LEADER'S GUIDE

1381-LDG-E

HEAT STRESS

Training for the
OSHA HAZARDOUS WASTE OPERATIONS
and EMERGENCY RESPONSE (HAZWOPER) REGULATION

Quality Safety and Health Products, for Today... and Tomorrow
THE “HAZWOPER” VIDEO SERIES

This program is part of a comprehensive series of programs on working safely with hazardous materials and hazardous waste, as well as how to deal with emergencies involving hazardous substances. These programs have also been designed to meet employee training requirements of OSHA’s Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations. The series includes programs on the following topics:

- Accidental Release Measures and Spill Cleanup
- The ANSI Material Safety Data Sheet
- Confined Space Entry
- Dealing with the Media in Emergency Situations
- Decontamination Procedures
- Electrical Safety in HAZMAT Environments
- Emergency Response Plan
- Exposure Monitoring and Medical Surveillance
- Fire Prevention
- Handling Hazardous Materials
- HAZMAT Labeling
- Heat Stress
- Introduction to HAZWOPER Retaining
- Medical Surveillance Programs
- Monitoring Procedures and Equipment
- Personal Protective Equipment and Decontamination Procedures
- Personal Protective Equipment
- Respiratory Protection
- Safety Orientation
- The Site Safety and Health Plan
- Understanding HAZWOPER
- Understanding Chemical Hazards
- Work Practices and Engineering Controls
WARRANTY/DISCLAIMER

"This program has been created to assist companies that are endeavoring to educate their employees regarding good safety practices. The information contained in this program is the information available to the producers of the program at the time of its production. All information in this program should be reviewed for accuracy and appropriateness by companies using the program to assure that it conforms to their situation and regulations governing their operations. There is no warranty, expressed or implied, that the information in this program is accurate or appropriate for any particular company's environment. In order to comply with OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation, employees may need to be provided with site-specific information as well as hands-on training in addition to the material presented in this program."

Copyright 2001 The MARCOM Group, Ltd.
TABLE OF CONTENTS

1 INTRODUCTION TO THE PROGRAM
   - Structure and organization
     - Background
     - Objectives
     - Reviewing the program

2 PREPARING FOR THE PRESENTATION
   - Structuring the presentation
   - Setting up the class and classroom

3 CONDUCTING THE SESSION
   - The initial steps
   - Showing the program
   - Presenting the supplemental information
   - Conducting the discussion
   - Concluding the presentation
   - Wrapping up the paperwork

4 OUTLINE OF MAJOR POINTS IN THE PROGRAM

5 ACCOMPANYING MATERIALS
   - Scheduling and Attendance Form
   - Quiz
   - Training Certificate
   - Employee Training Log
INTRODUCTION TO THE PROGRAM

Structure and Organization

Information in this program is presented in a definite order so that employees will see the relationships between the various groups of information and can retain them more easily. The sections included in the program are:

- How the body reacts to heat.
- The use of fluids and minerals.
- Preventing heat-related illnesses.
- Heat rash, heat cramps and heat exhaustion.
- Recognizing symptoms.
- First aid.
- Acclimatization.

These sections include examples and other references that will help employees to relate the information to their work environments.

Background

Hazardous materials and waste are a part of many work situations, and can be found in many types of facilities and job sites. It is very important for employees to know how to recognize these potentially dangerous substances, and how to handle and dispose of them properly.
In 1976, The U.S. Environmental Protection Agency (EPA) issued the Resource Conservation and Recovery Act (RCRA) to regulate the handling of hazardous waste from cradle to grave. Since then, other regulations have followed including the Occupational Safety and Health Administration's (OSHA) Interim Final Rule for Hazardous Waste Operations and Emergency Response ("HAZWOPER"") which in 1986 gave OSHA the task of protecting HAZMAT workers.

As part of these HAZWOPER regulations, there are varying requirements for employee training, depending on the employee's specific level of involvement with hazardous materials. This program will help employees to understand how protecting against heat stress is critical to working safely around hazardous materials.

**Objectives**

This training program is designed to present information on the nature of hazardous materials and help employees reduce or eliminate potential exposure to heat stress in their work environments. Upon completion of the program, employees should:

- Know how the body reacts to heat.
- Understand the difference between heat stress, heat exhaustion and heat stroke.
- Be able to recognize the symptoms of heat-related illnesses.
- Know what steps can be taken to prevent heat stress.
- Understand what types of basic first aid can be helpful when dealing with fellow employees who experience heat-related illnesses.
Reviewing the Program

As with any educational program, the presenter should go through the entire program at least once to become familiar with the content and make sure the program is consistent with company policy and directives.

As part of this review process, you should determine how you will conduct your session. The use of materials, such as handouts, charts, etc., that may be available to you needs to be well thought out and integrated into the overall program presentation.
PREPARING FOR THE PRESENTATION

Structuring the Presentation

In conducting this education session, you should proceed with a friendly and helpful attitude. Remember that the trainees are looking to your experience and knowledge to help them relate to the situations shown in the program. It is important to let the trainees interact with you and each other during the training session. Stimulating conversation within the group is one of the best things you, as the presenter of the program, can do to help everyone get as much as possible from the session. Be alert for comments that could help in this area in future sessions and make note of them.

As the presenter, you also should:

- Keep the session related to the topic of heat stress.
- Relate discussions to your company's/site operations, procedures and responsibilities.
- Prevent any one person or small group of employees in the session from doing all the talking.
- Get everyone involved. Ask questions of those who don't participate.
- Clarify comments by relating them to the key points in the program.

Use the Outline of Major Program Points in this guide, as well as the information included in the quiz, as the basis for answering any questions. If you don't know the answer, say so. Tragic results may occur should you provide incorrect or inaccurate information. Remember, this is a positive program on heat stress. Make sure your attitude and words reflect this, and that the emphasis is always on providing the information needed by the attendees to work safely with hazardous materials and waste.
Setting Up the Class and Classroom

Remember, there are a number of things that must be done to set up the class as well as the classroom. These fall into several groups of activities, and include:

- **Scheduling and Notification**
  - Use the enclosed form to schedule employees into the session.
  - Make sure that the session is scheduled so that it fits into your attendees' work day.
  - Send out notification of the session well in advance, to give people enough time to incorporate it into their schedule for that day.
  - If possible, post a notification on bulletin boards in the affected employees' areas.

- **The Classroom**
  - Schedule the room well in advance.
  - Make sure the room can accommodate the expected number of attendees.
  - Check it again on the day of the program to make sure there is no conflict.
  - Make sure the room can be darkened, and won't create a glare on the television screen.
  - Locate the light controls and test them.
  - Make sure the power for the videotape or DVD player you are using operates separately from the room light.
  - See if you can control the room temperature.
  - Know where the closest restrooms are located.
  - Assure that the room is free from distracting noises.
  - Make sure emergency exits are marked and known to the attendees.

- **Seating**
  - Make sure everyone can see the screen from their seat.
  - Make sure everyone can hear both the videotape/DVD and you (when you speak).
- Check to see that seating is such that writing can be done easily.
- Make sure the seating arrangement allows eye contact between attendees, and between you and attendees.

- **Equipment and Materials**
  - Make sure the videotape or DVD player, monitor, and all appropriate cables and extension cords are available.
  - Make sure a stand or table is available and is of appropriate height for all attendees to easily see the monitor.
  - If you plan on using a chartpad, blackboard, or other writing board, make sure it is available, easy to see, and you have the proper writing instruments.
  - Make sure you have 6” x 8” index cards or other materials to be used as name tents for attendees.
  - Make sure you have made up a sufficient number of copies of the quiz, as well as any other handouts you are using.

- **Final Check**
  - Make sure equipment is in the room prior to the scheduled session.
  - Check to see that the room is set up properly.
  - Check equipment prior to the presentation to assure that it works.
  - Make sure extension cords, etc. are taped down, if needed, to avoid tripping.
  - If you are using the videotape versions of the program, run the leader up to the point where the program begins.
CONDUCTING THE SESSION

The Initial Steps

In conducting the session remember the positive nature of this presentation. Everyone is attending in order to learn more about how to do things safely. Initially, you need to:

- Introduce yourself as the session leader.

- State the title of the program, Heat Stress and the purpose of the session (to learn more about how to work safely with hazardous materials and waste).

- Inform the attendees when there will be breaks (if you plan them) the location of exits and restrooms and if water, coffee, or other refreshments will be available.

- Make sure all of the attendees have signed in on your Scheduling and Attendance Form. Remember, it is very important to document peoples' attendance at the session.

Once this housekeeping is done, it is time to move to the meat of the session. First, the attendees need to be informed about the objectives of the session (this is where you can use a flip chart or board to list the objectives, which should be done prior to the class starting). This listing should be preceded with some introductory remarks. Your own words are always best, but the remarks should follow along the lines of the following:

"Today we are going to talk about how we can work as safely as possible in an environment that can bring us into contact with hazardous materials."
"We have a pretty good safety program here. However, as we all know, from time to time accidents can still occur. Drums or other containers can be damaged and begin to leak, or we may even experience a chemical spill. Some of us may belong to our in-house Emergency Response Team. All of these situations have the potential to cause us to be exposed to hazardous substances."

"As you probably know, the government has created a set of regulations to make sure that whenever these types of situations take place employees are protected as much as possible from hazardous exposures."

"We realize that the first step in protecting ourselves is to be able to recognize where potential exposure can occur. We have tried whenever possible to limit these exposures through Engineering controls and safe work practices. We also know that it is important to use appropriate personal protective equipment in many of our tasks and that when we use PPE, we must guard against the danger of heat stress."

"Learning more about these topics is the focus of our session. To make this the most productive session possible we need to look at what we want to accomplish here today (verbally reference the 'Objectives' list provided in the preceding section, or indicate to the board or chart where they have been written down)."

Once the objectives have been provided, you are ready to show the program. However, you need to let the attendees know that they will be taking a quiz at the end of the session (if you are using it). It needs to be emphasized that they are not being graded, but that the quiz is being used to see if the session is effectively transmitting information to them in a way they will remember.

**Showing the Program**

At this point, you need to introduce the title of the program once again, Heat Stress, darken the lights if necessary, and begin the showing of the program.
If you are using the DVD version of the course you have several options as to how you can move through the program and what employees see.

The DVD menu has two selection bars:
- Play.
- Contact Us.

To just play the program from beginning to end, select Play.

If you would like information on other programs and products that are available from Training Network you can select Contact Us for information about how to contact us.

**Conducting the Discussion**

After the program has been shown, it is time for the group discussion on the information contained in the session. Care must be taken to make sure that the discussion is kept to the general topic of heat stress and working safely with hazardous materials. There are several ways to conduct these discussions. These include:

- Calling for questions from the attendees and using these questions as the basis for the discussion.

- Leading the discussion through the points covered in the program using statements such as:
  - "One of the sections that we saw in the program was about electrolytes. Why are these minerals so important to our bodies?"
  - "We saw some interesting things about heat stroke. Who can tell us some of the symptoms of this dangerous condition?"
You should use the discussion format that you are most comfortable with. The Outline of Major Program Points addressed in this guide, and the questions and answers in the master copy of the quiz, should be used as a basis for this discussion, as well as the supplemental information that you have presented in this session.

Remember, you have allocated a limited amount of time in which this discussion can take place. It is important to blend the attendees' questions and areas of obvious interest with the objective of trying to touch on each major area within the session in the discussion. By touching on each area, the attendees are much more likely to retain the information presented in the session.

**Concluding the Presentation**

Once discussion has concluded (whether naturally or you have had to bring the discussion to a close in order to complete the session within the time allowed), it is time to give the quiz (if you are using it). Again, remind the attendees that the quiz is only meant to help determine how effective the presentation of the information is, and that they will not be graded. Let them know that they have approximately five minutes to complete the quiz.

At the end of the five minute period, remind the attendees to date and sign their quizzes and then collect them. The attendees should be thanked for attending the session and reminded of any other sessions in the educational program that they may be attending. They can then be dismissed to return to their normal activities.

*(An alternative to this approach is to give the quiz immediately after showing the program, then use a review of the quiz as a basis for your group discussion).*
Wrapping Up the Paperwork

Before much time has passed, and the subject matter is fresh in your mind, several areas of paperwork must be completed. First, check to make sure that all attendees signed the scheduling and attendance form. Next, make sure that you have a quiz from every attendee, dated and signed.

Also, depending upon what you have decided to do, a copy of the attendance sheet, along with the quiz for each attendee should be either filed in your files, or turned over to the attendee's department manager or the personnel office so that this paperwork can be included in their personnel file. Their training logs should also be updated, and each attendee should be given a filled out and signed training certificate, signifying that they have successfully completed the course.

Remember, you have allocated a limited amount of time in which this discussion can take place. It is important to blend the attendees' questions and interests with the objective of trying to touch on each major area that is discussed within the program. By touching on each area, the attendees are much more likely to retain the information presented in the session.
OUTLINE OF MAJOR PROGRAM POINTS

The following outline summarizes the major points of information presented in the program. The outline can be used to review the program before conducting a classroom session, as well as in preparing to lead a class discussion about the program.

- When you are working with hazardous materials, personal protective equipment (PPE) can be a double-edged sword.
  - On the one hand, you couldn't even approach some of these materials safely without wearing PPE.

- Chemical-protective clothing (CPC), for instance, defends your skin against:
  - Rashes.
  - Burns.
  - The absorption of toxins.

- Respiratory gear, such as self-contained breathing apparatuses (SCBAs), guards your airway from gases and vapors.

- But with all of the protection that PPE provides, it can also cause problems. This is usually due to two factors:
  - The weight of PPE.
  - The fact that it can often block air from reaching your skin.

- An SCBA, for example, can weigh over 30 pounds and fully-encapsulating CPC adds 30 more pounds to the load.
  - Carrying all of that extra weight around will make anyone work up a sweat.

- This is bad enough under normal conditions, but when your skin is sealed off from the outside air, your sweat cannot evaporate and you won't be able to cool off.
  - Under these conditions, your body may overheat, which can cause serious problems… even threaten your life.
  - This is called heat stress.
- To help us guard against heat stress, we need to take a close look at:
  - How it occurs.
  - What its symptoms are.
  - How to beat it.

- We'll begin by examining how your body's cooling system works under normal conditions.
  - Most of the time, your body has no problem keeping itself at or near its standard temperature of 98.6 degrees Fahrenheit (37 degrees Celsius).

- It does this in two ways. The first involves your blood.
  - Whenever you start to get hot, your body circulates more blood to the outer layers of your skin, where it's easier for the blood to release heat.
  - This is why your skin sometimes feels flushed when you are in a hot place.
  - In essence, your blood works just like the radiator fluid in your car. It comes out of the engine hot, gets cooled, and then returns.

- If blood circulation can't handle the whole job, your body uses a second method to cool you down.
  - It is at this point that the sweat glands beneath your skin start to secrete water, through your pores.
  - After a while, the sweat evaporates, lowering your body temperature and making you feel more comfortable.

- But maintaining your temperature this way can also drain your body's resources.
  - In addition to the fluids that you lose when you sweat, you also lose valuable minerals that help your body to function properly.
  - If they become too depleted, you can develop rashes, nausea or a high fever.
  - You might pass out or even die.
- To understand the roles that fluids and minerals play in keeping you going, let's take a detailed look at how your body uses them.
  - When you sweat a lot, your body can lose up to one quart of fluid an hour.
  - Over an eight hour day, this adds up to two gallons.
  - If you don’t replace this fluid you could end up with a serious case of dehydration.

- So it's important to replenish what your body sweats away.
  - Most people drink between five and eight glasses of water a day.
  - In areas of high heat, however, this amount of water won't be nearly enough to protect you from dehydration.

- This is even more critical if you are at a site that requires the use of totally-encapsulating CPC because you'll get hot even more quickly than you would under normal conditions.
  - You won’t be able to drink anything while you’re doing a job that requires you to wear a respirator or chemical-protective clothing.
  - You can’t drink and wear a respirator at the same time.
  - Also, there is simply no place to carry a drink inside of your chemical-protective suit.

- In these situations, taking a short break every 15 to 20 minutes or so to drink approximately seven ounces of liquid will help you to prevent dehydration.
  - It will also let you rest and cool down a bit.

- In addition to the liquid you need to replace, it's also important to replenish the minerals that you sweat away during the day.
  - These include the electrolytes, such as potassium and phosphate, which your muscles use while they work.
  - When these minerals are depleted, even simple movements can become difficult and painful.
  - Your employer will provide you with beverages whenever you return from decontamination, to restore the fluids and minerals you've lost.
- We’ve discussed how your body keeps its temperature under control and learned how dehydration occurs. But what happens when your body’s defenses are no longer able to cool you off?
  - This can result in a condition called heat stress.
  - This takes many forms, ranging from the mildly painful to life-threatening.

- Let’s look at the different types of heat stress starting with the least dangerous.

- Heat rash, commonly known as prickly heat, is an inflammation of the sweat glands which can occur when they are overworked. Symptoms of heat rash include:
  - Redness of the skin.
  - Prickling or burning sensations.
  - Small blisters (also known as blebs).

- Although it can be painful, there is no long-term danger to heat rash.
  - In fact, heat rash serves as a warning sign that worse forms of heat stress might be on their way.
  - If you develop heat rash, you should stop what you are doing and seek medical help as soon as possible.

- If you ignore heat rash, and do nothing to treat it, you might develop heat cramps.
  - Heat cramps are painful spasms in your arms, legs and abdomen.
  - They usually occur when you sweat a lot, but don't replace the minerals that you lose.
  - Heat cramps affect your muscles, but usually don't strike until you've taken a break, or have stopped working for the day.

- To prevent heat cramps, drink electrolyte-replacing beverages throughout your work shift.
  - This will quench your thirst, and replace the minerals that you've lost.
- Whatever you do, don't ignore heat cramps.
  - They are a strong indicator that you are on your way to developing even more dangerous forms of heat stress.

- For instance, heat cramps often precede heat exhaustion, which can cause:
  - Extreme thirst.
  - Dehydration.
  - Fatigue.
  - Weakness.
  - Loss of coordination.
  - Hyperventilation.
  - Anger.
  - Anxiety.
  - Impaired judgment.

- As with heat cramps, you can prevent heat exhaustion by drinking electrolyte-replacing fluids throughout the work day.
  - If you do find yourself suffering from heat exhaustion, stop working and see a doctor immediately!
  - Then follow the doctor’s advice as to what activities you can perform at work and at home, and when you can return to your full duties.

- Anyone who disregards heat rash, heat cramps or heat exhaustion runs a high risk of developing a life-threatening type of heat stress: heat stroke.
  - This occurs when your body is no longer capable of cooling itself in any way.
  - If you experience heat stroke, your temperature could rise so high that brain damage or even death could result unless you receive immediate first aid.

- Symptoms of heat stroke include:
  - Dizziness.
  - Nausea.
  - Severe headache.
  - Hot, dry skin.
  - Abnormally small pupils.
- A body temperature of 106 degrees Fahrenheit (41 degrees Celsius) or above.

- Heat stroke is a nightmare no matter where it happens but workers who develop this condition inside of a contaminated area are in extra danger.
  - While victims of heat stroke need medical help as soon as possible, they must be decontaminated before they can be treated no matter how seriously ill they are.
  - No exceptions can be made to this rule.

- If this is not done, the victims can spread contamination to anyone who touches them including the doctors and nurses who treat them.
  - The medical personnel could then unknowingly contaminate other patients.
  - The end result might be hundreds of injuries or deaths, rather than just one.

- What should you do if one of your coworkers develops heat stress inside of a contaminated area?
  - First, radio for help at once.
  - Let your supervisor know that a man-down situation exists, and call for a stretcher.
  - While the stretcher is being delivered, your supervisor will contact local paramedics.

- Meanwhile, load the victim onto the stretcher, then get them to the contamination reduction corridor (CRC) as fast, and as safely, as you can.
  - Once there, the victim and everyone involved in the rescue will be quickly decontaminated.
  - Emergency decontamination procedures will vary from site to site, depending on what type of contaminants are present.
  - Be sure to consult your supervisor about the emergency decontamination procedures at your work site.
- When decontamination is over, the victim must be moved to an area away from sources of heat and direct sunlight.
  - Place cool, moist towels on their skin.
  - If possible, place them in a bath of cool, but not cold water.
  - This is to lower the affected person’s temperature gradually, but not shock them by going from one temperature extreme to another.

- When the ambulance arrives, give the emergency medical technicians a full report of what happened, and let them know what hazardous materials were present where the victim fell.
  - Your supervisor may also give the ambulance crew MSDSs for the substances that the victim was working around.

- First-aid for heat stroke is easier in uncontaminated areas, where there is no need to send the victim through a CRC. Otherwise, the same basic rules apply:
  - Call for medical help immediately.
  - Do what you can to cool the victim down while you wait.

- In most cases, heat stroke is preventable. As with other forms of heat stress, the key is to:
  - Drink electrolyte-replacing fluids.
  - Take breaks in cool areas to keep from overheating.

- In addition to proper fluid intake and taking periodic breaks, there are other procedures you can follow to decrease your chances of heat stress.
  - For example, going through an acclimatization process is very important.
- Acclimatization means getting used to wearing your PPE over a gradual period of time.
  - This will be a part of the hazardous materials training program that your work group participates in.
  - Without acclimatizing, you are more prone to become overheated when you wear your PPE and that can lead to heat stress.

- Workers who are not acclimatized also face an increased risk of fainting in warm or humid environments.
  - This can lead to a fall, which in turn can cause injuries and exposure to hazardous substances.

- So take a break as soon as you can if you become dizzy or lightheaded.
  - A rapid heart rate and moist skin can also indicate that you are about to pass out.
  - If you develop any of these symptoms, seek medical attention as soon as possible.

- Acclimatization deals with what you wear during hazardous materials operations. But sometimes what is inside of you is as important as what is on the outside.
  - For example, if you're taking medication, it's a good idea to ask your doctor whether any side-effects will occur if you work in high heat areas.
Eating wisely is also important.
  - Hot and heavy meals add heat to your body.
  - They also divert blood to your digestive system that would normally help to cool you off.
  - So, if there is any possibility of you overheating, eat light, cool meals during the workday.

Light and cool should also describe what you wear next to your skin.
  - If you know that you are going into a hot situation, you will want to wear loose, lightweight clothing beneath your chemical-protective suit.
  - Cotton is often the fabric of preference.
  - Shirts and pants made of cotton or cotton blends don’t trap excess heat as much as some artificial fibers do.
  - Cotton also absorbs sweat, which helps to keep you cool.

In some situations, you may want to wear an ice vest, as well.
  - This fits around your upper torso under your innermost chemical-protective suit, and contains a reusable coolant.
  - After a few hours in a freezer, an ice vest is ready for use.
  - It keeps most of your chest, back and upper abdomen cold, and as a result, you sweat less.
  - This, in turn, lowers your chances of heat stress.

There are only two potential drawbacks to using an ice vest.
  - A vest does add to the weight that you are already carrying.
  - A vest is only a short-term solution to heat problems because the ice in the vest eventually melts.
  - Still, for many hazardous materials operations that involve quick trips into contaminated areas, ice vests can be a useful way to beat the heat.
* * *SUMMARY* * *

- There are a number of ways you can help to prevent heat stress.
- Take the time to get properly acclimatized to your personal protective equipment.
- Be careful with medications.
  - Some drugs have side-effects if you use them when the temperature is high.
- Wear lightweight cotton clothing under your chemical-protective suit.
  - Cotton stays cool, and also absorbs sweat.
- Eat light, not hot or heavy meals before working in a high heat area.
- Drink lots of water and electrolyte-replacing liquids during your workday.
- Take appropriate breaks to allow your body to recover after you've exerted yourself in a hot environment.
- In the world outside of work, staying cool means everything from keeping calm to being in-the-know
  - At a HAZMAT site, however, staying cool can mean the difference between driving your car home at the end of the day and leaving for the hospital in an ambulance.
- That’s why avoiding heat stress is the coolest thing you can do at work and at home!
ACCOMPANYING MATERIALS

In order to assist you in complying with as many facets of your training requirements as possible, we have provided a number of specific materials that can be used with this program. Some of these materials have been furnished in master form. This will enable you to make as many copies of these forms as you need. If you have colored paper available to you, it is often useful to put each form on a different color. This enables you to easily differentiate between the materials. The materials enclosed with this guide include:

Scheduling and Attendance Form

This form is provided so you can easily schedule your attendees into each session of the program. It is important that you have each attendee sign-in on the appropriate form, thereby documenting their attendance at the session. Typically, a copy of this attendance/sign-in form is filed in the employee's personnel file.

Quiz

The quiz is normally given after viewing the program. However, if you want an indication of the increase in the attendees' knowledge about HAZWOPER, you can give the quiz both before and after the program is shown. You can also use the quiz as the basis for class discussion. If you have decided to give the quiz both before and after the attendees view the program, it is often interesting to have the attendees compare their before and after answers as part of the session. Typically, the quiz is filed in the employee’s personnel file.
Training Certificate

This form allows you to give each employee their own certificate of completion showing that they have attended the course and taken the quiz. Space is provided to insert the employee's name, the course instructor and the date of completion.

Employee Training Log

This log helps you to keep track of when each employee has taken this course, as well as associated courses or training. Space is provided to list pertinent data about the employee, as well as information such as the date the course was taken, and the instructor conducting the course. A copy of this form should be kept in each employee’s training or personnel file.
SCHEDULING AND ATTENDANCE FORM

HEAT STRESS

TRAINING SESSION SCHEDULE

<table>
<thead>
<tr>
<th>ATTENDEE</th>
<th>DATE</th>
<th>TIME</th>
<th>SIGNATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUIZ

HEAT STRESS

Name: ___________________________ Date: ______________________

1. What is the normal body temperature?
   ____ 96.8°F.
   ____ 98.6°F.
   ____ 99.8°F.
   ____ 106°F.

2. True or False... To maintain your body's internal balance you must replace both fluids and minerals?
   ____ True
   ____ False

3. The most serious heat-related illness is...?
   ____ Heat stress.
   ____ Heat stroke.
   ____ Heat exhaustion.

4. In hot environments how much water can the average person's body lose an hour through sweating?
   ____ One pint.
   ____ One quart.
   ____ One gallon.

5. True or False... If you are working in high heat, doctors suggest that you should stop for a drink once every hour?
   ____ True
   ____ False

6. True or False... If you have been exposed to contaminated materials, you must first be decontaminated before receiving medical care for a heat-related illness?
   ____ True
   ____ False

7. True or False... Extreme thirst is a symptom of heat stroke?
   ____ True
   ____ False
QUIZ

HEAT STRESS

PRESENTER'S COPY WITH ANSWERS

1. What is the normal body temperature?
   - 96.8°F.
   - **X** 98.6°F.
   - ____ 99.8°F.
   - ____ 106°F.

2. True or False... To maintain your body's internal balance you must replace both fluids and minerals?
   - **X** True
   - ____ False

3. The most serious heat-related illness is...?
   - ____ Heat stress.
   - **X** Heat stroke.
   - ____ Heat exhaustion.

4. In hot environments how much water can the average person's body lose an hour through sweating?
   - ____ One pint.
   - **X** One quart.
   - ____ One gallon.

5. True or False... If you are working in high heat, doctors suggest that you should stop for a drink once every hour?
   - ____ True
   - **X** False

6. True or False... If you have been exposed to contaminated materials, you must first be decontaminated before receiving medical care for a heat-related illness?
   - **X** True
   - ____ False

7. True or False... Extreme thirst is a symptom of heat stroke?
   - ____ True
   - **X** False
# EMPLOYEE TRAINING LOG

## HEAT STRESS

<table>
<thead>
<tr>
<th>DATE</th>
<th>TYPE OF TRAINING OR COURSE DESCRIPTION</th>
<th>LOCATION OF COURSE MATERIALS</th>
<th>INSTRUCTOR'S NAME AND ADDRESS/DEPARTMENT</th>
<th>CERTIFICATION OF TRAINING AND TESTING (Instructor's Signature)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TRAINING CERTIFICATE

This is to certify that __________________________ has completed
the course **Heat Stress** and has been tested on the contents of the course, as
required.  This training, as well as the associated testing was conducted by
_____________________________ and was completed on ___________.

_________________________  ____________
(course instructor)  (date)

_____________________________
(course instructor)  ____________
                  (date)