suggests the correct answer, but they do suggest contamination by a chemical or other agent, acknowledge their answer as getting warm.]

#### Hint

A cleaning crew had been in the night before.

- **Natural gas leak.** The cleaning crew the night before had accidentally caused the gas leak. When they pulled the range out for cleaning, the range coupling disconnected from the gas line, leaving an open gas line into the room.

### Teaching Points

#### Story In the End

The crew at first wondered if they had eaten or drank something bad, but upon reflection, rejected that notion. One of the crew called 9-1-1 when the workers grew sicker and headed outdoors for air.

The fire department and paramedics responded. Upon taking air measurements the fire department discovered the gas leak behind the range.

All workers evacuated until the leak was repaired. The sick workers were treated and recovered.

## Activity

### Symptoms of Exposure to Airborne Releases

#### Ask

What are some symptoms of exposure to chemicals.

[Three have been mentioned in the story above.]

- **Unusual number or type of illnesses**, including flu-like symptoms of:
  - Nausea
  - Dizziness
  - Disorientation
  - Difficulty in breathing
  - Convulsions
- **Eye or skin irritation or burning sensation**
- **Unusual incidence of dead birds, insects or other animals**
- **Unexplained odor** that is out of character with surroundings. An odor may falsely seem to fade because chemicals can dull one's sense of smell

#### Teaching Points

Unusual occurrences of flu-like illness or skin rash can also be early warning signs of food that has been tampered with by deliberately contaminating the food with a disease-inducing biological agent.

Reporting illnesses to the person in charge can help to detect chemical contamination or food tampering.

#### Teaching Points

### Seek Expert Advice Before Cleaning

If chemical, biological or radioactive agents are involved in contamination of your food and place of business, be forewarned. You do NOT want to clean up surfaces or salvage food until you have expert advice on how to clean from the health department.

Cleanup may only spread the contamination around, and how to clean things will vary with the type of agent that was used.

#### Instruction

Turn to Photo Lesson 7 on "Chemical Incident."



## Ask

What two potential causes of chemical incidents do you see in the pictures?

- **Tanker truck accident** causing a chemical release to the air
- **Improper use or storage of chemicals used in food establishments**, such as cleaning and sanitizing products (proper storage is pictured).

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## Teaching Points

### Cover Mouth & Nose

Look again at the second photograph. When the tank truck releases a chemical to the air, you see someone leaving the nearby restaurant with a wet cloth covering their mouth and nose.

Covering the mouth and nose with a wet cloth can prevent or reduce the amount of chemicals, smoke, ash, or particles that are breathed into your lungs.

On average, adults breathe air into their lungs about 20 times every minute. So using a wet cloth to capture contaminants before they ever reach your lungs is a simple and good idea!

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## Teaching Points

### Have An Exit Plan

If employees and customers need to evacuate to a safe place, for example, in a fire, flood or a tornado warning, you will want:

- 1 Exit passageways to be clear
- 2 To assist customers on where to go, according to your establishment's exit plans

## Activity

## Ask

Do you know what the exit plan where you work is, if there is a tornado warning?

[If not, suggest talking with their manager to develop and communicate an exit plan.]

## Ask

Do you have a daily maintenance protocol to keep passageways clear?

## Ask

Do you know where emergency equipment is kept, such as a flashlight, a radio for public advisories and working batteries?

## Teaching Points

Having exit procedures in place and equipment on hand for an emergency can help keep workers and customers safe in an emergency.

---

## Teaching Points

### Protective Gear For Recovery After An Emergency

Staying safe is important *after* an emergency too, when the clean up and recovery begins. We have already talked about when to discard food that has sat for too long in the temperature Danger Zone, and how to stop the spread after handling contaminated food or after exposure to other contaminants.

Flood, fire, wind storms or explosions can cause structural damage to your building, shattering of glass, and can dislodge gas piping and electrical wiring inside. Before entering your work place after a destructive emergency, you will want to check with your manager to find out if the building has been inspected by the local Building Inspector and if it is safe to occupy.

Now we want to focus on your personal safety. Consulting a professional company for cleanup service after a significant emergency is recommended, but if you are involved in a cleanup protect your safety first.

## Instruction

Turn to Lesson 2 in your *Emergency Readiness* Photo Lessons, at the bottom of the page.

## Ask

During cleanup after an emergency, what personal safety equipment do you see, or do you think may be needed?  
What do you think it will protect you from?

- **Rubber gloves** – to protect your skin from germs and other contaminants or raw sewage, and from sharp objects in debris.  
Remove gloves to stop the spread before you leave
- **Goggles** – to protect your eyes from dust, germs and allergens, chemicals and sharp objects in debris
- **Face mask** – to protect your lungs from dust, germs or mold. If mold is a problem, a fitted filter mask rated N-95 or higher will keep the mold out

- **Coveralls** – if you are cleaning up in an area contaminated with flood waters, smoke and ash, fire suppression or other chemicals, etc., you will want to protect your skin and clothing and remove the coveralls before you leave to stop the spread
- **Rubber boots** – to protect you and your clothes from contaminants, and because they can be easily sanitized after clean up. Remove boots before you leave to stop the spread

## ***Let's Review***

To stay safe in an emergency and in recovery *after* an emergency:

- 1 **Be alert to symptoms of chemical exposure or biological contamination**, such as unexplained illnesses or skin irritation or rash.
- 2 **Cover mouth and nose with a damp cloth** to protect your lungs in a chemical release, or from smoke, ash, or other particles.
- 3 **Know the exit route and where emergency equipment is kept** to keep workers and customers safe in an emergency.
- 4 **Wear personal safety equipment** if you are cleaning up after an emergency to reduce your exposure to contamination.

## ***Additional Activity***

- 1 Form Small Groups of Participants. Instruct the groups to open to Photo Lesson 7, “Chemical Incident.”

Ask: Each group to come up with a response plan of procedures in the event of a chemical incidence using Photo Lesson 7.

Present Plans of Each Group for Group Discussion: Discuss thoroughness of plans based on Photo Lesson 7 concepts.

- 2 Facilitate development of a facility-specific exit strategy. Elements of an exit strategy should include:
  - Having a family emergency plan at home so that workers have assurance that loved ones at home know what steps to take. (The American Red Cross has a form for home planning at [www.redcross.org](http://www.redcross.org).)
  - Agreement on where customers and workers will exit to in the event of the following emergencies, which should be sufficient for other emergencies as well:
    - Fire
    - Tornado warning
    - Explosion or chemical release: address both sheltering in place and walking to a building just beyond the area of impact;
  - Protocol for daily maintenance to keep passageways clear.
  - Protocol for having emergency equipment on hand (see fact sheet: “In An Emergency: Equipment & Supplies List For Food Service,” Twin Cities Metro APC, Winter 2006 at [www.naccho.org/EQUIPH](http://www.naccho.org/EQUIPH).)
3. Practice a fire drill.

# Lesson 6: After -- Discard & Sanitize

**Lesson Time: 15 minutes**

## Lesson Concepts

Cleanup that sanitizes after an emergency is an essential part of stopping the spread of germs and other contaminants that can cause illnesses. A food establishment that can quickly and safely clean up and rebuild will stand a better chance of recovering after an emergency.

Participants should become familiar with recovery basics, including the rationale for deciding when to discard food and equipment, and the importance of washing and disinfecting food contact surfaces, utensils and equipment. Since the costs of recovery can be a severe business impact, suggest the practice of recording items that are discarded for property insurance purposes (a video camera is one easy way to do this).

Reinforce the importance of wearing personal safety gear (from Lesson 5) during cleanup.

## Learning Objectives for Participants

- 1 Become familiar with what needs to be discarded after an emergency, and why.
- 2 Know to first wash and rinse food contact surfaces, then to sanitize thoroughly to disinfect surfaces after an emergency.

## Materials Needed

- ✓ Easel Pad with three “Discard Categories” charted for recording participant Activity responses
- ✓ For Alternative Small Group Activity: Recovery Puzzle (in Appendix B)

**Trainer Note on Preparation:** The activity can be done as a puzzle for small groups to solve (see “Recovery Puzzle” at Appendix B), or as described here, a full group activity which will be accessible for workers with limited English reading proficiency. The purpose of the activity is to familiarize participants with what must be discarded and the food safety reasons why.

For the full group activity, you will need to post or chart the following three headings, leaving room to write in group answers. One at a time, read off the “Activity” items listed alphabetically in the lesson below, and ask participants to decide which of the three posted discard categories that each item falls within. Record their answers, affirming or pointing out a different reason to consider in their rationale. The three discard categories are:

- 1 Too Long In Temperature Danger Zone
- 2 Damaged By Or Exposed To Heat, Smoke, Flooding, Sewage, Fumes Or Chemicals
- 3 Cannot Be Fully Washed & Disinfected

## Lesson 6

### Teaching Points

Cleanup and recovery after an emergency are critical for keeping food safe and becoming fully operational again.

We have already talked about the damage to food in a power outage, and the need for expert advice before cleaning up after contamination by biologic or chemical agents. Think for a moment of the impact of how other emergencies can cause contamination of food, equipment, walls and furnishings.

Floodwater may carry silt, raw sewage, oil or chemicals that make storm-damaged foods, where packaging is contaminated, unsafe to eat. Sewage waste contains human and animal feces carrying a range of disease-causing organisms.

Any food, or furnishings that cannot be sanitized, in direct contact with floodwater must be discarded.

In a fire, smoke, toxic fumes, the chemicals used to put out the fire and the pressurized water used to douse flames can penetrate all kinds of food packaging and contaminate food.

Even foods in cans, jars, bottles, wraps or cardboard packaging that were near the heat of the fire are not safe to eat. Equipment that cannot be fully sanitized must be replaced.

Deciding what food must be discarded after an emergency is key for preventing food-borne illnesses.

While use of a professional cleaner is recommended, if you find yourself involved in the cleanup during or after an emergency, wear personal safety gear to protect yourself.

### Activity

### Teaching Points

#### What to Discard & Why

A first step after an emergency is to sort through and discard all food, utensils, equipment and furnishings that could make people sick. Your food establishment will want to document the items that are discarded for insurance purposes.

I am going to name items that you might likely come across in cleanup after an emergency. For each item, tell me which one of the following three reasons is why the item needs to be discarded:

- **Discard food too long in temperature danger zone**

**Answers: C, I, and M**

- **Discard food and packaged utensils damaged by or exposed to heat, smoke, flooding, sewage, fumes or chemicals**

**Answers: A, D, E, G, H, J, K and N**

- **Discard anything that cannot be fully washed and disinfected**

**Answers: B, F and L**

**List of Items To Read For Group Answer on Each:**

- A Cardboard food boxes even if contents seems dry
- B Damaged carpeting
- C Hot-held food below 140 °F for 4 hours and 5 minutes
- D Food packaged in paper, plastic, cloth or fiber
- E Dry foods, like flour and sugar
- F Toaster
- G Plastic forks wrapped in cellophane
- H Food products with lids or pull-tab tops like ketchup, milk, or cans of soda pop
- I Cold food above 41°F for 4 hours
- J Foods in glass jars
- K Canned foods that are dented, leaking, swollen or rusted
- L Damaged fabric on seating
- M Partly cooked food without power for more than an hour
- N Food not sealed off from a chemical release

## Teaching Points

### Wash & Rinse, Then Sanitize

Before the health department approves restarting food operations after an emergency, you will need to clean and sanitize all food contact surfaces, utensils & equipment.

You are not only cleaning away soot or residue of flooding or other contamination, but you are disinfecting to get rid of the organisms too small to see that can make people sick.

FIRST scrub and wash the building -- the floors, the walls and furnishings -- using soap. Rinse with clean water. Then sanitize to disinfect.

SECOND wash and rinse all food contact surfaces, including utensils and equipment. Then sanitize to disinfect.

#### Ask

What do you think is third?

THIRD discard all exposed items that cannot be cleaned. Launder all clothing and cleaning aids (e.g., cloths and mop heads) used in the cleanup with detergent and hot water.

#### Ask

What do you think is last, what you need to do after any cleanup?

#### Hint

You all know the answer.

FOURTH & FINALLY hand wash twice immediately after cleanup. Use soap or, if directed by health officials, other cleaning compound for at least 20 seconds and thoroughly rinse with clean water. Then do it again..

## Let's Review

- 1 **Discard food, equipment or furnishings damaged in an emergency if:**
  - a **Sat Too long in Temperature Danger Zone**
  - b **Damaged Or Exposed** by or to heat, smoke, flooding, sewage, fumes or chemicals
  - c **Cannot be fully washed & disinfected**
- 2 **If in doubt, throw it out!**
- 3 **During cleanup, wash and rinse; then sanitize to disinfect.**



# Lesson 7: Emergency Scenario Exercise

**Lesson Time: 30 minutes**

## Lesson Concepts

This is a group exercise to put emergency fundamentals learning into practice within the context of a mock emergency scenario.

Power outage will be used as the scenario, although others from the *Emergency Handbook For Food Managers* may be substituted. The exercise is written for a group of four, with roles of a cook, a server, a customer and a manager.

Provide each small group(s) of four with a setting, props, and a situation description that offers clues for emergency decision making (three situation descriptions are included in this lesson). You may alternatively want to use these situation descriptors to prompt groups during the exercise.

Where more than one group practices the exercise, vary the situation information given to each group to explore differing emergency circumstances.

- Exercise Outline:**
- Prepare beforehand
  - 3-5 minutes set-up
  - 10 minutes group
  - 5 minutes report back to full group
  - 5 minutes questions & wrap

## Learning Objectives for Participants

- 1 Discuss procedures needed and resources to have on hand for an emergency.
- 2 Know the importance of record keeping in an emergency (in this case time of onset and a temperature log).
- 3 Become familiar with food safety and food handling guidelines to prevent food illness in an emergency.
- 4 Decide whether food is safe to keep or must be discarded after an emergency.
- 5 Become familiar with fundamentals for keeping customers and workers safe in an emergency.

## Materials Needed

- ✓ Beforehand, decide on set-up, props, handouts and format for the exercise
- ✓ Situation Description – copies for each role player (also at Appendix B)
- ✓ *Emergency Readiness* Photo Lesson 1 on "Power Outage"
- ✓ "Discard or Salvage?" guide at *Emergency Readiness* Photo Lesson 10
- ✓ Flashlight
- ✓ "Closed" sign (make one)
- ✓ Temperature Log (form at Appendix B; also at *Emergency Handbook For Food Managers*, Appendix C)
- ✓ Thermometer
- ✓ Foods in various stages of preparation to fit the Situation Description (alternatively, ask breakout groups to list foods on their menu)

## Lesson 7

### Instructions for Exercise

### “Lights Out” Exercise

- A **Beforehand**, decide on set-up, props, handouts and format for the exercise.
- Situation Description with questions to address (at Appendix B)
  - Discard or Salvage guide
  - Provide or have participants develop props (see “Materials Needed” above)
- B Form one or more small group(s) of four to practice the exercise. Remaining participants may be assigned as “Observers” to report at the end.
- C Assign or instruct each group to self-assign the four roles to participants. Provide each with the handout of their Situation Description and provide their initial instructions to prepare for the exercise. The four roles for assignment are:
- 1 Cook
  - 2 Server
  - 3 Customer
  - 4 Manager
- D Have group(s) act out or answer these questions:
- 1 What tools do you need to deal with the situation?
  - 2 What procedures should be followed?
  - 3 What records need to be referred to or kept?
  - 4 How should these foods be handled?:
    - Cold foods, refrigerated and being held cold
    - Hot foods being hot held
    - Partially prepared foods
    - Frozen foods
  - 5 Which foods can be kept? Which should be discarded?
  - 6 Discuss customer safety and discuss worker safety

### Situations For Exercise

#### Situation 1

The power fails at 11:45 am.

- Restaurant opened at 11:00 am.
- Ten customers are in the restaurant.
- Expect a noon rush of 80 customers.
- Lunch service includes a buffet with both hot and cold held food.
- Some lights are on, some lights are off.
- The building next door has power.

## Situation 2

Thunderstorm knocks out power at dinner rush.

- Power is off in the whole neighborhood.
- Restaurant is full of customers.
- No phone service.
- Meals are being prepared in the kitchen.
- Power comes back on within 2 hours.

## Situation 3

Opening cook finds no power.

- Cook starts at 9:00 am.
- Kitchen clock reads 3:00 am.
- Temperature of chicken salad prepared yesterday is at 60° F.
- Milk in dispenser is at 50° F.
- Ice cream in freezer is soft.
- Restaurant opens at 11:00 am.

## Group Discussion At Exercise End

### Ask

- 1 What steps did you see taken that are emergency fundamentals from today's lessons?
- 2 What additional steps might have been taken to help with this emergency situation?
- 3 What procedures and tools did you need to deal with the situation?
- 4 What records needed to be referred to or kept?
- 5 How were foods handled?:
  - A Cold foods, refrigerated or being held cold
  - B Hot-held foods
  - C Partially prepared foods
  - D Frozen foods
- 6 Which foods were kept? Which were discarded?
- 7 How did you address customer and worker safety?

# Lesson 8: Wrap Up & Post-Training Quiz

**Lesson Time: 10 minutes**

## Evaluate Participant Learning

The completed post-training quizzes serve as measurement for evaluation of participant learning upon completion of this training, in conjunction with the baseline, pre-training quiz administered at the start of the training.

## Lesson Concepts

Emergency readiness calls for periodic review and practice of plans and fundamentals. A wrap-up discussion of how participating food establishments could incorporate emergency readiness training for new staff and periodic refresher training for existing staff will help prepare participants over time. Refresher training is recommended at least once a year. The “Emergency Readiness Discussion Guide and Photo Lessons” contained within the *Emergency Handbook For Food Managers* may be used for refresher training.

If you have multicultural course participants requiring photo lessons in languages other than English, encourage participants to place their set of “Emergency Readiness Photo Lessons” into the *Emergency Handbook For Food Managers* notebook at their work place, in a known location where they can refer to it in the event of an emergency.

Completion of the post-training quiz will conclude the training session.

## Learning Objectives for Participants

- 1 Leave with *Emergency Readiness For Food Workers* Photo Lessons, for emergency reference once back at work.
- 2 Review materials with new staff, and periodically with existing staff (at least once a year).
- 3 Exhibit learning in answering the post-quiz questions.

## Materials Needed

- ✓ Post-Quiz (in Appendix B)
- ✓ Certificates of completion (template at Appendix A)

## Post-Quiz

- 1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?
  - A Alert your manager to close down the restaurant
  - B Try to repair the problem
  - C Plug the drain with absorbent towels or rags
  - D Close and lock that rest room, and alert your manager to call a plumber**
  
- 2 For food security, why would you need to monitor food and condiment carts or buffets?
  - A To replace spoiling food
  - B To keep food containers filled
  - C To notice a customer adding a powder**
  - D To fill ice containers so they won't run low
  
- 3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:
  - A Place a wet cloth over your mouth and nose**
  - B Boil water before using it for cooking
  - C Offer customers plenty of drinking water
  - D Call the American Red Cross

# **Appendix A**

## **Certificate of Completion**

This certificate certifies completion of the two-hour training

# **Emergency Readiness For Food Service Workers**

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Participant Name

has completed this readiness training covering emergencies  
that pose a threat to food safety and public health,  
food security, response and recovery afterward.

---

Date

---

Trainer:

Funded by the National Association of County and City Health Officials (NACCHO)



# **Appendix B**

## **Course Materials**



# Pre-Quiz

- 1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?
  - A Alert your manager to close down the restaurant
  - B Try to repair the problem
  - C Plug the drain with absorbent towels or rags
  - D Close and lock that rest room, and alert your manager to call a plumber
  
- 2 For food security, why would you need to monitor food and condiment carts or buffets?
  - A To replace spoiling food
  - B To keep food containers filled
  - C To notice a customer adding a powder
  - D To fill ice containers so they won't run low
  
- 3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:
  - A Place a wet cloth over your mouth and nose
  - B Boil water before using it for cooking
  - C Offer customers plenty of drinking water
  - D Call the American Red Cross

# Post-Quiz

- 1 If a floor drain in one of the bathrooms at work is backed up creating a pool of sewage-contaminated water, what should you do?
  - A Alert your manager to close down the restaurant
  - B Try to repair the problem
  - C Plug the drain with absorbent towels or rags
  - D Close and lock that rest room, and alert your manager to call a plumber
  
- 2 For food security, why would you need to monitor food and condiment carts or buffets?
  - A To replace spoiling food
  - B To keep food containers filled
  - C To notice a customer adding a powder
  - D To fill ice containers so they won't run low
  
- 3 If a noxious chemical were released into the air from a nearby accident, it would be a good idea to:
  - A Place a wet cloth over your mouth and nose
  - B Boil water before using it for cooking
  - C Offer customers plenty of drinking water
  - D Call the American Red Cross

# Hand Washing Song

(to tune of “Sound Off”; Spanish version to tune of “Macarena”)

Palms	Back and Forth until there’s bubbles Repeat
Back of Hands	On the back of the hands with lots of bubbles Repeat
Between the Fingers	Between the fingers until they’re clean Repeat twice
Thumb	Thumb, Thumb, clean that Thumb Repeat
Nails	Scrub, Scrub, Scrub, Scrub those nails Repeat three times
Wrists	To the wrists, lather, lather, lather-up those wrists Repeat

# Recovery Puzzle

## Lesson 6

Sort through and discard items that can make people sick.

**For items A-N, pick the reason 1, 2 or 3.**

- |   |   |   |   |
|---|---|---|---|
| 1 | Discard food too long in temperature danger zone  | A | Cardboard boxes even if contents seems dry                                    |
|   |   | B | Damaged carpeting   |
| 2 | Discard food damaged by or exposed to heat, smoke, flooding, sewage, fumes or chemicals | C | Hot-held food below 135 °F for 4 hours and 5 minutes                          |
|   |   | D | Food packaged in paper, plastic, cloth or fiber                               |
|   |   | E | Dry foods, like flour and sugar   |
| 3 | Discard anything that cannot be fully washed and disinfected                            | F | Toaster   |
|   |   | G | Food affected by smoke, fire, fire suppression chemicals or pressurized water |
|   |   | H | Food products with lids or pull-tab tops (e.g., ketchup, milk, beverages)     |
|   |   | I | Cold food above 41°F for 4 hours  |
|   |   | J | Foods in glass jars   |
|   |   | K | Canned foods that are dented, leaking, swollen or rusted                      |
|   |   | L | Damaged fabric on seating   |
|   |   | M | Partly cooked food without power for more than an hour                        |
|   |   | N | Food not sealed off from a chemical release                                   |

# Situation Description One For Exercise

## Lesson 7

### Situation 1

The power fails at 11:45 am.

Restaurant opened at 11:00 am.

Ten customers are in the restaurant.

Expect a noon rush of 80 customers.

Lunch service includes a buffet with both hot and cold held food.

Some lights are on, some lights are off.

The building next door has power.

### Address the following:

- 1 What tools do you need to deal with the situation?
- 2 What procedures should be followed?
- 3 What records need to be referred to or kept?
- 4 How should these foods be handled?:
  - A Cold foods, refrigerated and being held cold
  - B Hot foods being hot held
  - C Partially prepared foods
  - D Frozen foods
- 5 Which foods can be kept? Which should be discarded?
- 6 Customer and worker safety

# Situation Description Two For Exercise

## Lesson 7

### Situation 2

Thunderstorm knocks out power at dinner rush.

Power is off in the whole neighborhood.

Restaurant is full of customers.

No phone service.

Meals are being prepared in the kitchen.

Power comes back on within 2 hours.

### Address the following:

- 1 What tools do you need to deal with the situation?
- 2 What procedures should be followed?
- 3 What records need to be referred to or kept?
- 4 How should these foods be handled?:
  - A Cold foods, refrigerated and being held cold
  - B Hot foods being hot held
  - C Partially prepared foods
  - D Frozen foods
- 5 Which foods can be kept? Which should be discarded?
- 6 Customer and worker safety

# Situation Description Three For Exercise

## Lesson 7

### Situation 3

Opening cook finds no power.

Cook starts at 9:00 am.

Kitchen clock reads 3:00 am.

Temperature of chicken salad prepared yesterday is at 60° F.

Milk in dispenser is at 50° F.

Ice cream in freezer is soft.

Restaurant opens at 11:00 am.

### Address the following:

- 1 What tools do you need to deal with the situation?
- 2 What procedures should be followed?
- 3 What records need to be referred to or kept?
- 4 How should these foods be handled?:
  - A Cold foods, refrigerated and being held cold
  - B Hot foods being hot held
  - C Partially prepared foods
  - D Frozen foods
- 5 Which foods can be kept? Which should be discarded?
- 6 Customer and worker safety

# Food Temperature Log

**Required temperatures:**

- Hot: 135° F or above
- Cold: 41° F or below
- Reheat to: 165° F or above

[illegible]



# **Appendix C**

## **Resources**

# Resources

## Advanced Practice Centers (APCs)

National Association for County & City Health Officials (NACCHO) Advanced Practice Centers (APCs) web sites <http://www.naccho.org/EQUIPh/>; [http://www.naccho.org/pubs/pub\\_list.cfm](http://www.naccho.org/pubs/pub_list.cfm)

Montgomery County, Maryland Emergency Preparedness Checklist for Nursing Homes <http://www.naccho.org/EQUIPh/detail.cfm?id=135>

Twin Cities Metro Advanced Practice Center (APC) resources for food industry:

- **Emergency Handbook for Food Managers**, released 9/05; available at <http://www.naccho.org/topics/environmental/foodsafety/EmergencyHandbookFSManagersFoodSafety.cfm>
- **Food Security Self Inspection Checklist** and related tools available in 10 languages at <http://www.naccho.org/equiph/detail.cfm?id=282>
- **In An Emergency Info Sheets: Discard or Salvage; Equipment & Supplies List For Food Service** (10 languages) available at <http://www.naccho.org/equiph/detail.cfm?id=283>

## Federal Government

USDA Food Security & Emergency Preparedness web site [http://www.fsis.usda.gov/Food\\_Security\\_&Emergency\\_Preparedness/index.asp](http://www.fsis.usda.gov/Food_Security_&Emergency_Preparedness/index.asp)

USDA Food Safety & Inspection Service web site <http://www.fsis.usda.gov/Home/index.asp>

Federal government food safety information web site <http://www.foodsafety.gov/~fsg/fsgnews.html>

FDA Center for Food Safety & Nutrition web site <http://vm.cfsan.fda.gov/list.html>

FDA Food Defense & Terrorism web site <http://www.cfsan.fda.gov/~dms/fsterr.html>

CDC Emergency Preparedness & Response web site <http://www.bt.cdc.gov>

FEMA *Are You Ready? An In-depth Guide to Citizen Preparedness* (IS-22) is FEMA's most comprehensive source on individual, family, and community preparedness, at web site <http://www.fema.gov/areyouready/>

US Department of Homeland Security Ready Business web site <http://www.ready.gov/business/index.html>

## State Government

Massachusetts Department of Health Food Security web site at [http://www.mass.gov?pageID=eohhs2terminal&L=4&L0=Home&L1=Provider&L2=Guidance+for+Businesses&L3=Food+Safety&sid=Eeohhs2&b=terminalcontent&f=dph\\_environmental\\_foodsafety\\_p\\_food\\_security&csid=Eeohhs2](http://www.mass.gov?pageID=eohhs2terminal&L=4&L0=Home&L1=Provider&L2=Guidance+for+Businesses&L3=Food+Safety&sid=Eeohhs2&b=terminalcontent&f=dph_environmental_foodsafety_p_food_security&csid=Eeohhs2)

Michigan Department of Agriculture, *Flip Chart of Emergency Procedures: Retail Food Establishments*, Michigan Retail Food Security Working Group of Michigan Grocers Association, Michigan Department of Agriculture, Michigan Association of Local Public Health Administrators, et al. web site at [http://www.michigan.gov/documents/MDA\\_FSPR\\_EmergencyFlipChart\\_Jan06\\_148793\\_7.pdf](http://www.michigan.gov/documents/MDA_FSPR_EmergencyFlipChart_Jan06_148793_7.pdf)

Minnesota Department of Health (MDH) Terrorism & Natural Disasters web site <http://www.health.state.mn.us/terrorism.html>

Minnesota Department of Health (MDH) Safety Center web site <http://www.health.state.mn.us/foodsafety/>

Minnesota Department of Health (MDH) Family and Personal Emergency Preparedness web site, includes an Emergency Kit Checklist, medical information and more, at <http://www.health.state.mn.us/emergency/index.html>

## Organizations & Academic Centers

American Red Cross web site <http://www.redcross.org/>

Centers for Public Health Preparedness Resource Center web site <http://www.asph.org/acphp/phprc.cfm>

University of Minnesota Center for Public Health Preparedness web site <http://www.sph.umn.edu/umncphp/>

Yale New Haven Center for Emergency Preparedness & Disaster Response offers a tool, “Peace of Mind” that will assist with developing and maintaining your personal preparedness plan at web site [http://www.ynhhs.org/emergency/progsvcs/pdf/PEACE\\_Checklist\\_English.pdf](http://www.ynhhs.org/emergency/progsvcs/pdf/PEACE_Checklist_English.pdf)

# Power Outage

## 1. Stop serving food and beverages.

- ◆ Notify customers.



## 2. Do two things immediately:

1. Write down the time power went off.
2. Check food temperatures with a thermometer and write them down.



## 3. Keep good temperature records while the power is out.

- ◆ Check hot food hourly and cold food every 2 hours for each unit.
- ◆ Write down times & temperatures.

DATE	TIME	EMPLOYEE	FOOD ITEM	TEMP	CORRECTIVE ACTION
1/4	4:30	EJ	QUICK	50°	
1/4	4:30	EJ	BEER BOK	58°	
1/4	4:30	EJ	MADE FRENCH	161°	
1/4	4:30	EJ	POT SA	40°	
1/4	4:30	EJ	GRACE BEAN POU	41°	
1/4	4:30	EJ	CASH ALICE	38°	
1/4	4:30	EJ	30°	38°	
1/4	4:30	EJ	CHILI	170°	
1/4	4:30	EJ	SHRED	170°	
1/4	4:30	EJ	BLACK BEAN SAKE	160°	Reheat to 165°
1/4	4:30	EJ	Red Hot Gully	157°	
1/4	4:30	EJ	MASHED	150°	
1/4	4:30	EJ	SAUSAGE	370°	
1/4	4:30	EJ	CARD	35°	
1/4	4:30	EJ	SETA	170°	
1/4	4:30	EJ	Red Beans	170°	
1/4	4:30	EJ	JUAN SA	35°	
1/4	4:30	EJ	GRAND	35°	
1/4	4:30	EJ	GIENF BOU SAKE	175°	
1/4	4:30	EJ	GREEN BEAN SAKE	35°	
1/4	4:30	EJ	TUNA BURGERS	58°	
1/4	4:30	EJ	MEAS	29°	
1/4	4:30	EJ	SHAKE	35°	
1/4	4:30	EJ	ELL TOST	220°	
1/4	4:30	EJ	BASIL ALICE	220°	
1/4	4:30	EJ	TURKEY G-QUE	161°	
1/4	4:30	EJ	ALICE	50°	
1/4	4:30	EJ	WAT SAKE	50°	

## 4. Do not serve partially cooked food.

- ◆ If power returns within 1 hour, rapidly reheat food to 165 F.
- ◆ If power is off more than 1 hour, discard food.



# Power Outage



## 5. Food being held cold:

- ◆ Discard all cold food that has been above 41 F for more than 4 hours.



## 6. Food being held hot:

- ◆ Discard all hot food that has been below 135 F for more than 4 hours.



## 7. Refrigerator tips:

- ◆ Keep refrigerator doors closed.
- ◆ Cover open units with a tarp.
- ◆ Don't add hot food to units.



## 8. Recovery when the power returns:

- ◆ Review temperature records.
- ◆ Discard food as required.
- ◆ Reset all breakers, equipment, etc.

# Flood or Sewage Back-Up

## 1. Stop serving food and beverages.

- ◆ Notify customers.



## 2a. If a sewage back-up occurs, then sewage lines are blocked.

- ◆ Don't track sewage around facility.
- ◆ Call plumber to clear sewage drain lines.



## 2b. If a flood occurs, do damage assessment first.

- ◆ Is building safe to occupy?
- ◆ Ask manager if building is safe.



## 3. Clean the building - safely!

- ◆ Wear rubber boots, gloves, goggles and coveralls.
- ◆ Wear an N-95 filter mask for mold protection.





# Flood or Sewage Back-Up



## 4 Clean the building - floors and walls.

- ♦ Remove sewage, solids, water.
- ♦ Scrub with brush, soap.
- ♦ Rinse and then sanitize floors, walls.
- ♦ Dry quickly with fans.



## 5 Clean all food equipment.

- ♦ Clean all hard equipment surfaces with soap and water.
- ♦ Rinse and sanitize before use.
- ♦ Mixers, ice machines, etc.



## 6 Discard damaged building items.

- ♦ Discard all porous, contaminated items that cannot be cleaned.



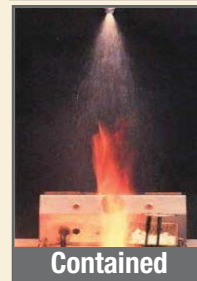
## 7 Salvage food and reopen for business.

- ♦ Discard any food contaminated by sewage or floodwaters.
- ♦ Discard all porous food packages that cannot be cleaned (bags of flour, salt, bottles or cans with screw tops, corks or EZ-open tops).
- ♦ Call your health department to review cleaning and salvage.

# Fire

1. Call for help.
2. Assess the severity of the situation.
3. Follow fire department instructions.
4. Afterward, discard unsafe food.
5. Repair or replace damaged equipment.
6. Get food safety inspection before reopening.

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# Water Service Disruption or Contamination

**1. Call the health department and the water utility.**



**2. Stop serving food and beverages.**



**3. Are we ready to reopen?**

- ♦ Do we have safe water?
- ♦ Call local health department.



**4. Recovery and clean up:**

- ♦ Follow instructions from local health department regarding contaminated water.
- ♦ Clean and sanitize as needed.



# Biological Tampering and Terrorism

## 1. Be on the lookout for suspicious activities and unusual items.

- ♦ Many ill customers & employees
- ♦ Foods that do not seem right
- ♦ Suspicious powders or liquids
- ♦ Unauthorized persons



## 2. Restrict access of non-employees.

- ♦ Verify ID of visitors.
- ♦ Have delivery persons check in.
- ♦ Check with manager if unsure.



## 3. Report suspicious activities to the person in charge.



## 4. Manager or person in charge may need to call 911.



# Biological Tampering and Terrorism



## 5. Close establishment if there is a biological contamination incident.

- ♦ Alert customers.
- ♦ Stop serving food.



## 6. Salvaging food & cleaning the establishment: **W A R N I N G!**

- ♦ DO NOT try to salvage food or clean up until you have expert advice from the health department.
- ♦ How to clean things will vary with the type of biological contaminant.



## 7. Clean up - safely!

- ♦ It is dangerous to clean without the proper safety equipment.
- ♦ Talk with the health department about what is required.



## 8. Be safe! Talk with your manager before you act.

- ♦ A biological incident is not a normal situation.

# Dirty Bomb

## 1. If the establishment IS in the immediate area of the blast:

- ◆ See manager for directions.
- ◆ Leave the immediate area on foot.
- ◆ Cover your mouth/nose with a wet cloth to prevent breathing in dust.



## 2. If the establishment IS NOT in the immediate area of the blast, stay in the building:

- ◆ See manager for directions.
- ◆ Call 911 to report an explosion.



## 3. Turn on local television, radio and computers for emergency information.

- ◆ Is your location safe?
- ◆ If not, where do I go?
- ◆ Decontamination sites?



## 4. The biggest danger from a dirty bomb is the blast itself.

- ◆ Stay inside.
- ◆ Buildings will provide some shielding from radiation.
- ◆ Minimize time spent exposed to the radiation.





# Dirty Bomb



## 5. Stop operations if there is a dirty bomb attack.

- ♦ Alert customers.
- ♦ Stop serving food.

## 6. Salvaging food & cleaning the establishment: **W A R N I N G!**

- ♦ **DO NOT** try to salvage food or clean up until you have expert advice from the health department.
- ♦ How to clean things will vary with the type of dirty bomb.

## 7. Cleaning up-safely!

- ♦ It is dangerous to clean without the proper safety equipment.
- ♦ Consult with the health department on what is required.

## 8. Be safe! Talk with your manager before you act.

- ♦ A dirty bomb incident is not a normal situation.
- ♦ Discuss everything with your manager **BEFORE** you act!

# Chemical Incident

## 1. Call 911



## 2. Cover mouth and nose with a wet cloth to prevent exposure.



## 3. Discontinue food and beverage service to the general public.



## 4. Seek expert advice about clean-up.

- ♦ Call local health department.



## 5. Employee safety training:

- ♦ Proper use of chemicals stored on-site.



# Solid Waste Collection Disruption and Pest Control

1. Separate food waste from empty boxes and cans.
2. Separate hazardous materials for appropriate disposal.
3. Place food waste in plastic bags and tie securely.
4. Place tied bags into containers with tight-fitting lids.
5. Food waste outside of trash containers attracts pests!
6. Put used cooking oil from fryers in sealed buckets or a grease container.
  - ♦ Do not mix with food waste.

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# Solid Waste Collection Disruption and Pest Control



**7. Eliminate nesting spaces  
outside - remove brush, debris, etc.**



**8. Eliminate nesting spaces  
inside - store food and equipment  
neatly, off the floor.**



**9. Use traps to detect and monitor  
pest activity.**



**10. Inspect incoming shipments.**



**11. Keep waste containers closed and  
the ground around them clean.**



**12. Eliminate standing water.**



# Maintaining Food Safety in a Disaster

1. Practice food safety basics in a disaster.
2. Clean and sanitize food preparation areas before use.
3. Hand washing is one of the most important ways to keep food safe.
4. Home-prepared foods cannot be used, even in a disaster.
5. Monitor cold foods to keep them at or below 41 F.
6. Monitor hot foods to keep them at or above 135 F.

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# Maintaining Food Safety in a Disaster

*Wash Hands Frequently!*

**1. Roll up sleeves and wet hands with warm water.**

**2. Use soap. Work up lather that covers hands and forearms.**

**3. Wash well for 20 seconds.**

**4. Rinse hands and forearms.**

**5. Dry hands using clean towel.**

**6. Use towel to turn off faucet.**

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# Discard or Salvage?

Discard	Salvage
<p><b>Any food or service item that has been contaminated or come in contact with water, sewage, smoke, fumes or chemicals.</b> This includes:</p> <ul style="list-style-type: none"> <li>♦ <b>Fresh perishables</b> - produce, meat, poultry, fish, dairy products and eggs.</li> <li>♦ <b>Opened containers and packages</b></li> <li>♦ <b>Vulnerable containers</b> with peel-off, waxed cardboard, cork or screw tops or paraffin seals such as glass or plastic containers of catsup, dressing, milk, horseradish, mayonnaise, pop, beer, sauces, etc.</li> <li>♦ <b>Soft, porous packaging</b> - food in cardboard boxes, paper, foil, plastic, and cellophane such as boxes or bags of food, cereal, flour, sugar, rice, salt, etc.</li> <li>♦ <b>Dry goods</b> - spices, seasoning and extracts, flour, sugar and other staples in canisters.</li> <li>♦ <b>Single service items</b> - plates, cups, utensils, lids, etc.</li> </ul>	<p><b>Frozen foods if stored in a sealed walk-in or cabinet freezer</b> (<i>no water, smoke, fumes or chemical infiltration</i>) <b>and where ambient temperature has remained below 41°F.</b></p>
<p><b>Canned and bottled items should be discarded:</b></p> <ul style="list-style-type: none"> <li>♦ If charred or near the heat of the fire.</li> <li>♦ If rusted, pitted, dented, swollen or leaking.</li> </ul>	<p><b>Disinfect undamaged cans and bottles</b> that have no heat or water damage and are free from dents, bulging, leaks or rust.</p> <ul style="list-style-type: none"> <li>♦ Paper label removed</li> <li>♦ Washed with soap and water, then rinsed</li> <li>♦ Sanitized with sanitizing solution, then air dried</li> <li>♦ Relabeled with permanent marker.</li> </ul>
<p><b>Refrigerated or frozen food</b> must be discarded if:</p> <ul style="list-style-type: none"> <li>♦ In contact with sewage, water, smoke, fumes or chemical seepage.</li> <li>♦ Above 41°F for four hours or more.</li> <li>♦ Frozen and then thawed for four or more hours.</li> <li>♦ Deteriorated in quality or has an unusual appearance, color or odor.</li> </ul>	<p><b>If fire, flood or sewage back-up has been effectively contained:</b></p> <ul style="list-style-type: none"> <li>♦ Food in areas unaffected by smoke, fumes, water, heat, fire suppression chemicals, floodwater or sewage back-up may be salvaged.</li> <li>♦ Seek the advice of your local health inspector.</li> </ul>
<p><b>Potentially Hazardous Food (PHF)</b> must be discarded if it has been in the "Temperature Danger Zone" (41°F - 135°F) for more than 4 hours. PHFs include:</p> <p><b>Meat and mixed dishes</b></p> <ul style="list-style-type: none"> <li>♦ Beef, veal, lamb, pork, poultry, fish, seafood, luncheon meats, hot dogs, hams, etc.</li> <li>♦ Soups, stews, casseroles or similar dishes containing meats, pasta, rice, eggs or cheeses</li> </ul> <p><b>Eggs and dairy products</b></p> <ul style="list-style-type: none"> <li>♦ Eggs or egg products, ice cream, yogurt</li> <li>♦ Milk, cream, buttermilk, cream-based foods or soups</li> <li>♦ Soft cheeses such as cream, ricotta, brie, etc.</li> </ul> <p><b>Desserts</b> - Pies, cakes and pastries containing custard, cheese, chiffon, meringue or pumpkin</p> <p><b>Cut Melons &amp; Cooked Vegetables</b> - Watermelon, musk or honeydew melons, cooked peas or corn or beans</p>	<p><b>Non-PHF</b>s may be kept at room temperature, though quality may deteriorate, including:</p> <ul style="list-style-type: none"> <li>♦ Bread, rolls, muffins, dry cakes</li> <li>♦ Solid butter or margarine</li> <li>♦ Hard cheese - cheddar, parmesan, etc.</li> <li>♦ Fresh, uncut fruits &amp; vegetables</li> <li>♦ Fruit or vegetable juices, dried fruit, fruit pies</li> <li>♦ Canned goods</li> <li>♦ Dry foods - flour, pasta, rice, etc.</li> <li>♦ High sugar foods - honey, jellies</li> <li>♦ Acid-based condiments - ketchup, mustard</li> </ul>
<p><b>Partially cooked food</b> must be discarded if without power for more than one hour.</p>	<p><b>Partially cooked food</b> may be quickly reheated to 165°F if without power for less than one hour. When in doubt, throw it out.</p>

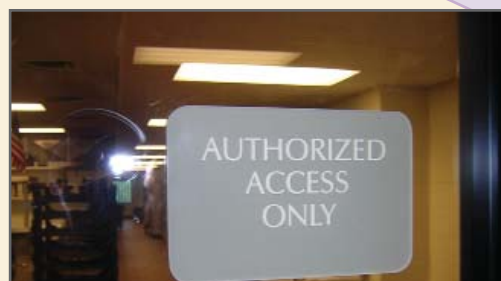
## Other than food: Discard

Discard any exposed materials that cannot be effectively cleaned and sanitized, including toasters and other food equipment, linens, furnishings, carpets, etc.

# Food Security

1. Restrict customer and supplier access from non-public spaces.
  - ♦ Many people becoming ill
  - ♦ Suspicious powders or liquids
  - ♦ Unauthorized persons
2. Be on the lookout for suspicious and out-of-the-ordinary activities.
3. Keep food safe at buffet tables and on food carts.
4. Inspect deliveries from suppliers.
  - ♦ Suspicious powders or liquids
  - ♦ Unauthorized delivery or unfamiliar supplier
5. Report suspicious activity or delivery to person in charge.
6. Keep loading dock and food storage areas locked.

*Emergency Readiness for Food Workers*





# Food Security

## 7. Illnesses should be tracked on an employee illness log.

### Employee illness log

**Food code requirements for employee health:**

1. Food employees who are ill with vomiting or diarrhea should be excluded from working in the establishment.
2. Complete this log when employees have vomiting or diarrhea.
3. Restrict food employees who are ill with *Salmonella*, *Shigella*, *E. coli* or Hepatitis A from working with food. Clean equipment, utensils, linens, or single-use items until the Public Health Department has evaluated the potential for food-borne disease transmission.
4. Call your local health department if an employee is diagnosed with:
  - ♦ *Salmonella*
  - ♦ *Shigella*
  - ♦ *E. coli*
  - ♦ Hepatitis A
5. Call your local health department if a customer complains of diarrhea or vomiting; or being infected with *Salmonella*, *Shigella*, *E. coli*, or Hepatitis A.

Date missed work	Employee name	Symptoms/ illness	Diarrhea or vomiting?	Was doctor seen?	Date return to work

