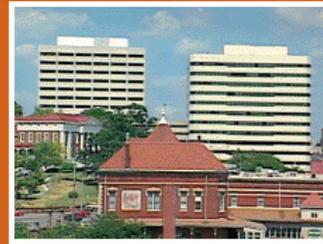
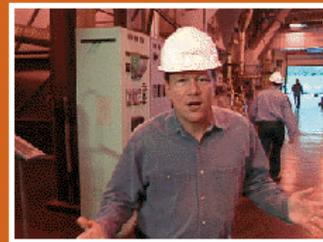


Business Shelter-In-Place



This video describes Shelter-In-Place (SIP) planning for businesses and commercial facilities. Planning for business SIP presents different issues than one will deal with in residential SIP. This video explains how sheltering can protect employees and visitors during a hazardous materials emergency and provides examples of ways to implement SIP in different commercial structures. It also discusses the major issues a business will face in developing a SIP plan, including scale of operations, determining how many people will be involved, security, protection of assets, and continuity of operations.



STUDENT GUIDE



FEMA

Business Shelter-In-Place (SIP) **Student Guide**

Prepared for

FEDERAL EMERGENCY MANAGEMENT AGENCY
Washington, DC

and

UNITED STATES ARMY
CHEMICAL MATERIALS AGENCY
Aberdeen Proving Ground, MD

by

Oak Ridge National Laboratory*
Oak Ridge, Tennessee

March 2004

*Managed by
UT-BATTELLE, LLC
for the
U.S. DEPARTMENT OF ENERGY
under Contract No. DE-AC05-00OR22725

INTRODUCTION

These STUDENT NOTES are intended to accompany the *Business Shelter-In-Place* video prepared for the Chemical Stockpile Emergency Preparedness Program (CSEPP). The CSEPP is a collaborative effort by the Army and Federal Emergency Management Agency (FEMA) and state and local officials to improve the emergency response capabilities of communities that surround the chemical stockpiles at the eight U.S. Army installations in the continental United States. Since CSEPP began in 1988, state and local officials have teamed with the Army and the FEMA to protect the public in the unlikely event of a chemical agent release. Although evacuation is the preferred action in the event of an accidental release of chemical warfare agent if time permits, officials may advise businesses and industries to shelter-in-place under some circumstances. This video is intended to describe the planning elements necessary in developing a plan for sheltering-in-place of occupants in a place of business during a short-term chemical emergency. Many businesses and commercial operations have contingency plans that include evacuation during emergencies. The information provided in this training can be coordinated with those plans to accommodate the unique features of shelter-in-place protective actions. It is important to remember that in the development of a SIP plan for business and commercial interests, it is impossible to anticipate the detailed local conditions that will exist when a chemical agent is released. Thus the information does not include a “ready-made” or “how-to” plan. Rather the objective is to recommend strategies that will permit a facility manager or operations officer to develop an emergency plan or guide that includes SIP as a potential protective action.

VOICE	SCREEN	NOTES
<p>Narrator: Every year hazardous emergencies take their toll in dollars and human lives. While some losses are unavoidable, adding shelter-in-place to emergency plans can help businesses cope with a fast-moving toxic cloud when there isn't time to evacuate.</p> <p>No one can predict the exact conditions - or who will be around – at the time of a hazardous chemical release. This training is to help facility managers, safety officers, and others who manage emergencies, understand how sheltering works, identify areas in buildings for sheltering occupants, and develop shelter-in-place plans for short-term chemical vapor releases.</p> <p>Narrator: Sheltering-in-place is a standard protective action that has been used throughout the United States for years. Fire Departments and emergency managers have used sheltering-in-place for toxic fumes from chemical plant fires to railroad tank spills. You might be asked to shelter-in-place because of an accident today.</p> <p>Your business may already have an all-hazards or business continuity plan that includes evacuation as a protective action. Adding a shelter-in-place strategy can increase your options for protection during emergencies.</p>		 <p>Narrator for video.</p>
<p>Narrator: To help you understand shelter-in-place as a protective action, we will describe:</p> <ul style="list-style-type: none">• why sheltering-in-place works,• when sheltering is appropriate,• how to integrate shelter-in-place with existing emergency or contingency plans,• how to select and prepare appropriate shelter spaces in your building,• how to identify the tasks associated with the shelter-in-place process, and• what to do when sheltering is terminated.		<p>Objectives</p> <ul style="list-style-type: none">• Why sheltering-in-place works• When sheltering in-place is appropriate• How to integrate shelter-in-place with existing plans• How to select spaces for sheltering• How to identify tasks• What to do when sheltering is terminated

VOICE	SCREEN	NOTES
<p>Narrator: The protection offered by sheltering against airborne clouds of hazardous substances can be substantial. For particulate clouds of long duration – such as outdoor air pollution, pollen, and soil particles, concentrations inside buildings are generally 10 to 50% of the outdoor air concentrations. For clouds of short duration - 15 minutes or less – the exposure may easily be as low as 5% of that outside.</p> <p>Once the cloud with hazardous materials has passed, the concentration that has built up inside the shelter decreases with time. However, occupants must exit or vent the shelter to prevent further exposure.</p> <p>Narrator: The concentration of contaminated air within a shelter relative to that outside depends on:</p> <ul style="list-style-type: none"> • the rate at which air is exchanged with the outdoors – called the “air exchange rate”, • the removal of the contaminant as it passes between the outdoors and the shelter, and • the deposition rate of the contaminant within the shelter. <p>The air exchange rate will vary depending on:</p> <ul style="list-style-type: none"> • the shelter’s volume, • the tightness of the doors and windows, • the existence of vertical routes such as chimneys, flues and elevator shafts, • whether heating, ventilation, and air-conditioning systems are operating, • the indoor–outdoor temperature differences - the greater the difference the higher the infiltration rate, • wind speed and the orientation of the building to those winds as higher windspeeds increase the infiltration rate, and • the sheltering of the structure by surrounding trees and buildings. 		<p>Photo of plume from a hazard release.</p>  <p>Concentration of contaminated air inside shelter</p> <ul style="list-style-type: none"> • Air exchange rate • Removal of Contaminant • Deposition rate

VOICE

SCREEN

NOTES

Narrator VO: The amount of contaminant filtered out as air enters the building is affected by:

- the tightness and fit of the doors and windows,
- the size of the contaminant (if a particulate), and
- the velocity and turbulence of the air-flow within the shelter, and
- the area and nature of the shelter’s interior surfaces.

A contaminant will remain in a building for the same reasons unless the structure is vented thoroughly.

Preparing to shelter-in-place is relatively easy. The key pieces to an effective shelter-in-place plan are preparation, teamwork, and practice.

Female Store Owner: Why would a business develop a plan to shelter-in-place?

Narrator: Because sheltering-in-place:

- is quickly implemented in a fast-paced event when evacuation would take much longer;
- It provides temporary protection from airborne chemical clouds which pass by in less than an hour;
- It’s preferred when weather conditions are unfavorable for evacuation;
- It’s less disruptive to business processes, and
- It’s often less costly than evacuation.

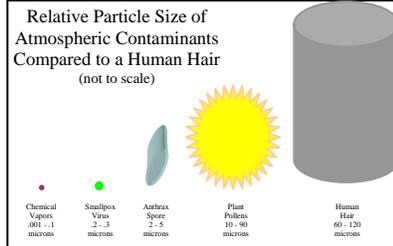


Photo of female business owner.



Shelter-In-Place

- Quickly implemented
- Protects from chemical clouds
- Preferable in bad weather
- Less disruptive
- Less costly than evacuation

VOICE	SCREEN	NOTES
<p>Narrator: However, if the chemical release will last several hours and everyone can leave the area before the hazardous cloud arrives, it's better to evacuate. If the cloud has a high concentration of vapors that are flammable, explosive, or that react dangerously with common substances like water, officials may order evacuation anyway.</p> <p>Female shop manager in hotel lobby: What about liability?</p>		 <p>Plume.</p>
<p>Narrator: Liability and insurance concerns should be discussed with your attorney or insurance representative during the initial planning stages. These issues are too complex and situation-specific to be resolved here.</p> <p>Female shop manager in hotel lobby: So we should be concerned about dangerous chemicals released in the air - I've thought about other hazards but not much about that one.</p>		
<p>Narrator: Not too many people consider the implications of airborne hazards until they experience such an event.</p> <p>But managing a business involves anticipating risks and identifying vulnerabilities to safeguard personnel, products, and operations and then seeking to reduce the impacts of hazards. And in today's world, hazards that once happened accidentally may now be intentionally created.</p>		
		<p>Photo of shop manager in hotel.</p>

Business Shelter- In-Place (SIP)

VOICE	SCREEN	NOTES
<p>Office manager #1: So what are the basic shelter-in-place procedures?</p> <p>Narrator: Basically shelter-in-place means:</p> <ul style="list-style-type: none">• stop what you're doing and go inside,• shut,• listen and• leave. <p>Once notified to shelter-in-place, occupants stop their activities, go inside if out-of-doors, and proceed to a pre-selected location inside a structure.</p> <p>Everyone should be told that the building will be closed in a certain timeframe – such as in three minutes – and that no one will be allowed in or out until authorities sound the all-clear signal.</p> <p>People then go the pre-selected shelter areas, shut doors and windows, and, if not done ahead of time, seal leaky areas with duct tape and plastic against infiltration.</p> <p>Then they listen to emergency broadcasts on radio or television to find out when it is safe to exit the shelter. And, finally, they leave when told to do so by authorities – usually going to a pre-selected site so that everyone can be accounted for.</p> <p>Office manager #1: Sounds simple enough – is that all?</p>		 <p>Photo of office manager.</p> <p>To Shelter-In-Place</p> <ul style="list-style-type: none">• Stop• Shut• Listen• Leave  <p>Emergency broadcast radio.</p>

VOICE	SCREEN	NOTES
<p>Narrator: Some contaminated air may have seeped into the building while the vapor cloud passed so the structure should be thoroughly vented. Venting the structure will replace the contaminated inside air with clean outside air.</p> <p>The only time it is not necessary to vent is when emergency officials determine the building was not actually exposed to the hazardous material – something that might happen if the wind blew the cloud away from the building or heavy rain washed the contaminants out of the air before it reached the building.</p> <p>Office manager #1: How do I go about developing a plan?</p> <p>Narrator: It’s important to designate one or more persons who can authorize shelter-in-place and shutdown. Those people will likely be the same ones who can authorize an evacuation.</p> <p>In developing a plan, it’s also helpful to include both upper management and employees, especially those familiar with engineering or safety. This is because shutting down - and restarting – heat and air conditioning units can be a very complicated procedure, and there may be some critical operations that require special considerations.</p>		<p>Managers around desk.</p>

Business Shelter- In-Place (SIP)

VOICE	SCREEN	NOTES
<p>Narrator: Let's walk through the steps. First you should select appropriate areas to use as shelter locations. Make sure the shelter provides at least 10 square feet of floor space per person to provide ample oxygen for a 5 hour period assuming a normal breathing rate while resting. Officials should not recommend that people shelter for more than 1 to 2 hours because this strategy is to protect against short-term releases.</p> <p>Rooms that are ground level or above with minimal connections to the outside of a building make the most effective shelters. The ideal room will not have windows or exterior doors or vents to the outside. If your business has an emergency power supply, such as a back-up generator, then some lighting in the shelter and at least one electrical outlet should be on the emergency power circuit. A telephone line in the shelter will allow a convenient alternate voice and computer capability.</p>	<p>Narrator: Next prepare an emergency kit for shelter use – and designate a person to retrieve it when needed. Most emergency kits contain similar stocks. At a minimum the shelter-in-place kit should include:</p> <ul style="list-style-type: none">• Portable battery operated radio or TV with extra batteries in case of power outage. A radio or TV that plugs into a wall socket is desirable if power exists.• Flashlight and extra batteries.• Portable telephones.• Blankets or large towels, one for each expected occupant.• Bottled water and snacks.• A first aid kit.• Plastic sheeting – pre-cut to cover windows, doors and ceiling vents.• Duct or sealing tape to secure plastic to walls, cover vents, and seal beneath doors and other areas of infiltration. The whole building doesn't need to be sealed - just the actual shelter space.	<p>Photo of shelter space in office building.</p> 
		<p>Suggested items for emergency kit for shelter use</p> <ul style="list-style-type: none">• Portable radio with extra batteries or TV• Flashlight and extra batteries• Portable telephones• Blankets or large towels• Bottled water and snacks• A first aid kit• Plastic sheeting• Duct or sealing tape

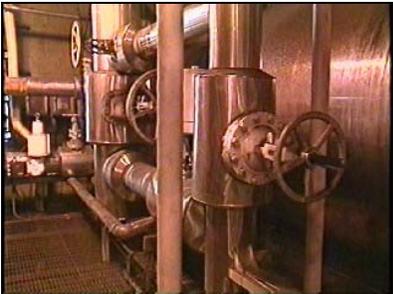
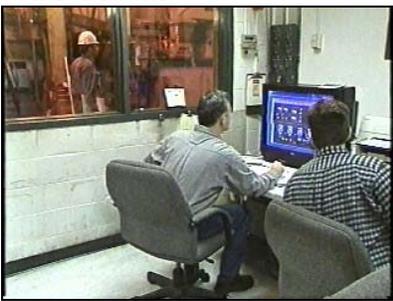
Business Shelter- In-Place (SIP)

VOICE	SCREEN	NOTES
<p>Other items might include office supplies. Remember that some people may want to bring their portable computers to the shelter so several wall outlets are desirable. Someone should be assigned to record who is in the shelter and to make sure everyone is out of the building when it's being vented. And they should plan to periodically check the kits to replace outdated supplies.</p> <p>Narrator: Then identify who will be responsible for each task. You will already have decided who can authorize shelter-in-place – the same person may be the one to issue the warning to take shelter. The usual choice is a manager, owner, or CEO - but it could be your safety officer or managers responsible for certain groups or areas of the facility.</p> <p>Narrator: If you have a 24/7 operation you will need to designate a person for each shift. The person should be very familiar with the notification elements of the emergency plan. This may include initiating telephone call-downs as well as specialized warnings to make sure everyone – including those with disabilities - is informed of the decision to shelter.</p> <p>Narrator: Then identify the people responsible for:</p> <ul style="list-style-type: none">• Locking doors, windows and other entrances to block outside air from entering the structure,• Shutting down external HVAC systems or for setting air to recirculate only,• Placing placards at business entrances to indicate the business is closed for the duration of the emergency,• Ensuring dangerous or critical operations are secured,• Sealing doors or other openings in the shelter space with duct tape and plastic as necessary,• Accounting for persons in the shelter space, and determining what to do if some employees, customers,		<p>Photo of folks in conference room sitting at conference table.</p>  <p>Photo of placard "Closed until further notice."</p> 

VOICE	SCREEN	NOTES
<p>or visitors remain unaccounted for,</p> <ul style="list-style-type: none">• Monitoring official announcements advising when to leave the building, and ensuring everyone sheltered evacuates to a pre-selected site,• Venting the structure, and• Determining when it is safe for employees to return to the building. <p>It also makes sense to select an off-site point of contact employees can call to learn when they can return to work or where they should go if the building cannot be reoccupied right away.</p> <p>Narrator: You should determine what to do after leaving the shelter and the approximate time needed to purge the structure of contaminated air. Some managers may want employees to go to a designated area to make sure everyone is safe and accounted for.</p> <p>Regularly train personnel and employees through periodic drills or exercises. And finally, evaluate your plan yearly, when management teams change, or when physical structures are modified. It's really not that difficult - often existing emergency plans can be altered to include shelter-in-place.</p>		<p>Photo of people congregating outside building.</p> 

VOICE	SCREEN	NOTES
<p>Golf Store Owner: Who will tell me to shelter people in my business? This all sounds like it will take time to accomplish. Will I receive notice in time to do all the things you've just described?</p> <p>Narrator: In most communities emergency officials will issue warnings to evacuate or shelter-in-place. Sometimes that warning comes directly through specialized warning systems such as indoor alert systems, tone-alert radios or telephone call-down systems. Or you may be told to take shelter by police or firefighters using public address systems.</p> <p>Usually the authorities who issue warnings will determine when it's safe to leave shelters. However, they may use other methods – such as broadcasting an all-clear message over the radio or local television station. That's why it's important to monitor local radio stations when you are in the shelter.</p> <p>Some hazardous facilities use sirens to notify nearby residents and businesses to shelter-in-place. Those same sirens may be used to signal an all-clear message when the danger is over.</p> <p>Golf Store Owner: I can see some problems with getting my employees to shelter-in place at work during an emergency. I mean they'll be worried about their families. And what about the customers? Can we force them to shelter-in place?</p> <p>Narrator: You're right - a shelter plan for a business or commercial facility involves both planning and cooperation from employees. You probably can't force people – employees or customers - to stay and shelter-in-place. You'd better have a very strong and persuasive warning message prepared to get them to comply. Make sure everyone knows that after the building is closed that no one will be allowed in or out until authorities sound the all-clear signal.</p>		<p>Photo of golf store owner.</p> 

VOICE	SCREEN	NOTES
<p>Manager of bank: Would sheltering-in-place protect against a “dirty” bomb?</p> <p>Narrator: You’re talking about a radiological dispersion device that contains some radioactive material that would be dispersed when a bomb explodes. The hazards associated with a dirty bomb explosion are radioactive aerosols and particles, radiation, and heat and debris from the blast.</p> <p>The three elements that protect against radiation from a nuclear explosion are:</p> <ul style="list-style-type: none">• time,• distance, and• shielding. <p>Sheltering-in-place provides some temporary shielding from radiation released from a dirty bomb, but it is not intended for long-term protection from a high altitude nuclear explosion that would spread radioactive material over a large area for an extended period of time. Sheltering as discussed here will reduce the hazards from inhalation of radioactive aerosols and particles produced by the explosion of a dirty bomb.</p>		<p>Photo of manager in bank.</p>  <p>Hazards from dirty bomb</p> <ul style="list-style-type: none">•Radioactive aerosols and particles•Radiation•Heat and debris

VOICE	SCREEN	NOTES
<p>Power Plant Operator: I can't just shut down operations on a moment's notice. It takes over a day to do that.</p> <p>Narrator: Shutting down all plant operations may not be possible or may require specially trained operators or engineers who are not always on-site.</p> <p>Businesses with critical operations that require continued oversight or management may need to consider other actions – such as providing those employees with personal protective equipment and training in its use.</p> <p>Power Plant Operator: Some operations or facility security could be compromised.</p> <p>Narrator: Security should be addressed in the planning stages. Most business continuity plans routinely address power outages and other losses that affect operations or security. Some business plans call for an alternative communications center or store copies of important documents at an off-site location to be used in event of fire or explosion.</p>		<p>Photo of power plant interior.</p>  <p>Photo of operator outside control room.</p> 

VOICE	SCREEN	NOTES
<p>Bank Manager: How can we be assured our assets will be protected?</p>		
<p>Narrator: Some businesses need to protect both people and their critical or high-value assets in an emergency. Those businesses should have a section in their security plan that addresses asset protection during an emergency in which they are advised to shelter or to evacuate.</p>		
<p>Home Improvement Store Manager: We've always promoted evacuation for emergencies.</p>		<p>Photo inside home improvement center.</p>
<p>Narrator: Many emergency plans call for evacuation without providing other options. If you decide to add a shelter-in-place strategy, changes should be discussed with all personnel so everyone understands why sheltering will be used for certain events. Employees should be encouraged to discuss the changes with their families and co-workers.</p>		
<p>Office Manager 2: I'm skeptical my boss will go along with shelter-in-place.</p>		<p>Photo of office manager at desk.</p>
<p>Narrator: Senior management may not view sheltering as appropriate and thus not support it. Bringing upper management in during the initial planning stages is critical. Giving managers actual examples of when customers were protected by sheltering might help convince them that no business is immune to sudden airborne hazards where evacuation just won't work well.</p>		

VOICE	SCREEN	NOTES
<p>Office Manager #3: So - can we do anything else ahead of time for sheltering-in-place?</p> <p>Narrator: You could enhance the protection your building offers by systematically reducing air infiltration into the structure. Caulking seams, sealing around pipes or adding air-lock entry systems will slow the penetration of air into the structure and likely increase energy efficiency.</p> <p>Some facilities have elevated HVAC systems above ground or moved them to a more protected location to keep them away from potential ground level emissions. You can install special carbon filters to clean in-coming air before it is dispersed into a building or recirculated.</p> <p>Others have installed single override switches for HVAC systems to be used only in emergency shut-downs. Such retrofitting measures may also reduce the facility's vulnerability to terrorist acts. If you do decide to retrofit your system, be sure to consult a qualified HVAC engineer.</p>	 	<p>Photo of air lock entry.</p> <p>HVAC System on Roof.</p>

VOICE	SCREEN	NOTES
<p>Office Manager #3: My daughter attends a school near an Army post where chemical agents are stored. The school library is over-pressurized – how does that work?</p>		<p>Photo of high school library with students.</p> 
<p>Narrator: A pressurized sheltering system draws in and filters extra air so that the air pressure inside a building is slightly higher than that outside. The pressure of this additional clean air blocks contaminated air from seeping in. Pressurized shelters provide a very high level of protection against specific chemicals.</p> <p>In schools with such systems students enter the designated over-pressurized space and remain there with the doors sealed until the all-clear signal is issued. Unless there is an air lock entry, these systems are compromised if people enter the shelter after it is sealed. Parents are told not to retrieve their children because they are amply protected in this way.</p>		<p>Photo of students entering library.</p> 
<p>Office Manager #3: So - you're saying I might need to get an outside vendor in to install specialized systems to shelter-in-place?</p>		

VOICE	SCREEN	NOTES
<p>Narrator: You should remember that most buildings provide some protection against outside airborne hazards. You may have some areas that have far less air infiltration than others – such as a secured storage room. You may be surprised by your building’s protection level if the windows are permanently sealed or corridors have fire doors that close with a tight seal. On the other hand, the space above dropped ceilings in commercial buildings is a notorious source of air leakage. The key is to inventory your building and proceed from there.</p> <p>Narrator: Airborne hazards produced <i>inside</i> a building can actually be more dangerous than an outside release. Not only can higher concentrations result from an inside release, but the hazard persists longer - especially if no venting occurs. When a toxic material is released inside a building, all occupants should evacuate as quickly as possible. Sheltering-in-place is appropriate only if the hazard can be confined to a specific portion of the building away from the shelter area.</p> <p>Office Manager 2: So if I prepare to shelter-in-place, how will I know when to implement it? Should I get a detector?</p>		 <p>Photo of sealed window sill.</p>
<p>Narrator: Reliable commercial detectors for chemical warfare or biological warfare agents are not practical for businesses. You will likely have to rely on emergency officials to advise you when to implement shelter-in-place. The Army and local communities involved in the Chemical Stockpile Emergency Preparedness Program – or CSEPP - have developed state-of-the-art systems to rapidly warn surrounding residents and businesses of a vapor release of chemical warfare agent. Many communities also have call down or reverse 911 warning systems to alert specific facilities of emergencies.</p>		<p>Photo of receptionist with tone alert radio.</p> 

VOICE	SCREEN	NOTES
<p>Manager: So – using shelter-in-place requires planning. Are there any special considerations?</p> <p>Narrator: Communications are important. Talk with employees about sheltering-in-place plans. Managers may not be aware of each employee’s special equipment or physical needs. Assign or recruit employees for specific tasks. Some managers assign responsibility for certain work groups or for areas where customers or vendors may be located to personnel normally working in those areas. In facilities operating 24 hours, seven days a week each shift should have a designated employee familiar with the plan and available in an emergency. Also talk to other businesses if you share a common structure. You may be able to coordinate or combine your shelter-in-place plans.</p> <p>Owner: What do you think about preparing warning messages ahead of time?</p> <p>Narrator: Having a warning message for alerting employees and customers written before the event and adding details at the time the emergency avoids last minute confusion about what to say. It’s also a good idea to prepare the printed placards for doors and windows.</p>		<p>Photo of receptionist repeating warning message.</p> 

Business Shelter- In-Place (SIP)

VOICE	SCREEN	NOTES
<p>Prepared messages should inform employees and customers that the facility is closing and where shelter areas are located. The message should also stress that the facility will not be reopened until an official all-clear notification is made. Some customers and employees may choose to leave and they should know they can't return until the facility is reopened. You should discuss with your insurance agent and local representative your obligations for customer safety.</p> <p>Manager: Should employees do anything special?</p> <p>Narrator: Employees should be encouraged to keep a personal emergency kit near their workplace if they require special medical supplies or have special needs.</p> <p>Employees with disabilities who would have difficulty getting into the shelter should have a buddy assigned to help them. In multi-storied structures, this may mean having an emergency escape chair that carries them to the safe room either up or down stairs. Such actions are necessary for evacuations and should be part of the overall emergency plans.</p>		<p><u>Suggested items for personal emergency kit</u></p> <ul style="list-style-type: none">• Special medications• Emergency telephone numbers• Water bottle• Cell phone <p>Photo of evac-chair going down stairs.</p> 

VOICE	SCREEN	NOTES
<p>Owner: What about employees contacting families?</p> <p>Narrator: Telephone numbers of essential contacts should be included in emergency kits of your employees. For example, you may have to inform your customers of a delay in shipping.</p> <p>Since local phone networks often become jammed in an emergency, encourage employees to select an emergency telephone contact outside the affected area that family members can call. Once in the shelter telephone calls should be limited to maintain free lines for emergency responders use.</p> <p>Manager: What are you supposed to do while in the shelter space?</p> <p>Narrator: What you do inside the shelter varies. It is important that occupants remain as calm as possible. One thing you can be sure of is that everyone in the shelter will be anxious for news about the emergency.</p> <p>Training and conducting exercises for sheltering will familiarize employees with sheltering procedures and give them an idea of what to expect in an actual emergency. Encourage employee questions during drills. Remember that sheltering-in-place is a short-term solution and that business and other activities can often be resumed shortly after the building is vented.</p> <p>Manager of gift-store in hotel lobby: Will it be safe to reenter the structure?</p>	<p>Photo of employees around conference table.</p> 	

VOICE	SCREEN	NOTES
<p>Narrator: It’s unlikely that a chemical vapor will leave deposits on furniture or other surfaces. This is generally a concern only for specialized or critical care facilities, or in the event of a biological agent release. If this is a concern, your plans should include a contact – local hazmat unit, local or state health agency or certified vendor – to verify the structure is safe to reoccupy.</p> <p>There is no way you can control when a chemical agent will be released accidentally or intentionally into the environment. What you can control is the degree of disruption it causes by preparing and exercising a shelter-in-place plan. Whether or not you use it, shelter-in-place provides an essential option in the face of a dangerous fast-moving event.</p>		 <p>Photo of Narrator with SIP logo.</p>

ACKNOWLEDGEMENTS

We would like to take this opportunity to acknowledge various businesses that participated in the production of this video. They are listed in alphabetical order:

- Business Interiors, Knoxville, Tennessee
- Carter High School, Strawberry Plains, Tennessee
- Collective Protection, Inc., La Jolla, California
- Environmental Protection Agency (EPA), Washington, DC
- EVAC Chair Corporation, New York, New York
- Holiday Inn, Cedar Bluff, Knoxville, Tennessee
- Knox County Sheriff’s Office, Knoxville, Tennessee
- National Institute for Chemical Studies (NICS), Charleston, West Virginia
- National Transportation Research Center, Knoxville, Tennessee
- Occupational Safety and Health Administration (OSHA), Washington, DC
- ORNL Federal Credit Union, Farragut, Tennessee
- Perfumery and Gifts, Knoxville, Tennessee
- Talladega County Emergency Management Agency, Talladega, Alabama
- Tooele County Emergency Management Agency, Tooele, Utah
- The University of Tennessee, Knoxville, Tennessee
- U.S. Golf and Sports Center, Farragut, Tennessee
- WATE Television, Knoxville, Tennessee
- Witt Bldg Material Company, Inc., Knoxville, Tennessee