



PURDUE PESTICIDE PROGRAMS

Purdue University Cooperative Extension Service

PESTICIDES AND PLANNING FOR EMERGENCIES PREVENTION, REACTION, AND RESPONSE

Fred Whitford, Coordinator, Purdue Pesticide Programs

David Gunter, Attorney, Beers, Mallery, Backs & Salin

Brian Miller, Supervisor, Operating Compliance, E, H, & S, Crop Production Services

Brad Shurdut, Risk Assessment Manager, Dow AgroSciences

Allen Summers, President, Asmark, Inc.

Larry Hamby, Hazmat Specialist, State Fire Marshall

Mike Titus, Assistant Fire Chief, Flora Fire Department

Arlene Blessing, Editor and Designer, Purdue Pesticide Programs

TABLE OF CONTENTS

PAGE

INTRODUCTION	3
PREPLANNING FOR EMERGENCIES	8
WORKPLACE HAZARD ASSESSMENT	8
CERTIFICATION OF HAZARD ASSESSMENT	13
PORTABLE FIRE EXTINGUISHERS	22
FIRST AID KITS	30
BLOODBORNE PATHOGENS	33
BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN	37
EMERGENCY PHONE NUMBERS	42
HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE	43
EXIT SIGNS	48
ELECTRIC PANEL MARKINGS	50
EVACUATION MAP	52
SITE MAP	55
EMERGENCY RESPONSE PLAN	58
EMERGENCY RESPONSE PLAN (Model)	63
CONCLUSION	111
ACKNOWLEDGMENTS	112

INTRODUCTION

Customer loyalty can mean the difference between prosperity and bankruptcy in today's highly competitive pest control markets, both urban and rural. Managers must continually adapt to changing markets by establishing sales goals, implementing business plans, taking advantage of business opportunities, and coupling effective, competitively priced products with quality service.

Equally important—but often overlooked—are potential financial threats from injuries, fires, spills, explosions, and other accidents. A fire or an accidental spill can be as catastrophic as losing your entire customer base. You must identify the potential for these events and, more importantly, develop a proactive plan. Many prudent business owners and managers recognize and acknowledge their responsibility for human and environmental protection and purposely develop a plan for handling emergencies. But too many don't.

Postponing critical judgment until an unfortunate situation presents itself—be it a fire, a spill, or what have you—is an irresponsible stance. Decisions of this magnitude should not be made under stress fueled by an emergency situation: Snap decisions are seldom the best decisions. Wrong decisions may leave an individual or a business vulnerable to the ravages of fines (local, state, federal) and legal action as well as potentially astronomical cleanup costs. Once an emergency occurs, it's too late to plan.

Business owners cite various reasons for failing to plan for emergencies:

- A belief that accidents will not happen to them
- A misconception that preplanning is expensive
- Ignorance of potential costs an emergency can impose
- Lack of understanding of the emergency potential of stored chemicals
- Oversight of the fact that environmental damages may require reimbursement to a state agency
- Failure to recognize that on-the-job injuries are covered by workmen's compensation and that claims raise the cost to the business owner
- Failure to recognize that emergency-related claims for damage increase liability insurance premiums



Personal injury from pesticide exposure



Fleet vehicle that overturned while hauling pesticides

- A belief that time dedicated to preplanning is wasted
- Failure to comprehend that a serious emergency can quickly tarnish the spotless reputation that a business has spent decades building
- Failure to recognize that some laws require businesses to prepare contingency plans



Ashes and debris from a building lost to fire near chemical storage tanks



Spill resulting from irresponsible transfer of chemicals

An Emergency Is a Situation Out of Control

An emergency is defined as a serious situation which is unanticipated and which demands immediate action. Once the situation is under control, it is no longer regarded as an emergency; but follow-up and cleanup may take days or weeks, or even longer.

Emergencies Can Be Large or Small

Some emergencies require professional assistance (police, firefighters, paramedics, environmental contractors) while others may be handled by properly trained company employees. Personal injuries may range from minor cuts, treatable with a first aid kit, to major injuries from exposure to toxic chemicals, which may require hospitalization.

Small fires often can be extinguished with a portable fire extinguisher, while larger ones require trained firefighters and possibly emergency medical assistance.

Some spills can be controlled and contained and the area cleaned, using spill kits kept on-site. It is important that all employees know exactly where spill kits, fire extinguishers, and first aid kits are stored.

A large, uncontained spill from a ruptured thousand-gallon pesticide tank would likely require a trained hazardous materials response team to control the release, evacuate the area, coordinate remedial measures, contain the spill, clean and decontaminate the site, and dispose of contaminated waste.



Work-site spill caused by broken hose

Example of a Preventable Emergency

A driver who is behind schedule decides to inform the next customer while filling an application rig with pesticide and water. The hose is left running inside the tank while the driver walks to the office to use the phone. While the driver is gone, the tank overflows, creating an emergency. Upon discovering the situation, the driver immediately shuts off the hose and contains the spill. With the situation under control, the driver's company must address its responsibility for the proper handling/removal of any pesticide-contaminated soil at the spill site, and for appropriate actions to minimize or prevent ground water contamination resulting from the spill.

Responsible preplanning might prevent or minimize this type of emergency; that is, it should be an ingrained company policy that *drivers must remain with their rigs when filling the tank*. If drivers need to make any type of phone call, they must know to do so either before or after filling the tank—*never during*.

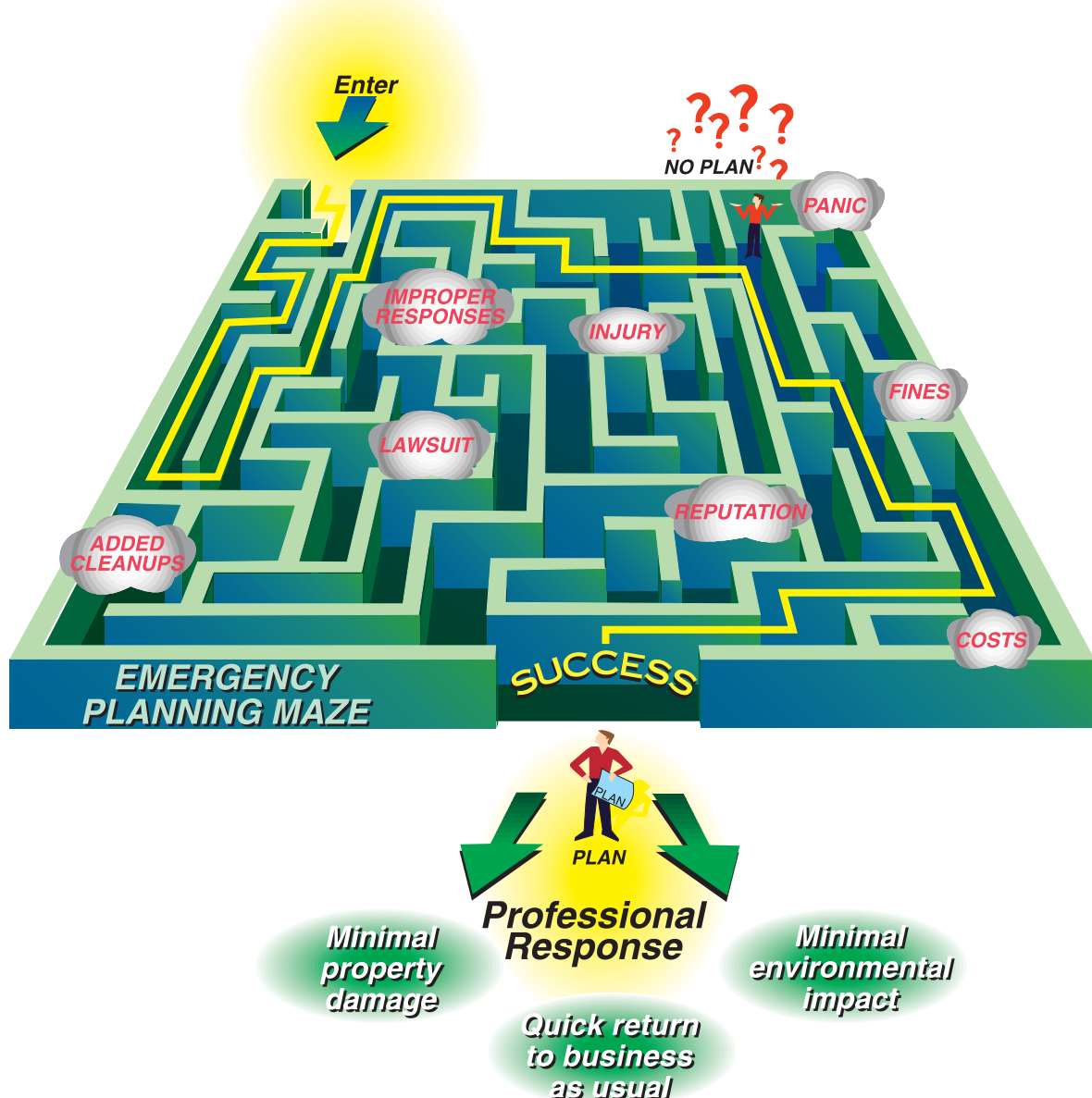
Emergencies Can Be Anticipated

You can never completely eliminate the risk of accident or injury. However, preventive planning can reduce the likelihood of emergencies through

- the implementation of appropriate, everyday operational procedures;
- the identification of potential hazards; and
- the development of contingency plans.

Contingency plans can minimize the severity of an emergency and the extent to which business is disrupted. A trained work force can minimize the immediate and long-term impact of fires, spills, and pesticide exposures. Good advance training equips employees to respond appropriately; and if they know exactly what to do, they are less likely to panic during an emergency.

Stated simply, the objective of preplanning is to be ready for emergencies. Management personnel and employees should be trained on how to react in an emergency situation. Community response personnel should be brought on-site and familiarized with the various chemicals stored there, their



PREPLANNING FOR EMERGENCIES

Emergency planning should not be viewed as an insurmountable task, nor should it be viewed as just more paperwork required by bureaucrats who have limited familiarity with your business. An emergency can result in injury, environmental damage, financial loss, fines, and a damaged reputation for the business involved. But time invested in preplanning for emergencies can pay large dividends.

If you are skeptical, just ask businesspersons who have experienced a warehouse fire, a chemical spill, or the serious injury or death of an employee. Ask them what they wish they had done differently. Those who were unprepared will wish they could turn back the clock and develop a contingency plan; they will wish they had verified specific insurance coverage and conducted in-depth emergency response employee training. Those who *were* prepared likely will mention that they intend to implement changes to fine-tune what they had in place, such as upgrading an insurance policy or educating employees on a specific point.

The recommendations set forth in this publication represent the professional opinions of the authors and should guide you in setting up a functional emergency contingency plan for your business. Simply read each section and complete the assigned tasks, and you will be well on your way to compliance with regulations pertinent to chemical emergency situations.

Each headline in this publication is followed by a citation, in parentheses, to facilitate the reader in locating pertinent regulations for review. The acronym *OSHA* stands for the Occupational Safety and Health Administration; *CFR* stands for Code of Federal Regulations. Various local, state, and federal agencies, as well as state and national associations, can be contacted for copies of specific regulations in their entirety.

WORKPLACE HAZARD ASSESSMENT (OSHA 29 CFR PART 1910.132)

Employers are required to identify potentially hazardous conditions in their workplace. This is important because each facility is unique in its operations, the types of equipment it uses, and the chemicals which it stores and applies.

The term *workplace* can include more than just the main base of operation. It includes off-site locations where any phase of the business is conducted: places such as restaurants, hospitals,

construction sites, farm fields, golf courses, and city parks. *Workplace hazards* can exist at any of these locations.

Assessment procedures to identify problem areas should involve both management and employees; and particular attention should be devoted to details relating to materials handled and work procedures followed.

A hazardous condition may exist due to

- handling a particular pesticide,
- performing a particular task such as welding, or
- entering a particular area such as a hospital where there is potential to come into contact with blood.

Hazardous situations might include such activities as

- mixing concentrated pesticides,
- handling anhydrous ammonia,
- cutting weeds with a string weed trimmer, or
- working in a grain elevator.

Workplace hazards could also include working in proximity to

- falling objects,
- projectiles,
- electrical or motorized equipment,
- confined space,
- harmful dust, or
- extreme temperatures.



Pesticide application rig being transported on a trailer. Notice 2.5-gallon pesticide containers placed precariously near back of trailer where they could easily fall off and spill (above). The use of heavy machinery around power lines requires skill and caution (above right).

What Must Be Done to Comply with This Regulation?

OSHA 29 CFR Part 1910.132 states that “the employer should assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment.” Thus, all businesses are subject to this regulation.

A survey form for use as a guide in assessing workplace hazards can be quite useful. When developing such a form for your operation, interview employees and identify the types of hazards they might encounter on the job: things like contact with chemicals, sharp objects, excessive heat, etc. Do not, however, delegate hazard assessment solely to employees; a good mix of management and employee personnel is more likely to yield recognition of all potential hazards.

You must focus on the big picture when conducting a hazard assessment. Although a tendency to focus primarily on pesticide applicators might seem reasonable due to the complexity of their jobs, it would be shortsighted to limit the hazard assessment process to applicators only.

Consider hazards present in maintenance shop and office atmospheres. Give some thought to hazards that might be present in the mechanics' shop. Electrical, mechanical, and physical hazards may exist in any of these locations.



Electrical wiring protruding from its conduit and taped to “hang” instead of being installed properly

You should also refer to documentation (OSHA injury log and/or medical records) of previous workplace injuries. Is there a repetition of injuries? If so, identify and correct specific conditions leading to the recurring problem.

Although conducting an all-inclusive hazard assessment takes time, completion of the task will place you in a much better position to anticipate and control specific hazards in the workplace—and to prevent injuries.

The person who actually conducts the hazard assessment can see firsthand the relativity of various workplace activities to hazardous situations. This observance, supplemented by employee interviews, can facilitate the identification of work practices that could lead to serious injury.

Hazard assessments are needed also to evaluate a business's level of compliance with current health and safety policies and regulations, i.e., how well those already in place are actually being followed. Spot checks and regularly scheduled safety meetings are important in enforcing compliance.

Once hazards are identified, they should be engineered out of the work process or otherwise controlled, e.g., by changing job procedures to exclude them. The use of personal protective equipment always should be the last resort. Consideration first should be given to engineering controls and alternative job design; exceptions would be pesticide label requirements and the use of specific tools or devices specified by the owner's manual for equipment in use.

HAZARD



**PPE is the last element
between YOU and the HAZARD**



Documenting the Assessment

Your hazard assessment must be documented in writing (handwritten notes at a minimum). It must be documented as the *Certification of Hazard Assessment*, detailing all areas inspected: pesticide storage room, mechanics' shop, etc. The certification of hazard assessment also should bear the date of inspection and the printed name, signature, and title of the inspector. An example of a certification of hazard assessment appears on the following pages.

Personal Protective Equipment Selection

Personal protective equipment (PPE) is essential for anyone who handles potentially hazardous chemicals or conducts hazardous tasks. Identify when, where, and under what circumstances employees and management personnel might be exposed, then implement—and enforce—a PPE program. Make sure anyone who handles chemicals wears appropriate protective gear as required by the pesticide label *and* company policy. One or more of these items may be necessary: ear plugs, gloves, splash aprons, coveralls, chemical resistant or steel-toed boots, face shields, hard hats, respirators, back supports, nonslip shoes, goggles.

Companies are required to make available to all workers whatever protective equipment is required for handling the chemicals they use. An effective program details the PPE required (by the pesticide label and company policy) for each task and includes regimented company training on its use. Employees must be taught to always wear protective gear and to wear it properly; and management personnel should monitor them to make sure that they do.



CERTIFICATION OF HAZARD ASSESSMENT

OSHA CFR 29 1910.132

This is to certify that an inspection of company premises, vehicles, and application equipment has been conducted to assess hazards associated with this firm: _____
Name of Company

The inspection addressed potential job site hazards, as well.

Date of Assessment _____ Facility Assessed _____

Department(s) Assessed _____

Location/Address _____

PERSON(S) INTERVIEWED:

_____	_____
Name	Title
_____	_____
Name	Title
_____	_____
Name	Title
_____	_____
Name	Title

ASSESSOR:

Name (Please Print) _____ Title _____

Signature

TYPE OF INSPECTION: Initial _____ Follow-up _____

NUMBER OF PAGES IN THIS REPORT: _____

INCLUSIONS IN THIS REPORT:

Written Notes _____ Audio _____ Video _____ Still Photographs _____ None _____

LOCATION OF PREVIOUS ASSESSMENT REPORTS: On-site _____ Corporate Headquarters _____

HAZARD EVALUATIONS

Consideration has been given to each of the basic hazard categories outlined in Appendix B, 29 CFR Part 1910.132. Listed below, for each category, are specifics on hazards observed and a description of the location of each.

- 1. Impact Sources (e.g., vehicles, moving machinery, grinders, forklifts, hammers, or movement of personnel that could result in collision with stationary objects)

- 2. Penetration Sources (e.g., sharp objects which might pierce feet or cut hands; lawn debris; lawn mower blades; sharp edges or corners on equipment)

- 3. Compression Sources (e.g., high pressure compressed air; rolling or pinching objects which could crush; pneumatic or hydraulic mechanisms/equipment)

- 4. Chemical Sources (e.g., pesticides, paints, fuels, solvents, hydraulic fluids)

- 5. High Temperature Sources (e.g., welding torches; vehicle cooling systems; exhaust mufflers)

- 6. Low Temperature Sources (e.g., high wind chill, propane, anhydrous ammonia)

HAZARD EVALUATIONS

- 7. Dust Sources (e.g., grain bins, crawl spaces, basements, attics, fertilizer dust, dust from granular trace elements, silica sand from sand blasting, dry flowable and dry powder pesticides)

- 8. Light Radiation Sources (e.g., welders)

- 9. Steam (e.g., steam cleaners, vehicle and machinery cooling systems)

- 10. Noise (e.g., grinders, saws, small engines, loaders and other heavy machinery, highway noise)

- 11. Electrical Sources (e.g., exposed wiring, ungrounded wiring, damaged cords)

- 12. Other Sources (e.g., atmospheric conditions, confined space, bloodborne pathogens)

WORKPLACE CHANGES TO REMOVE HAZARDS

The company, through internal review and discussion with employees, has agreed to introduce into the workplace the procedures checked below.

PESTICIDES

- Treatment options that do not require the use of pesticides will be given first consideration.
- If a pesticide application is necessary, general use products will be given preference over those labeled for restricted use, thereby reducing risk potential.

Whenever possible, we will select products

- that have the signal word CAUTION instead of WARNING or DANGER;
- that are packaged to reduce the risk of exposure or spillage;
- for which material safety data sheets do not indicate long-term health effects;
- that do not require users to wear personal protective equipment (PPE).
(But if products requiring PPE are selected, we will train all designated pesticide users on PPE requirements as stated on the label.)

We will

- designate certain individuals to handle pesticides;
- train designated pesticide handlers on the specifics of handling, mixing, and applying the products they use;
- supplement training by providing pertinent literature (e.g., product labels, MSDSs, hazard communication plan);
- maintain proper storage of chemicals in inventory;
- ensure good ventilation in pesticide mixing, loading, and storage areas;
- provide proper secondary containment in mixing, loading, and storage areas;
- train personnel on proper personal hygiene and decontamination procedures (washing hands, laundering clothing, etc.);
- enforce good housekeeping practices to reduce workplace exposure and accidents.

MAINTENANCE SHOP

- Access to the maintenance shop shall be restricted to authorized personnel only.
- All equipment shall have safety guards, as appropriate.
- OSHA's lockout/tagout program will be enforced.
- Store oils, solvents, paints, and other flammable materials away from welding, cutting, and grinding areas and away from pilot lights.
- Good lighting, ventilation, and ultraviolet screens will be provided in welding and cutting areas.
- Good ventilation and proper PPE will be provided in the battery charging area.
- Control of drains in shop floors will be verified.
- Mechanics will be made aware of pesticides used and the PPE and/or cleaning practices required when working on pesticide application equipment. Mechanics also will be informed of products that are volatile or flammable and warned that all pesticides are potentially poisonous.

VEHICLES

- All company vehicles will be properly maintained and serviced.
- Employees will receive training on safe driving techniques.
- All employees will wear seat belts when operating company vehicles.
- Vehicles will transport chemicals only in small quantities.

GENERAL EMPLOYEES

- All full- and part-time employees will be made aware of potential hazards in the workplace.
- Employees will be trained how to lift heavy objects to prevent back injuries.
- Training in forklift (required by OSHA) and loader operations will include instructions to lower loads whenever possible; to use caution in proceeding up and down ramps; to use slow to moderate speeds; and to stay alert when turning corners and when backing up.
- Training and proper fall-protection equipment will be provided for employees working off the ground on such apparatus as storage tanks, roofs, rail cars, and tanker trucks.
- Handling and storage areas for liquids will be kept clear of standing water and product contamination to prevent personal injury.

PERSONAL PROTECTIVE EQUIPMENT EVALUATIONS

In recognition that not all potential hazards can be eliminated through engineering, the use of PPE will be enforced to safeguard employees. All workers with exposure potential—not only to chemicals, but to all workplace hazards—are required to wear appropriate personal safety equipment. Each employee will be instructed to wear safety equipment relative to their job assignment as determined by the type, level of risk, and injury potential from hazards that they might encounter in the workplace. We will enforce the use of personal safety equipment as indicated in the following table.

Hazard Category	Specific Hazard	PPE/Practices Required
Impact	Drill Press	Safety glasses or full-face shield
Chemical	Pesticides	Gloves and goggles for all pesticides, plus any additional requirements as stated on the label
Penetration	Grass Trimmers	Safety goggles and work shoes
Other	Bloodborne Pathogens	Gloves; mouthpiece for CPR

EMPLOYEE EDUCATION

All employees will be trained on the proper use and maintenance of safety equipment. Training programs will be documented by a Certificate of Training.

OSHA 29 CFR 1910.132 Certificate of Training

Name of Company

Street Address

City, State, Zip Code

Training Location

Date

Program Agenda	Speaker	Major Points Covered
What Jobs Require PPE?		
What PPE Is Necessary?		
What Are PPE Limitations?		
How to Fit and Wear PPE		
How to Dispose of PPE		
Company Policies on PPE		

Recommendations

Recommendation 1

Seek input from your employees; they may shed light on physical and chemical job hazards unique to their everyday routine—things that you might otherwise overlook. Their involvement in the development of the PPE program will make it their own, in a sense, and will enhance their appreciation for its importance.

Recommendation 2

Assess workplace hazards at least on an annual basis—more frequently, if possible. At a minimum, reassessment is appropriate as new chemicals are added to inventory and as new hazards are recognized or introduced into the workplace. Sometimes chemical hazards can be diminished or eliminated by selecting a different formulation or product, or by implementing new handling procedures.



Recommendation 3

Identify and execute practices that can be modified to eliminate hazards noted during the assessment process; and document all changes.

Recommendation 4

Retain for as long as you own or manage the business all documentation—written notes as well as audio and video tapes recorded during the hazard assessment process—as an official record of each assessment performed. Be sure to label each record with the date and the name of the person logging the documentation. Keep copies both on- and off-site.

Recommendation 5

The type of contaminant and the anticipated level of exposure directly influence the selection of PPE, so seek professional advice as to which equipment best meets your specific needs. Such information is available in PPE catalogs or through product manufacturers.

Recommendation 6

Train employees explicitly on how to use PPE and how to maintain it properly.

Recommendation 7

Contact your local county extension educator or Purdue Pesticide Programs for one free copy of publications with information relevant to health and safety programs:

- For information on hazard communication, ask for *Pesticides and Material Safety Data Sheets* (PPP-37).
- For information on personal protective equipment, ask for *Pesticides and Personal Protective Equipment* (PPP-38).

Recommendation 8

Issue employees their own set of PPE, and have them sign for it. Keep a dated record of exactly what was issued, and stress that they alone are to use the equipment. Experience has shown that employees take better care of equipment issued to them, personally. Check all safety equipment regularly, and replace it as necessary.

PORTABLE FIRE EXTINGUISHERS (OSHA, 29 CFR PART 1910.157)

Allowing a fire to spread from its source can increase its seriousness. For instance, a fire that spreads to a pesticide storage room may produce deadly toxic vapors, creating the need to evacuate the community. Therefore, it is important to preplan:

- Train all employees to use portable fire extinguishers.
- Invite local fire department personnel to survey your facility to acquaint themselves with what is stored there and the precise location of chemical inventory.
- Conduct a mock emergency, on-site.

Water used to fight a chemical fire should be contained; afterward, you will likely have to deal with environmental contamination and regulatory oversight of remediation, as well as insurance claims. But remember: Such problems often can be avoided simply by training employees to operate portable fire extinguishers! Provide your employees the training they need, and make them aware that extinguishers can be effective in putting out initial-stage fires.

Protecting your business against fires involves more than simply mounting fire extinguishers throughout the building.

Fire extinguishers contain only enough fire suppressant material to deal with a small fire; the contents last only for a matter of seconds. Improper discharge can waste the contents, diminishing any hope of putting out a small fire. Therefore, it is crucial to train your employees and post visible instructions on how to use a fire extinguisher. Check with your local fire department or an extinguisher company to help with or conduct such training.

What Must Be Done to Comply with This Regulation?

OSHA does not require extinguishers to be placed in a building, nor are they required in vehicles unless they are required under Department of Transportation (DOT) regulations. Employers who preplan to evacuate their facility in case of fire need not train employees on the use of extinguishers *as long as there are none on-site*. Instead, obviously, employees should be trained to vacate the building at the first indication of fire.

If you preplan to evacuate and prefer not to install fire extinguishers, first check your insurance company's requirements and the local fire code; either of these might mandate extinguishers despite your plan to evacuate. And be aware that, even if you preplan to evacuate, if there *are* fire extinguishers on the premises, OSHA regulates their inspection and maintenance and requires that employees be trained to use them properly. In essence, their presence triggers the need for compliance under OSHA.

If fire extinguishers are to be installed, choose models recommended for the specific type of fire most likely to occur on the premises. Every fire extinguisher has a class designation that communicates the type of fire that it is designated to suppress. It is critical that you purchase the right class. Using the wrong extinguishers on a fire may worsen the problem.

OSHA regulations state that fire extinguishers must be located within a certain distance from employees:

- No more than 50 feet for Class B extinguishers (page 24)
- No more than 75 feet for Class A, C, or D (page 24)

Also, extinguishers must be installed at certain heights and certain distances from exits. Check local fire codes or call your local fire department for those criteria.

Employers are required to visually inspect each extinguisher, monthly, to ensure that it is fully charged and sealed, properly mounted, and accessible without obstruction.

More sophisticated, annual inspections are required for refillable and rechargeable extinguishers. These inspections should be performed by a commercial fire extinguisher company representative. Refer to CFR 29 Part 1910.157, Table L-1, or consult with a fire extinguisher service for more information.

Employers are responsible for providing employee training on basic firefighting techniques. All employees who might need to use a fire extinguisher must be trained upon hiring or upon initial installation of extinguishers, and annually thereafter. Employees

Fire Extinguisher Recommendations

Class Designation	Use Specifications	Approved Markings on Fire Extinguisher
A	Ordinary combustion (paper, wood, cloth)	Green triangle with an <i>A</i> inside
B	Flammable and combustible liquids	Red square with a <i>B</i> inside
C	Electrical	Blue circle with a <i>C</i> inside
D	Combustible metals	Yellow 5-pointed star with a <i>D</i> inside
A-B-C	Multipurpose	A-B-C markings, as above

battling a small fire must be trained to recognize when it is beyond their control. Local fire departments and commercial fire safety companies often provide excellent training. In some communities, local universities or trade schools also may offer fire safety training.

Recommendations

Recommendation 1

Hire a company that specializes in *fire extinguisher sales, service, and training*. Make sure training is tailored to chemicals that might be present.

Recommendation 2

Conduct annual, hands-on training where each employee has the opportunity to handle and use a fire extinguisher. Advise your local fire department, when planning training, to see if a burn permit is required. There are many excellent fire extinguisher videos currently on the market which can be shown to complement—not replace—face-to-face training.

One teaching method often used by professional trainers is to have the employees remember the word PASS:

- P stands for “Pull the pin.”
- A stands for “Aim the extinguisher nozzle at the base of the fire.”
- S stands for “Squeeze the handle.”
- S stands for “Sweep the hose from side-to-side at the base of the fire.”



Answer the following in regard to your business...

- Do you have the correct type of fire extinguisher for the materials that you store or transport?
- Do you have an appropriate number of fire extinguishers for the size of your facility?
- Are extinguishers placed according to OSHA distance requirements?
- Do you verify the following information during your monthly inspections?
 - Extinguishers are in their designated areas.
 - Each extinguisher is easily identifiable.
 - There is a clear path to each extinguisher.
 - Each extinguisher is properly mounted (e.g., not sitting on floor).
 - Each extinguisher gauge indicates a full charge.
 - The plastic seal is intact on each extinguisher.
 - All extinguisher tags and pins are in place.
 - All extinguisher hoses are intact (not cracked, dry rotted, or plugged).
 - All extinguisher pieces are present and functional.
- Are all previous monthly inspections documented?
- Are all extinguishers professionally evaluated once a year?
- Are monthly inspection and annual maintenance records maintained for a minimum of one year?
- Have all employees who might use a fire extinguisher been verifiably trained or instructed?
- Are all employees who might use a fire extinguisher retrained annually?



Example of cluttered path to fire extinguisher



Fire extinguisher sitting in water on the floor

Recommendation 3

Verify all training with employees' signatures.

Recommendation 4

Although current OSHA regulations do not specify the height at which fire extinguishers are to be mounted, general guidelines prescribe placement of extinguishers in locations that are easy to see and easy to get to. Fire extinguishers weighing less than 40 pounds should be placed no more than 5 feet off the floor; and those that weigh more than 40 pounds should not be placed higher than 3.5 feet off the ground.

Recommendation 5

If extinguishers are not readily visible, post FIRE EXTINGUISHER signs that clearly identify the location of each unit so that employees can find them easily.

Recommendation 6

Many companies select A-B-C, multipurpose extinguishers. But you should consult a professional choosing the most appropriate size and type of extinguisher for your business.

Recommendation 7

Instruct employees to call for help and verify that it is on the way before attempting to fight any fire; otherwise, they may become trapped by the fire, with no help on the way. Employees should be taught not to attempt to fight a fire larger than what might be controlled by discharging one or (at worst) two fire extinguishers.

Recommendation 8

Always use the buddy system. Never respond to a fire, alone, because smoke and vapors can quickly overcome a responder.

Recommendation 9

Ask your local fire department to conduct an inspection and consider their input as to fire potential at your facility. Such inspections also allow fire departments the opportunity to do some preplanning of their own.

Recommendation 10

Cover extinguishers located in dusty and/or corrosive environments, but make sure they remain visible. Consider using a clear plastic bag with plastic ties.

Recommendation 11

Consider using the check sheet on page 28.

Recommendation 12

Install 10 pound, B-C fire extinguishers in all vehicles that meet the definition of "commercial motor vehicle" as defined by the state or federal department of transportation (whichever is stricter).

Recommendation 13

Contact your local fire department or insurance company for help with selection and distribution of extinguishers.

WARNING! BE SURE TO CHECK WITH YOUR INSURANCE CARRIER AND ATTORNEY

BEFORE IMPLEMENTING A LET-IT-BURN POLICY.

WARNING! BE SURE TO CHECK WITH YOUR INSURANCE CARRIER

LET-IT-BURN POLICY

Fire in a pest control business is always a concern to management, employees, and the community. We have adopted an Emergency Response Plan that will be activated in the event of a fire or other emergency situations; and we have taken steps to train our employees in the safe handling of chemicals, both on and off company property.

Heat is one of the best ways of breaking down hazardous materials; therefore, we ask that you support our LET-IT-BURN POLICY under the following circumstances:

- When the situation is deemed out of control and the use of water could create additional hazards
- When the use of water could increase airborne contamination
- When the use of water could adversely affect off-site properties

In recognition that environmental impairment is detrimental to society and must be held to a minimum, we request that the FIRE DEPARTMENT acknowledge certain conditions which favor letting a facility burn.

_____ prefers that the fire department apply only the smallest quantity of water necessary to prevent additional hazards.

(Name of Company Representative)

_____ resolves to exclude the emergency agency from liability for situations that might arise from permitting the facility to incinerate. Our respective insurance companies are aware of this policy.

(Name of Company Representative)

Company Name (printed)

Date

Company Official

Title

Name of Fire Department

Fire Chief

Date

SURE TO CHECK WITH YOUR INSURANCE CARRIER AND ATTORNEY BEFORE IMPLEMENTING A LET-IT-BURN POLICY.

AND ATTORNEY BEFORE IMPLEMENTING A LET-IT-BURN POLICY. WARNING! BE



Monthly Safety Inspections

Fire Extinguishers • Exit Signs • First Aid Kits

Fire Extinguishers

Date of Inspection	Name of Person Conducting the Inspection							
	Extinguishers Located at the Facility				Extinguishers Located in Vehicles			
Extinguisher Number	1	2	3	4	5	6	7	8
Size of each extinguisher	_____	_____	_____	_____	_____	_____	_____	_____
Type of each extinguisher	_____	_____	_____	_____	_____	_____	_____	_____
Is each extinguisher...								
...location indicated on evacuation/site maps?	_____	_____	_____	_____	_____	_____	_____	_____
...in its assigned location?	_____	_____	_____	_____	_____	_____	_____	_____
...locatable with signs?	_____	_____	_____	_____	_____	_____	_____	_____
...easily accessible?	_____	_____	_____	_____	_____	_____	_____	_____
...properly mounted?	_____	_____	_____	_____	_____	_____	_____	_____
...fully charged?	_____	_____	_____	_____	_____	_____	_____	_____
...in good condition?	_____	_____	_____	_____	_____	_____	_____	_____
Are plastic seals intact?	_____	_____	_____	_____	_____	_____	_____	_____
Are all pieces present?	_____	_____	_____	_____	_____	_____	_____	_____

Exit Signs

Date of Inspection	Name of Person Conducting the Inspection							
Exit Sign Number	1	2	3	4	5	6	7	8
Is each exit sign present?	_____	_____	_____	_____	_____	_____	_____	_____
Are letters at least 6 inches high?	_____	_____	_____	_____	_____	_____	_____	_____
Are the bulbs in lighted signs functional?	_____	_____	_____	_____	_____	_____	_____	_____
Are exit doors free of obstructions?	_____	_____	_____	_____	_____	_____	_____	_____
Are doors that are not exits marked "NOT AN EXIT"?	_____	_____	_____	_____	_____	_____	_____	_____

First Aid Kits

_____ Date of Inspection _____ Name of Person Conducting the Inspection

First Aid Kit Number	First Aid Kits Located at the Facility				First Aid Kits Located in Vehicles			
	1	2	3	4	5	6	7	8
Is each first aid kit...								
...location indicated on the evacuation and site maps?	_____	_____	_____	_____	_____	_____	_____	_____
...in its assigned location?	_____	_____	_____	_____	_____	_____	_____	_____
...easily identifiable?	_____	_____	_____	_____	_____	_____	_____	_____
...easily accessible?	_____	_____	_____	_____	_____	_____	_____	_____
...mounted on the wall (indoors) or in its assigned vehicle?	_____	_____	_____	_____	_____	_____	_____	_____
...clean and in good condition?	_____	_____	_____	_____	_____	_____	_____	_____
...labeled with the name of an employee assigned to administer first aid?	_____	_____	_____	_____	_____	_____	_____	_____
Are the contents complete?	_____	_____	_____	_____	_____	_____	_____	_____
Is there an ample supply of all contents?	_____	_____	_____	_____	_____	_____	_____	_____
Are all expiration dates current?	_____	_____	_____	_____	_____	_____	_____	_____
If a bloodborne hazard kit, is sticker attached?	_____	_____	_____	_____	_____	_____	_____	_____
Does the kit contain protective gloves and eyewear?	_____	_____	_____	_____	_____	_____	_____	_____
Is there a CPR mask and check valve in the kit or nearby?	_____	_____	_____	_____	_____	_____	_____	_____

Topic	Fire Extinguishers	Exit Signs	First Aid Kits
Date of Correction			
Name of Person Who Made the Correction			

FIRST AID KITS

(OSHA, 29 CFR 1910.151)

First aid is the initial action taken to stabilize an injury or illness (i.e., to prevent it from becoming worse) until the victim can be treated by a qualified medical professional. But, unfortunately, some injuries can be made worse by inappropriate first aid administered by well-meaning but unqualified individuals.

You should not expect an untrained employee to aid an injured coworker. First aid training, including information on bloodborne pathogens, is essential. OSHA requires the availability of first aid kits suitable for hazards most likely to occur in a given workplace, but it requires certified first aid personnel only if there are no local medical services within three minutes of the site. First aid training should be conducted at least every two years; CPR training should be repeated annually.

What Must Be Done to Comply with This Regulation?

First aid kits are required. The person administering first aid must be educated on proper techniques and must have supplies to deal with cuts, bruises, and other injuries that are likely to occur. A certified first aid person is required only when emergency responders are more than three minutes away.

Consider the following...

- Do you have at least one qualified employee on each shift available to administer first aid and CPR?
- Can you verify the training of employees assigned to respond to an injury?
- Are first aid kits inspected at least monthly and contents replenished (or replaced) as needed?
- Do first aid kits contain bloodborne pathogen safety equipment?
- If your business handles corrosive materials, do you have a specific area where the eyes can be flushed or the body showered for a minimum of 15 minutes?
- Are the names of designated, company-trained first responders posted on all first aid kits?

Recommendations

Recommendation 1

Purchase medical kits that contain the appropriate supplies in sufficient quantities to deal with the type of emergency that might occur in your business; make sure there are ample supplies to treat multiple victims if necessary. Before purchasing the kits, seek the advice of a doctor who specializes in occupational medicine; if buying the kits from a safety supply house, ask what they recommend for your specific situation.



Recommendation 2

If your business is not in close proximity to a hospital, contact the American Red Cross or the National Safety Council for first aid and CPR training. Being trained to administer first aid to an ill or injured worker or customer might make a major difference in that person's prognosis.

Recommendation 3

Train all full-time employees to administer basic first aid; if possible, train temporary and part-time employees as well.

Recommendation 4

Invite local emergency medical services (EMS) personnel to visit your facility. Building a relationship and educating these front-line responders will ease their fears and help to dispel any misunderstandings they may have regarding your business and the pesticide application industry in general. Go over in detail the steps that you take to prevent contamination and to make sure that products are handled and applied according to label directions. Discuss appropriate victim decontamination procedures that emergency personnel should follow in case of human injury.

Recommendation 5

Document that first aid kits are inspected monthly. Consider using the check sheet on page 29, or develop your own. A good approach is to inspect medical kits at the time that the fire extinguishers are being checked.

Recommendation 6

Affix to all first aid kits a sticker outlining procedures to follow when dealing with an injury where the victim is bleeding.

Recommendation 7

Whenever a first aid kit is used, immediately replace the items used to treat the injury. And, while you're at it, check to make sure that product expiration dates are current on all contents.

Recommendation 8

Remove all oral medication—even aspirin—from first aid kits; any decision to use such products should be left up to the physician and the victim.

Recommendation 9

Inform your local hospital or emergency training center if you deal with pesticides that would require special handling of accident victims to minimize medical staff exposure.

Recommendation 10

If you have a company policy that no first aid is to be administered by one employee to another, make sure it is understood that the injured person should at least be provided a first aid kit. If the injured individual is unable to deal with the injury, personally, arrange for medical assistance.

Recommendation 11

Mount medical kits properly and in a clean environment; this applies to vehicles as well as offices, warehouses, workshops, etc. Consider covering first aid kits with a clear plastic bag to protect them from dust and dirt.

Recommendation 12

Give employees who work with chemicals a small, unbreakable bottle of water to carry with them to flush their eyes in the event of exposure.

BLOODBORNE PATHOGENS

(OSHA, 29 CFR 1910.1030)

Diseases spread by bloodborne pathogens (e.g., AIDS and hepatitis viruses) can cause lifelong debilitation and sometimes can be life threatening. Transmission occurs when an individual comes into contact with body fluids of a person harboring a bloodborne disease. Although transmission of the disease between two people can occur during a split second exposure, the manifestation of symptoms in the newly infected person may not occur for decades.

Transmission of these diseases in the workplace can occur when a worker aids a coworker who is bleeding from an injury on the job. Although it is obviously important to provide first aid, it is equally important that those administering it be aware of the risk of infection by bloodborne pathogens and that they take steps to protect themselves. And it should be noted that, despite their name, bloodborne pathogens are present in other human fluids in addition to blood: saliva, tears, etc.

In addition to implementing a medical surveillance program to track levels of harmful substances in employees' blood (e.g., cholinesterase testing of employees who use organophosphates) employers must follow universal precautions and requirements under bloodborne pathogen regulations.

Consider this hypothetical situation: A truck driver suffers a severe heart attack while unloading bulk pesticides at your facility. A nearby employee determines that the driver is not breathing and immediately begins mouth-to-mouth resuscitation, bringing himself into direct contact with the driver's saliva. His quick actions may save the driver's life, but at what risk to himself? What if the truck driver is harboring a bloodborne pathogen? The heroic act that saves a life, today, may yield catastrophic consequences to the hero, tomorrow; symptoms of bloodborne diseases might not become apparent for decades after initial contact.

So the critical question is this: How can we encourage our employees to respond to injured coworkers and at the same time protect themselves from bloodborne pathogens?

What Must Be Done to Comply with This Regulation?

The rule says that "each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section establish a written Exposure Control Plan designed to eliminate or minimize employee exposure." Occupational exposure is defined in

paragraph (b) as “reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties.” Using this definition, we believe that all pest control businesses must comply with the bloodborne pathogen regulation.

It is the intent of the OSHA bloodborne pathogen regulation to compel employers to evaluate each job to determine whether the employee performing it could potentially come into contact with another person’s blood or other body fluids in an emergency situation. If so, employers are required to develop a bloodborne pathogen plan: a detailed outline stating the company’s policies on safeguarding employees who may come to the aid of others who become injured on the job.

Recommendations



Recommendation 1

Conduct bloodborne pathogen training for all employees who are expected to administer first aid and CPR. Conduct awareness training for all others. Recent OSHA guidelines require training to include interaction with an individual who is knowledgeable on bloodborne pathogens and competent to answer pertinent questions.

Recommendation 2

Train all employees—custodial, field, office, part-time, and managerial staff—on bloodborne pathogens because most would react to a work-related accident by assisting the injured.

Recommendation 3

Use employees trained in first aid, CPR, and bloodborne pathogens as trainers for other employees *only if they are qualified to train*. Additional training normally is required to become a certified instructor.

Recommendation 4

Post on first aid kits the name, the phone number and extension, and the department of employees designated and trained to administer medical assistance.

Recommendation 5

Keep the original written plan as an official business record; it is important that it state the implementation date. If the written plan mandates training, itemize the training provided and include a list of names and signatures of employees who have completed the training. There can be an extended delay between the date of exposure/infection and the date that symptoms manifest themselves. Therefore, the list might become a very important record at some future date, e.g., if an employee were to sue a company for negligence concerning its training policies. The plan should be reviewed and the training repeated annually. Employees should sign updated lists annually, as well.

Recommendation 6

Keep the most current written plan where it is readily accessible to every employee, and verify that all employees are knowledgeable of its content.

Recommendation 7

Have employees sign a form stating that they have read and understand the plan.

Recommendation 8

Document every incident where an employee performs first aid or CPR; indicate the name of the victim as well as the name of the person offering assistance. Complete an exposure record for the individual offering first aid, describing the incident in detail. If medical records result, OSHA requires that they be kept for 30 years.

Recommendation 9

Make sure that the first aid kit contains rubber gloves, splash shields, goggles, and CPR mouthpieces suitable for dealing with injuries involving blood or other body fluids.

Recommendation 10

Instruct employees not to eat, drink, or smoke during a bloodborne pathogen incident.

Recommendation 11

Consider using the model plan (below) when writing your own bloodborne pathogen plan.

Recommendation 12

If your company has a policy whereby employees are not to administer first aid to injured coworkers, make sure they at least know to provide first aid kits to injured individuals. If the injured cannot administer their own first aid, they should go (or be taken) to a medical facility for treatment.

Preface to Bloodborne Pathogen Exposure Control Plan

The following (sample) bloodborne pathogen exposure control plan is offered as a guide for use in writing your own. Below are some sample job classifications that you may use in identifying jobs within your company that may bring employees into contact with blood or other body fluids.

Sample Job Classifications

• Service	• Clerical	• Management	• Custodial
Technician	Secretary	Supervisors	Buildings
Dispatcher	Clerk	Managers	Grounds
	Receptionist		

Company Policy

We do not mandate testing for bloodborne pathogens as a condition of employment, nor are employees randomly screened when hired or thereafter. Instead, as a precautionary measure and universal precaution, the company operates under the hypothetical assumption that everyone is infected. This precautionary stance assures maximum protection of all employees through policies and guidelines enforced by management. Compliance with the following company policies is mandatory.

- Only persons trained in first aid response are to administer care to an injured person. However, in unique emergency situations where there is no trained employee available, untrained personnel may offer minimal assistance pending the arrival of emergency responders.
- Employees are to consider themselves at risk when providing assistance to an injured person. The presence of blood or other body fluids on victims, on their clothing, or in the surrounding area is cause for heightened concern on the part of the responder.
- Each employee must wear appropriate personal protective equipment when dealing with an emergency situation. Company first aid kits contain protective gloves, eyewear, and a shield for mouth-to-mouth resuscitation.
- Responding employees who come into contact with blood or body fluids other than their own must report the situation to their supervisor. A mandatory physical examination will follow.
- Clothing, towels, etc., that have come into contact with body fluids must be stored in a clearly-marked biohazard container, pending proper disposal.
- Employees are not to perform cleanup procedures involving blood or other body fluids without specific approval from management; company-prescribed procedures must be followed.

Components of Implementation

Designated Personnel

At this facility, only the following individuals are trained to administer first aid. Their names are posted on all first aid kits. As a preventive measure, they have the option of receiving the Hepatitis B vaccine at no cost.

General

Contact with someone else's blood or other body fluids carries the risk of pathogen transmission; so it is imperative that all employees follow company protocol, precisely, when dealing with an injured person or contaminated objects.

- Wear a mask with solid side shields or a chin-length face shield whenever there is potential for eye, nasal, or oral contact with someone else's blood or other body fluids.
- Never perform mouth-to-mouth CPR without using a pocket mask.
- Wash hands, arms, and face with soap and water *immediately* after assisting injured parties.
- Store cosmetics and contact lenses away from areas where there is potential for bloodborne pathogen exposure.
- Do not share food and beverages with other employees, and store these items separately to prevent cross-contamination. Disposable paper cups are provided at drinking fountains and in service vehicles.
- Wear single-use rubber gloves when handling objects that are contaminated—or *possibly* contaminated—with blood or other body fluids.
- Wear single-use, disposable gloves when handling contaminated clothing. All contaminated clothing, as well as contaminated objects such as disposable gloves and paper towels, must be placed in the container marked BIOHAZARD. The biohazard container is located in the main office. Tape is available there, as well, for taping the lid to prevent easy access; the container is to be opened by authorized personnel only. The taped biohazard container must be given directly to the manager or supervisor for proper disposal.
- Stay away from or vacate the scene of any emergency unless you are a first aid responder. The manager or designated company representative will limit access by individuals other than first aid responders; and they will post employees around the perimeter to redirect traffic, etc.
- Do not clean areas/objects contaminated with blood or other body fluids unless you are appropriately trained to do so. The company assigns trained employees to decontaminate machinery, floors, walls, etc., or hires an outside decontamination contractor, depending on the situation.
- Do not eat, drink, or smoke during cleanup of a bloodborne pathogen incident.

Engineering and Work Practices

Safe job performance and work environments minimize the likelihood of accidents and injuries. We train our employees and maintain our equipment in an effort to reduce accident potential, and supervisors must ensure that work areas remain uncluttered.

Personal Protective Equipment

All personal protective equipment (PPE) is selected for protection against bloodborne pathogens blocks body fluids from reaching the wearer's skin, eyes, or mouth. Gloves and safety goggles are distributed to trained responders throughout the company and are also available as follows: in the main office; in bloodborne pathogen emergency kits located in the break room; and in all first aid kits, both in the building and in fleet vehicles. The site evacuation map located in the main office and in the break room shows where first aid and bloodborne pathogen kits may be accessed. All personal protective items used to deal with bloodborne pathogen emergencies are inventoried regularly, and used or outdated items are replaced as necessary. All personal protective equipment used at this facility is provided to employees free of charge.

Contaminated Objects and Surfaces

Objects and surfaces such as clothing, counter tops, equipment, etc., are to be quarantined immediately upon contamination with blood or other body fluids. A designated company representative will determine if and when such items/areas can be put back into use following effective decontamination procedures.

Small contaminated objects are to be discarded in biohazard containers; plastic bags may be substituted if additional containers are needed. It is the responsibility of management personnel to consult with local solid waste disposal authorities to determine appropriate disposal procedures.

Laundry Procedures

No attempt is to be made to decontaminate gloves and clothing contaminated with blood or other body fluids; such items must not be washed or reused. All contaminated clothing, regardless of the extent of contamination, must be left at the facility for placement in a biohazard container, pending disposal. Employees are to be reimbursed for replacement costs of discarded clothing. Temporary clothing (e.g., a Tyvek suit) is provided by the company for interim use.

Post-Exposure Evaluation and Follow-Up

Any employee exposed to blood or body fluids must receive a medical evaluation at the company's expense. The victim (the employee whose body fluids were the source of contamination) will be asked to submit to testing for hepatitis and AIDS. If the victim consents to testing, the results will be revealed only to those employees who might possibly have been contaminated. Victims who refuse testing must sign refusal forms. (Note: Before adopting this policy, clear it with your attorney since some states do not allow it.)

Education, Communication, and Documentation

It is our policy to train all employees on bloodborne pathogens. The training must occur before any employee—newly hired or newly assigned—begins a job where exposure to blood or other body fluids might occur. This training is conducted as part of new employee orientation. All employees receive additional training on an annual basis. Training covers the following information:

- The OSHA Bloodborne Pathogen Standard and the company's written plan (includes information on where to access these documents)
- Epidemiology and symptoms of diseases transmitted by bloodborne pathogens
- How bloodborne pathogen transmission occurs
- Company policy as outlined in the written plan
- Identification and explanation of jobs for which some possibility of exposure to bloodborne pathogens exists
- Methods used to detect the potential for contact with bloodborne pathogens, including engineering controls, work practices, and PPE
- Instruction on how to deal with an injured person who is bleeding
- Actions that must be taken in the event of human contact with blood or other body fluids

Each person trained is required to sign a roster as evidence of attendance. This documentation is maintained in the company's file and includes the following:

- Date of training
- Content or summary of training conducted (agenda format)
- Names and qualifications of training instructors
- Names, job titles, and employee signatures of those in attendance

Recordkeeping

All records required by OSHA 29 CFR 1910.1030 are maintained by the following designated company representatives:

_____ (printed name)

_____ (printed name)

Availability of the Plan

The written Bloodborne Pathogen Exposure Control Plan is on file in the main office and is available upon request to all employees and OSHA inspectors.

<h2>Inception and Revision of the Written Bloodborne Pathogen Exposure Control Plan</h2> <p>Inception Date _____</p> <p>Prepared by _____ (printed name)</p> <p>Title _____</p> <p>Signature _____</p> <hr/> <p>Revision Date _____</p> <p>Revised by _____ (printed name)</p> <p>Title _____</p> <p>Signature _____</p>
--

EMERGENCY PHONE NUMBERS

[OSHA 29 CFR 1910.38 (A)(2)(V)

AND 1910.165(B)(4)]

Post emergency telephone numbers throughout your facility and inside company vehicles. This simple procedure will save valuable time in the event of an emergency—time that may make the difference between a controlled situation and a disaster.



What Must Be Done to Comply with This Regulation?

This regulation states that employers must make employees understand “the preferred means of reporting fires and other emergencies.” Most companies emphasize that calling for help should always be the first action taken; emergency telephone numbers must be posted at or near every phone.

Recommendations



Recommendation 1

Develop a phone list with only those numbers that are extremely important. Other, less important numbers may be listed in Emergency Response Plan. Consider using *The Quick Response Emergency Plan* (PPP-45) as an easy-to-use phone list. Additional copies can be obtained through the Purdue University Media Distribution Center, (888) 398-4636.

Recommendation 2

Verify phone numbers annually; mark your calendar and form a habit of checking them the same month every year. If there are changes, retype the list; handwritten notations can be difficult to read, especially in an emergency situation. Make sure the updated list replaces every old list posted.

Recommendation 3

Post emergency telephone numbers on all bulletin boards and near all phones.

Recommendation 4

Post signs listing emergency contact personnel conspicuously on the outside of all buildings. The signs should include the names of emergency contact personnel (company representatives) and their phone numbers.

Recommendation 5

Provide company contact numbers to local law enforcement agencies, fire departments, and medical responders. Update them on all personnel or telephone number changes.

Recommendation 6

Post company emergency numbers on a clipboard or by other means in all company vehicles to facilitate notification efforts during a roadway emergency.

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE

(OSHA 29 CFR 1910.120)

This standard, better known as HAZWOPER, requires emergency response training for all employees who might have to react to a hazardous situation. Training is the key to competent, effective response; and the more employers expect employees to participate in emergency response, the more education and training they must provide.

There are five levels of first responder training: awareness, operations, technician, specialist, and commander. Employers should designate and train individuals at each level, for each site. This requirement can be fulfilled by training multiple individuals or by training one individual at all five levels.

First Responder Levels

First Responder Awareness Level

All employees with the potential for contact with hazardous substances during an emergency must complete awareness level training. Employees who are likely to discover an accidental release of a hazardous substance should be instructed to evacuate the area and notify management personnel; they are to take no other action. This level of training is usually fulfilled within the context of the company's emergency response training.

First Responder Operations Level

All employees with responsibility to protect other individuals, the surrounding property, or the environment during a hazardous substance release must complete operations level training. They must be trained to control the spill without actually trying to stop the release or coming into contact with the substance. OSHA mandates eight hours of training at the operations level; the requirement usually can be fulfilled within the context of emergency response training.

First Responder Technician Level

Employees responsible for stopping an accidental hazardous substance release must complete technician level training. Twenty-four hours of initial training are required, plus an additional eight hours of field experience and eight hours of refresher training annually. These individuals are designated on the basis of their training to plug, patch, or otherwise stop the release in an emergency situation.

First Responder Specialist Level

Specialist training requirements are similar to those of the technician level, but specialists are required to know more about the specific substances used at the facility.

Incident Commander Level

An employee trained as an incident commander may actually participate in the emergency response, decision-making process. All first responders trained above the awareness level who could potentially assume control of an incident must complete commander level training. As the title implies, these responders are trained to take command of an incident and coordinate on-the-scene emergency operations. Initial training requirements consist of 24 hours of formal training and an additional eight hours of field experience. In addition, commanders must complete eight hours of refresher courses annually.

The five levels of competency are illustrated in the following example.

Imagine that a pesticide is leaking from a tank and flowing toward a nearby creek...

- An employee trained at the awareness level should evacuate the area and contact company management personnel.
- An operations level employee should construct a dam ahead of the flow or otherwise contain the spill, thereby preventing the pesticide from reaching the creek.
- An employee trained at the technician or specialist level should attempt to stop the leak, e.g., repair a malfunctioning valve, while wearing sufficient PPE and taking appropriate safety precautions.
- A specialist should provide other emergency responders with detailed environmental and safety information on the specific product involved.
- An incident commander or a specialist should work with community emergency responders to make decisions on defusing the situation and should coordinate and direct trained personnel involved in remedial action.

What Must Be Done to Comply with This Regulation?

It is recommended that all employees be trained to respond to emergencies. However, minor spills that can be handled by employees, such as releases incidental to their job, do not constitute an emergency situation.

The level of training required depends on company policy, i.e., what management personnel expect of their employees. However, OSHA mandates that any business working with pesticides and/or fertilizers must at least train their employees (both full- and part-time) to the awareness level. Training to higher levels is required only if management expects employees to respond to an emergency. Basic awareness training may be conducted in-house and should convey the following:

- The definition of a hazardous substance and associated risks
- The need to identify hazardous substances during an emergency
- Potential repercussions of a hazardous substance emergency
- The role of first responder awareness level employees as set forth in the employer's emergency response plan

Recommendations



Recommendation 1

Document all training with itemized agendas, tests, certificates, and signed attendance sheets. If materials are passed out, either list the exact contents or keep the packet of information on file for subsequent referral.

Recommendation 2

Provide a trained person to answer questions that employees may have after viewing videos or reading publications purchased or rented to help with awareness level training.

Recommendation 3

If awareness level training applies to new employees, provide it immediately. They should be instructed to call 911 in the event of an accident when company representatives are not present.

Recommendation 4

Train all full-time employees to the operations level, covering the following:

- Basic hazard and risk assessment techniques
- Proper selection and use of personal protective equipment
- Basic hazardous materials terminology
- Basic control and containment operation techniques
- Basic decontamination procedures

Recommendation 5

Train at least one person to the technician and incident commander levels; in smaller companies, this person likely would be the company owner or manager. The designated person must have thorough knowledge of the facility and what is stored there and be able to communicate effectively with fire department, ambulance, and regulatory personnel. The individual must have authority to make on-the-spot, monetary decisions regarding emergency remedial action. The technician/incident commander should notify regulatory agencies of the mishap.

Recommendation 6

Invite local fire department, police, and emergency personnel, and possibly local and state regulators, to your facility. Making them familiar with your facility and the chemicals you handle could prove valuable in the event of an emergency.

Recommendation 7

Invite local emergency responders to speak at your training programs. Their training and experience will add credibility to your effort in teaching your employees how to deal with emergencies properly.

EXIT SIGNS

(OSHA, 29 CFR PART 1910.35)



Make sure all exits are marked clearly and that the path is clear

It is often necessary to evacuate a facility during an emergency, and a quick decision to do so can prevent injuries and save lives.

Employers often ask why they should post EXIT signs and escape routes when their employees already know how to exit the building. But we must recognize that excitement is a powerful emotion during an emergency, and people may panic and lose their way; new employees may not remember exactly where the exits are. Others such as salespeople, suppliers, customers, and the general public are often allowed to enter facilities without restriction; if an emergency were to occur while they are present, they might or might not remember how to get out.

What Must Be Done to Comply with This Regulation?

Place EXIT signs conspicuously and make sure doors serving as exits are side-hinged and accessible from both directions. Leave exit doors unlocked during business hours.

Place an EXIT sign above each exit door. OSHA mandates illuminated signs only if the area is dimly lit. Check with the fire department to see if local regulations require illuminated signs.

Recommendation

Exit Signs



Recommendations

Recommendation 1

With exits such as see-through doors that are not readily apparent, post EXIT signs with accompanying arrows indicating the route of escape.

Recommendation 2

Indicate all exits on the site evacuation map.

Recommendation 3

If EXIT signs are lighted, perform monthly inspections to verify their operation.

Recommendation 4

Perform periodic inspections to make sure all exits are adequately marked. This can be accomplished simultaneously with fire extinguisher and medical kit evaluations; documentation should be filed as a company record. (See page 28.)

Recommendation 5

Post NOT AN EXIT signs on or over doors that are not exits.

Recommendation 6

Keep emergency lighting available and inspect it regularly to make sure batteries are fully charged, etc.



Recommendation 7

Familiarize employees with fire alarm locations and conduct drills on how to signal other employees that there is a fire.

Recommendation 8

Keep all exit routes open and accessible. There must be at least 28 inches of clearance around each exit.

Recommendation 9

Post DO NOT BLOCK EXIT signs on the outside of the building, near each exit.



Unacceptable: Path to exit is cluttered and door is padlocked

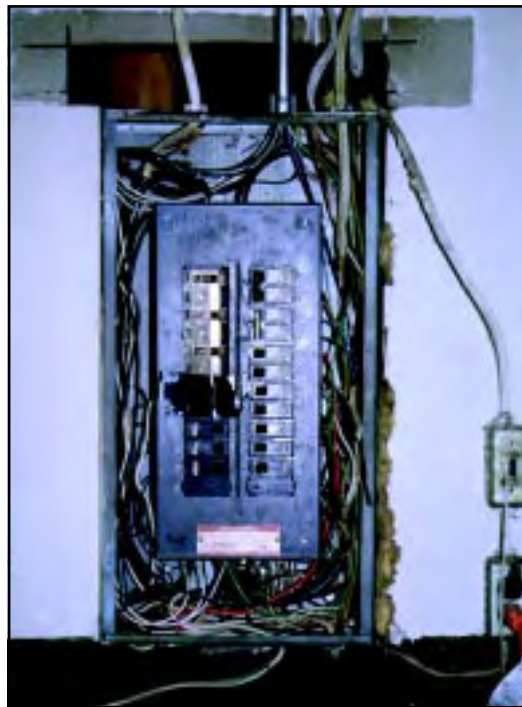
ELECTRIC PANEL MARKINGS (OSHA, 29 CFR PART 1910.303)

Most employees seldom have reason to access the breaker panel at the facility where they work. In some emergencies, however, it may be necessary to turn off power to one room or one piece of equipment. For example, during a spill or fire the power to a specific area might need to be turned off to ensure that emergency responders can work without threat of electrocution. Meanwhile, it might be essential to maintain power to other rooms or buildings so that emergency teams can operate their equipment. Label each circuit in the breaker panel as to what it controls, its voltage, and its amperage. And make sure all employees know where the panel is located as well as how to use it.

What Must Be Done to Comply with This Regulation?



Good



Bad

The two most important items to be addressed under this regulation are as follows: Make sure the outside of the breaker box is marked MAIN ELECTRICAL PANEL, and mark each circuit as to specifically what it controls (e.g., machine 3, air conditioning).

Keep covers in place over all breakers and the breaker box to prevent electrocution. All cover latches must be operational.

Recommendations

Recommendation 1

Make sure breaker box locations are noted on the evacuation map.

Recommendation 2

Include in your Emergency Response Plan a list of what each circuit controls.



Recommendation 3

As stated previously, label each circuit in the breaker panel as to what it controls, its voltage, and its amperage. Check breaker boxes regularly to confirm that each circuit is marked as to specifically what it controls, that each such identification is current, and that labels remain legible. All markings must be in permanent ink, not in pencil.

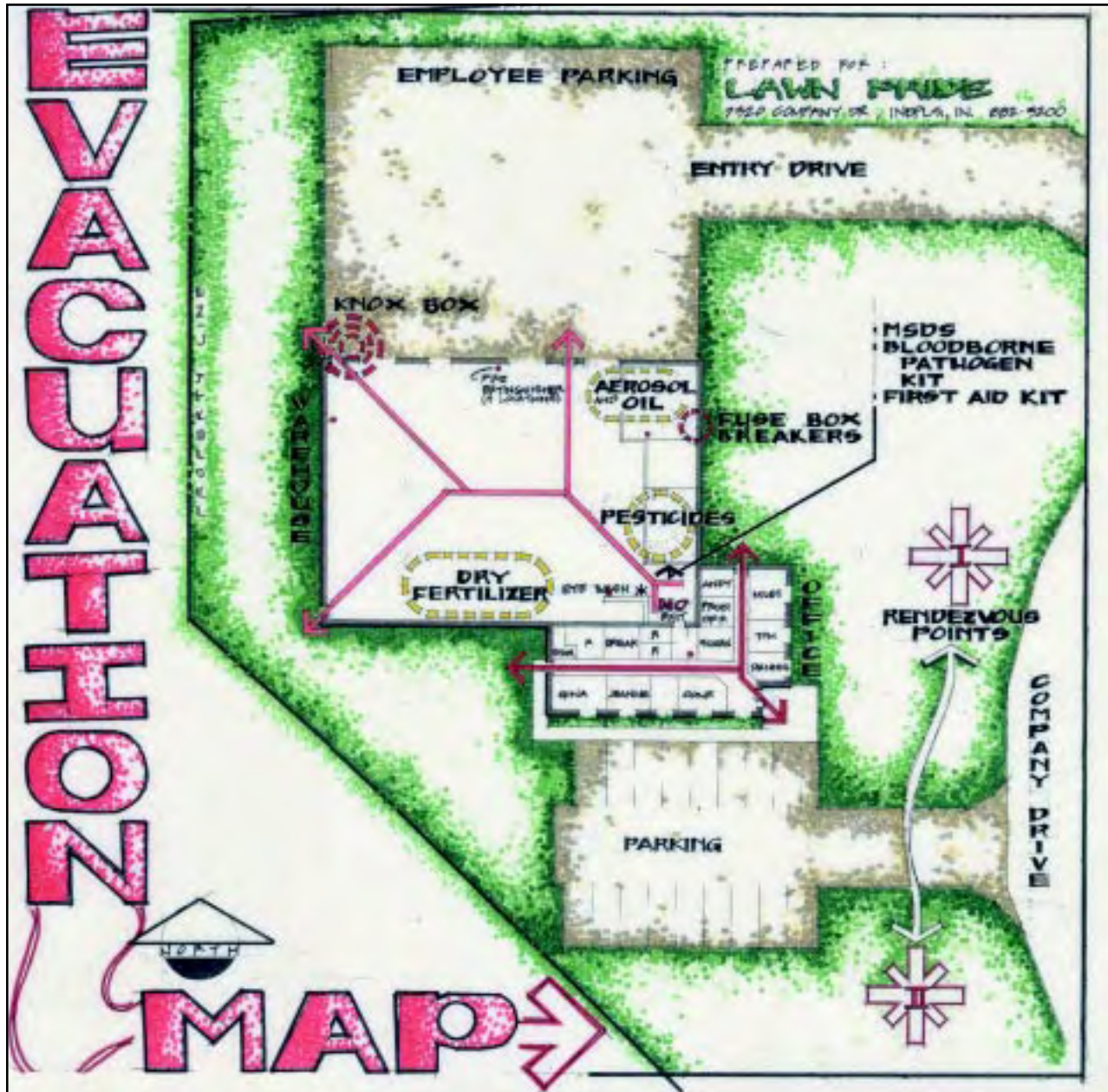
Recommendation 4

If electrical panel work is done, be sure to update circuit identification markings.

Recommendation 5

Make sure the circuit box remains accessible at all times. Keep an area clear at least 28 inches in front of the box.

EVACUATION MAP (OSHA, CFR 1910.38)



Map courtesy of Miles Floetker, Lawn Pride, Inc.

When a facility must be evacuated, it is important that it be done quickly and uniformly and that employees proceed immediately to a predesignated rendezvous point. A facility evacuation map should be posted conspicuously and employees made aware of the exit route to take in the event of an emergency.

The importance of meeting at a designated site can never be overemphasized. Having everyone rendezvous immediately after evacuation facilitates accounting for all employees. This is critical since the

emergency responders' strategy for controlling the situation may hinge on whether or not the area has been totally evacuated. For example, without confirmation that everyone is out, an incident commander might send firefighters into a burning building to look for persons trapped inside; verification that everyone is out of the building would prevent placing those firefighters in jeopardy. From another standpoint, as long as firefighters are inside a burning building, other emergency management strategies might have to be delayed.

What Must Be Done to Comply with This Regulation?

This regulation requires that employees be trained on evacuation routes and rendezvous points. Employers with ten or fewer employees can communicate verbally to employees about what they need to do in an emergency.

Recommendations

Recommendation 1

Create and post in employee break rooms, the main office, bulletin boards, and work areas an evacuation map for each building; copies should be filed with the Emergency Response Plan and in company policy and training manuals.

Recommendation 2

Verify the evacuation map regularly and make changes as necessary; *always* update it when the layout of the facility changes due to construction, the installation of new equipment, etc. Follow with immediate notification of employees. Schedule evacuation map evaluation along with those for fire extinguishers, medical kits, and exit signs.



Recommendation 3

Designate a first- and second-choice rendezvous point where employees are to proceed following evacuation. The second-choice site should be used if the first is made undesirable by the emergency itself. For instance, if the first-choice site turns out to be downwind of a burning building, employees should proceed to the second site.

Recommendation 4

Mark locations of the following on the evacuation map:

- Emergency exits
- Evacuation routes (each in a different color)
- Primary and alternative rendezvous points
- Fire extinguishers
- Fire alarms
- Sprinkler controls
- First aid kits
- Bloodborne pathogen kits
- Biohazard containers
- Eye wash areas
- Emergency showers
- Circuit breaker boxes
- Gas and water shutoffs
- Spill control equipment
- Tornado shelters

Recommendation 5

Assign an individual to account for all employees and visitors at the rendezvous points. Decide on a bright-colored vest or cap which that person is to wear in the event of evacuation, and train all employees to check in with that person upon reaching the rendezvous point.

Recommendation 6

Institute a sign-in and sign-out ledger for guests. Managers and supervisors should be made aware (each day) of all visitors on the premises for accountability purposes in the event of an emergency.

Recommendation 7

Conduct annual, unannounced drills to determine the effectiveness of training provided on emergency evacuation procedures. Analyze the results and compliment employees on the aspects that were performed well; call to their attention the things that need correcting, then schedule training to emphasize those points. Document the drill and all training conducted as a follow-up.

SITE MAP

(OSHA, 29 CFR 1910.38 AND 1910.120)

The site map is a requirement of OSHA's regulations dealing with emergency plans. Its preparation is one of the most important activities that any business can undertake. Essentially, it is a blueprint of the site which identifies all buildings and their exact locations; it also indicates exact locations within each building where chemicals are stored.

A detailed site map can convey vital information to emergency personnel in a matter of minutes. It can be a critical resource for first responders in assessing a situation and determining a plan of action.

What Must Be Done to Comply with This Regulation?

Site maps fall under OSHA's regulations on emergency planning. If an employer has fewer than ten employees, a written emergency plan is not required, so neither is a site map. Nevertheless, it is strongly recommended that business owners and managers develop site maps for use in emergency situations.

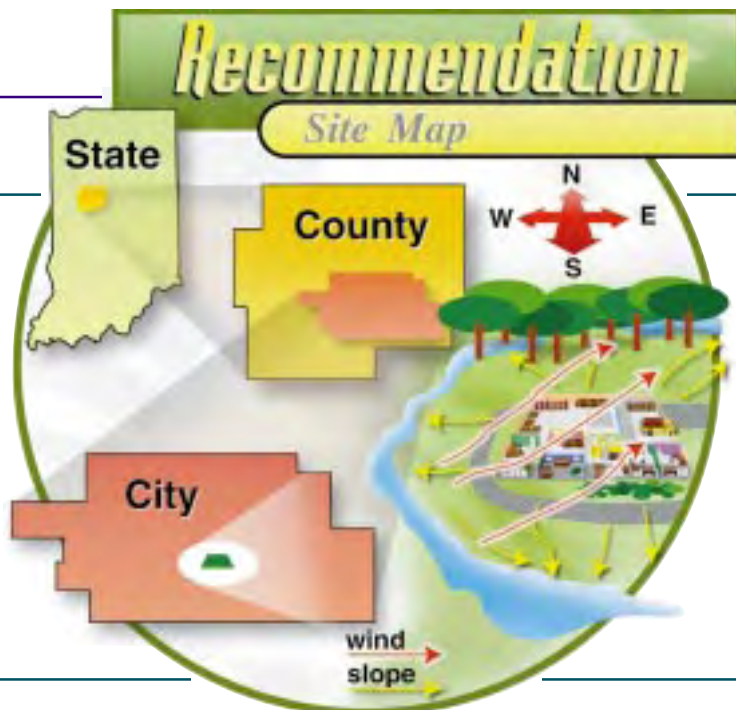
Recommendations

Recommendation 1

Post the site map in employee break rooms and the main office, and on bulletin boards; include it in company policy and training manuals and the company Emergency Response Plan. Also post it in a weatherproof exterior location where it is easily accessible to emergency responders. Review the map (and where to find it) with employees annually.

Recommendation 2

Draw the site map to scale.



Recommendation 3

Show the following on your site map:

- Direction legend: north, south, east, west
- Road numbers
- Ditches, rivers, and lakes on or near the property
- Points of access to the property
- The directional slope of the land
- Types and location of fencing on or around the property
- Name and exact location of each building
- Indoor and outdoor chemical storage areas
- Outdoor chemical mixing and loading areas
- Fuel storage areas
- Liquid propane tanks
- Anhydrous ammonia tanks
- Underground sewer, electrical, water, and gas lines
- Emergency disconnect sites for gas, water, and electricity
- Aboveground electrical service drop
- Tile drains (outdoors)
- Septic tanks
- Wells
- Fire hydrants
- Special equipment for cleanup of spills

Indicate the following with respect to the *interior* of each building:

- Building age
- Building dimensions
- Type of building construction
- Type of roof, window, and floor construction
- Location of MSDSs, first aid kits, fire extinguishers, and biohazard kits
- Chemical storage areas
- Chemical mixing and loading areas
- Emergency eye wash and shower areas
- Drains and where they lead

Keep a county map handy, showing the following:

- The business site
- The directional slope of the land
- Schools, hospitals, nursing homes, subdivisions, towns, etc., adjacent to the property
- Flow patterns of surface water
- Proximity of ditches, rivers, and lakes to the property
- Direction of prevailing winds (In Indiana the prevailing winds blow from the SW to the NE.)

Recommendation 4

Consider hiring a local high school or trade school student with experience in drafting techniques to help with the layout of the site map; or consider using one of the many computer programs available.

Recommendation 5

Confirm storm sewer outfall locations, using tracer dye. This information is useful in the event of a spill in that responders can identify the point at which the spill must be contained.

Recommendation 6

Color code all drains to differentiate storm sewers from sanitary sewers.

Recommendation 7

Videotape the site, with narration, and make the tape available to local emergency plan committees, fire departments, and other emergency responders. Their review of the tape will help prepare them to address an emergency at the site, should one occur.

Recommendation 8

Update site maps annually.

Recommendation 9

Include worst case scenarios in the emergency response plan.

EMERGENCY RESPONSE PLAN

(FEDERAL REGISTER, VOL. 61,
NO. 109, PP. 28642-28664)

The objective of contingency planning is to prevent emergencies; but if they do occur, the objective becomes a matter of reacting appropriately to minimize detrimental effects. Both aspects—prevention and reaction—require a well organized effort on the part of business owners and management personnel.

When government took the stance that businesses must adopt contingency plans to deal with emergencies, many state and

federal agencies wrote regulations requiring the development of emergency response plans. These regulations, despite originating in different agencies, were often very similar. But despite the similarities, each agency had its unique requirements. And pest control companies, in attempting to comply, often duplicated their own efforts. That is, they began anew to satisfy each requirement instead of adding to a plan already in place.

In 1996, the United States Environmental Protection Agency, the Department of Transportation, the Department of the Interior, and the Department of Labor agreed

to a single, consolidated plan: the National Response Team's Integrated Contingency Plan. Since that time, businesses have been able to develop and implement a single plan to satisfy all requirements. The resulting, more comprehensive plans are easier to train to and more efficient to maintain. There is no repetition. The focus on a single plan yields a well-informed employee base; workers are better prepared to react appropriately in emergency situations—a benefit to the business *and* the community.

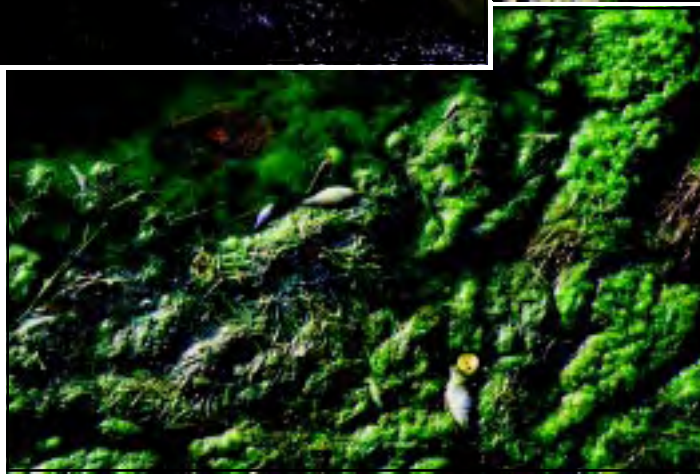
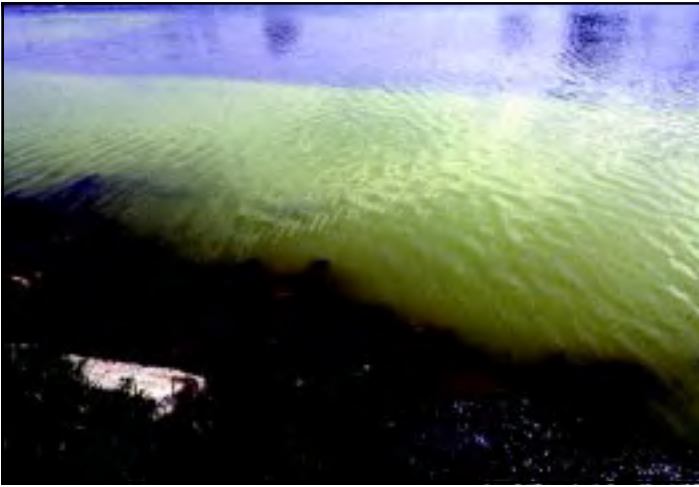
A contingency plan is only as good as the information it conveys to employees and emergency responders. It is useless if the only people who comprehend its intent and how to execute it are those who wrote it. Employees must be educated to understand the purpose of the plan, and they must be trained to perform their assigned duties in an emergency situation.



Chemical ate through hose (inset) and flowed out the back of the building into a tile leading to the city pond (see adjacent page).



It is essential that every employee and all emergency responders in the community be familiar with the plan. And it is equally important that the plan be updated on a regular basis to incorporate changes: phone numbers, new employees, new (company) emergency responders, new or reassigned position responsibilities, etc. A thorough review should be done at least annually, as should employee review and retraining.



Chemical from spill ran into tile which had to be dug up (top right) to stop the flow into the city pond (above) where it caused a fish kill (center). Chemical also reached the city sewage treatment facility (right).



What Must Be Done to Comply with This Regulation?

A written emergency response plan is required for most emergency response businesses, and in developing a plan the approach should be to fit it to your industry, your facilities, and your geographic site. The goal is not to impress with bulk, nor is it only to meet the letter of the law; and it is more than just putting a plan in writing. The goal is to prescribe procedures and policies to minimize injury, death, and environmental damage that could result from an emergency. A vital component of preplanning is to educate and train employees on how to carry out the plan in an actual emergency.



Recommendations

Recommendation 1

Post a 24-hour number on the outside of all buildings so that emergency responders will know where to call if an emergency occurs when the business is closed and the premises vacant.



Recommendation 2

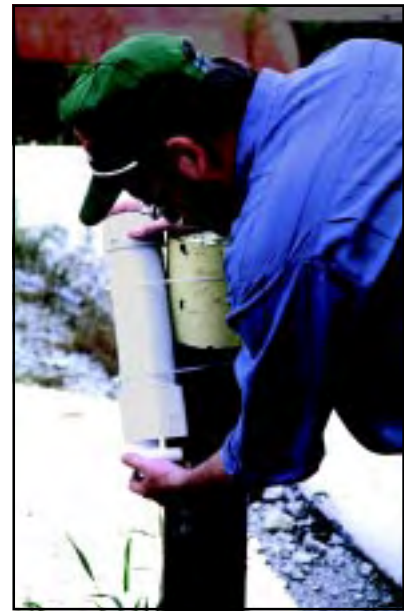
Train all employees and document all training on:

- the location of the written emergency response plan,
- the purpose and objectives of the plan,
- implementing the plan,
- who to contact in an emergency,
- where to rendezvous following evacuation, and
- who should deal with and talk to the media.

Recommendation 3

Personally deliver copies of the emergency response plan to local responders: fire departments, law enforcement agencies, emergency medical services, and emergency planning committees. Review the plan with them, and document their receipt of the plan. Such one-on-one contact is much more meaningful than their receiving the plan by mail. By showing this type of interest and initiative, you captivate the community's interest in your business and impress upon them that you have everyone's best interests in mind. Point out the following:

- Who to contact in an emergency
- Where employees are to rendezvous if evacuated
- Types of chemicals stored on-site
- Precise locations of chemical storage areas
- Important listings on the site map
- What you and your staff should and should not do in an emergency
- What expectations you have (e.g., a let-it-burn policy) when outside assistance is requested.
- The on-site location of the written plan, i.e., where emergency responders can access it
- Off-site locations where the plan is accessible



Emergency plan stored in a weatherproof canister (above) and in a mailbox (left)

Recommendation 4

Add value to the plan by inviting emergency responders to walk through your facility. Consider incorporating videos and photographs with the written plan and ask for suggestions to make the plan better; follow up on any recommendations they offer.

Recommendation 5

Update the emergency response plan annually and as changes occur. This practice is often overlooked, but the consequences of having emergency responders act on an out-of-date plan can be critical.

Recommendation 6

Stage a mock accident or spill, annually, and critique the generated response.

Recommendation 7

Contact hospitals to see if they can treat patients for exposure to the chemicals you handle, and ask if they have decontamination capabilities. Hospitals are often overlooked when notifying local responders.

Recommendation 8

Use the emergency response plan in this publication on the following page as a model for developing your own.

Recommendation 9

Spill recovery contractors play an essential role in follow-up operations related to a spill emergency. Select a reputable firm that you are comfortable with. Always obtain references—and check them—before signing a contract. Hire someone who understands your business *and* is knowledgeable on prevailing state and federal requirements; it is important that they accept the obligation to comply with local, state, and federal paperwork and permit requirements.

Preplanning in cooperation with the company is important. Discuss your operations, describe a worst-case scenario, and ask for a firm estimate before signing. Determine their availability and the amount of time it would take them to respond to an emergency at your facility. Insist on a number where you can reach them 24 hours a day. Select a company that either employs or can easily and quickly subcontract industrial hygienists, engineers, heavy equipment, specialized equipment such as laboratory and monitoring devices, and supplies needed during an emergency.

INTRODUCTORY ELEMENTS

Purpose and Scope

The purpose of our company's emergency response plan is to prepare employees for emergency situations. Safeguarding the environment as well as the health of our own personnel and people in surrounding communities is paramount. Strict compliance with the plan will lessen the potential for accidents and equip us to respond to emergencies in an organized and professional manner.

A primary objective of this plan is to educate employees to react appropriately to emergencies, pending the arrival of emergency responders, or to evacuate if their well-being is threatened.

Prevention Philosophy

The company strives continually to develop and implement practices and procedures designed to minimize accident and emergency potential. All employees—full- or part-time, salaried or paid hourly—must comply with all company policies and all local, state, and federal regulations.

Facility Profile

The (branch or site) of (name of company) is a commercial facility for (services provided, e.g., sales, distribution, custom application) of (type of product, e.g., pesticides, fertilizers, fuels). Business numbers and a detailed site map are provided on pages 66–69. The site map shows the exact location of the facility (with streets, roads, and highways clearly marked) and every structure on-site. It also includes directions on how to get there; recognizable icons such as large signs, chemical storage tanks, and structures that are visible from long distances are indicated, as well as geographical landmarks that can be used by emergency response personnel in finding the facility. All entrances to the property are clearly marked on the map.

Chemical Profile

Our chemical inventory varies throughout the year. See pages 70–73 for detailed information on chemicals that we store.

Employee Profile

We normally retain ____ full-time employees. We hire an additional ____ seasonal and part-time workers to meet production schedules during _____. We have ____ full time clerical employees and ____ mechanics who work on-site. The facility is staffed _____ (daily, M–F, etc.) between the hours of ____ a.m. and ____ p.m.

FACILITY INFORMATION

Name of Facility/Branch

Telephone _____ (main number) _____ (24-hr number) Fax _____

Geographical Site Address

Street/Road/Highway _____

County _____ Latitude _____ Longitude _____

Global Positioning System Coordinates _____

Mailing Address

Street or P.O. Box _____

City/State/Zip _____

Management Personnel

Name _____

Title _____

Telephone _____ (work) _____ (home)

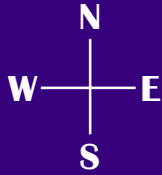
_____ (cell phone) _____ (pager)

Street or P.O. Box _____

City/State/Zip _____


COUNTY MAP

County Map



Geographic Location of Facility = X

Yellow Highlight Over Solid Black Line  = Most Common Route of Access

Solid Blue Line  = Alternate Traffic Route

Solid Red Line  = Route for Transporting Hazardous Materials

Verbal Directions for Most Common and Alternate Routes of Access

During an emergency situation it may become difficult to think clearly. These directions to the facility can be read easily when calling for assistance.

Most Common Route

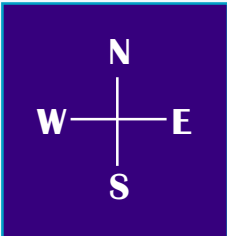
Alternate Route

SITE MAP



Code	Building, Storage Tank, or Other Structure
A	
B	
C	
D	
E	

EVACUATION MAP



Building or Other Structure _____

Site Map Code (from preceding page) _____

Utilities are marked with a red star (★).

Evacuation Routes =  Exits = 

First Choice Rendezvous Point = 

Second Choice Rendezvous Point = 

CHEMICAL INVENTORY (continued)

FERTILIZERS

Company Name _____ Date of Original Inventory _____

Geographical Address _____ Dates of Revision _____

NOTE: The amount of each fertilizer in inventory may fluctuate throughout the year, but the maximum amount of each fertilizer stored will not exceed the maximum stated here. The storage location for each fertilizer is identical in wording to the corresponding location on the site map (page 68).

A checked box indicates a chemical reported under Community Right-to-Know.

Fertilizer Trade Name	CAS Number	Storage Location Building Name and Code	Maximum Amount Stored	Month(s) of Highest Inventory	Size of Container
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					
<input type="checkbox"/>					

Revision History and Distribution of Emergency Response Plan

The company's emergency response plan is reviewed annually, at least, and more frequently as necessary. Revisions, employee training updates, and distribution records appear on page 76.

Regulatory Compliance

This Emergency Response Plan was written using the template provided in the National Response Team's Integrated Contingency Plan Guidance (Federal Register, Volume 61, Number 109, pages 28642–28664). This plan, as written, is intended to comply with EPA's Oil Pollution Prevention Regulation [40 CFR part 112.7(d) and 112.20], OSHA's Emergency Action Plan Regulation [29 CFR 1910.38(a)], and OSHA's HAZWOPER Regulation (29 CFR 1910.120). This plan also meets the requirements of the Office of Indiana State Chemist's Bulk Storage Regulations (355 IAC 5-6 and 355 IAC 2-7-1). The sequence and titles of topics suggested in the integrated plan have been modified to meet our specific needs.

CORE PLAN ELEMENTS

Emergency Response Policy

The most important thing to keep in mind in any emergency is to avoid putting yourself or anyone else at risk. Emergency responders, both trained company staff and professionals, should give highest priority to the prevention of personal injury. Responders should also make every effort to minimize environmental damage to the site and to surrounding properties. Protection of structures, chemical inventory, and supplies should be of concern only after any threat to human health and the environment has been satisfactorily addressed. Emergency responders can meet all three goals—protection of people, the environment, and the facility—by implementing an integrated, preplanned, well organized emergency response plan.

Location of the Plan

The most current revision of this written plan, along with other emergency information, is located as stated below (fill in the blanks).

EMPLOYEE INFORMATION

Date Original Information Was Recorded _____ **Updated** _____

A checked box indicates an employee who has keys to all buildings.

	Name	Title or Position	Telephone Numbers			HAZWOPER Training?		
			Home	Cell	Pager	Yes/No	Level	
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								
<input type="checkbox"/>								

REVISION HISTORY OF EMERGENCY RESPONSE PLAN

Date of Revision _____

Revised by

Name _____ Title _____

Telephone _____ (work) _____ (home)

Revision Reviewed and Approved by

Name _____ Title _____

Telephone _____ (work) _____ (home)

Changes Made _____

Employees Trained on Changes _____ (date)

Trainer _____ (name)

**Location Where Training Agenda and
Record of Employees Trained May Be Accessed** _____

~ THE BLANK VERSION OF THIS FORM MAY BE PHOTOCOPIED FOR SUBSEQUENT REVISIONS ~

If your personal copy bears a different date, use the more current version. Company management personnel will check this location periodically to ensure that all contents are intact.

A copy of the plan is also kept at the main office of this facility, at corporate headquarters, and at the homes of company-trained emergency responders.

A copy is on permanent display on the safety bulletin board located _____

Message to Community Responders

The company trains certain employees as emergency responders; therefore, someone is quickly accessible at all times to respond to emergency situations. Knowledgeable, authorized company employees are assigned to coordinate their efforts with those of professional emergency responders and to address questions posed by local fire, medical, and environmental emergency personnel.

See the page 78 for a list of our primary and alternate emergency coordinators. These individuals are authorized to make emergency decisions. They are familiar with the written emergency response plan, with the operations and layout of this facility, and with the on-site location of hazardous chemicals. Each person listed is authorized to commit company resources, manpower, equipment, etc., to manage emergency situations.

Company employees and emergency responders have been instructed to take no action without using personal protective equipment necessary to deal safely with the specific emergency.

Employees are instructed not to participate in emergency response if they feel that doing so would pose excessive personal risk. In such situations, emergency response is to be handled by professionals from the fire department, the rescue squad, or other teams appropriately trained and duly assigned those duties by local, state, and federal authorities.

The company requests that local fire departments consider how actions taken during their response to an emergency might impact the facility, the environment, and the surrounding property. Runoff is a serious issue relative to soil and water contamination, and the decision to apply large volumes of water should be made as a last resort. First consideration should be given to the amount of product in inventory, prevailing atmospheric conditions, and alternative control tactics.

In certain situations, it might be more desirable to let a structure burn than to extinguish it with water (let-it-burn policy, page 27).

PRIMARY AND ALTERNATE EMERGENCY COORDINATORS

Primary On-Site Emergency Coordinator

Name _____

Telephone _____ (home) _____ (work)

_____ (cell) _____ (pager)

Alternate On-Site Emergency Coordinator

Name _____

Telephone _____ (home) _____ (work)

_____ (cell) _____ (pager)

Primary Corporate Emergency Coordinator

Name _____

Telephone _____ (home) _____ (work)

_____ (cell) _____ (pager)

~ THE BLANK VERSION OF THIS FORM MAY BE PHOTOCOPIED FOR SUBSEQUENT USE ~

It is acknowledged that representatives from local, state, and federal agencies have authority to investigate emergencies. However, while on-site, said individuals are expected to follow the specific instructions of company-employed emergency coordinator. It is our policy that one of our employees shall be assigned to accompany all local, state, or federal authorities conducting investigations on-site, and that all safety protocols be strictly followed.

In cases where an emergency is in progress, local, state, and federal authorities may contact the company employees listed on the preceding page. Agencies should direct questions to the primary or alternate emergency coordinator. It is our policy that employees with relevant and useful information be accompanied by the designated emergency coordinator when addressing questions during an emergency.

The responsibility to notify local, state, and federal authorities of certain emergency situations is delegated to emergency coordinators specified by company management. Under no circumstances should any employee who is not so-designated be ordered to initiate notification procedures.

On-the-Scene Jurisdiction

It is our expectation that our on-site emergency coordinators will participate in decision-making processes during an emergency. They have been instructed to inform outside emergency responders when they believe that actions being considered would pose excessive danger to public health or the environment. Our emergency coordinators and other employees at the scene are to extract themselves from dangerous conditions when, in their opinion, actions being taken by the incident commander would jeopardize their personal well-being.

Company Response Management System

This response plan addresses a wide range of emergencies, including severe storms, floods, fires, explosions, injuries, deaths, and toxic gas releases. The company's employees are trained to quickly evaluate the circumstances surrounding an emergency before making decisions on remedial action. Guidelines set forth in this plan shall govern the decision-making process.

The company's emergency coordinators are instructed to take charge at the scene of an emergency. They are to manage the emergency according to the following guidelines.

Remarks to Employees

Never attempt to deal with any emergency situation, alone. Immediately upon recognition of an emergency, employees must alert the company's designated emergency coordinators, who will quickly interpret the cause of the emergency situation and implement steps necessary to stabilize it. But under no circumstances should employees attempt response measures clearly beyond their training. Employees unfamiliar with emergency response procedures should follow the instructions of designated emergency coordinators.

Remarks to Company Emergency Coordinators

- A. Notify all company personnel and visitors that an emergency exists.
- B. Address the situation in a controlled sequence.
 1. Assess the situation to determine the seriousness of the problem.
 2. Evacuate employees and visitors, if necessary.
 3. Take measures to prevent personal injuries.
 4. Control the source of the emergency, if applicable, to lessen the potential for adverse environmental impact.
 5. Notify authorities.
 6. Contact corporate headquarters.
- C. Document the following:
 1. Details of the incident
 2. Injuries and/or deaths
 3. Impact of the emergency on surrounding areas
 4. Actions taken
 5. Contacts made with service and regulatory agencies
- D. Material Safety Data Sheets (MSDS), the *North American Emergency Response Guidebook*, and professionals linked to MSDS emergency phone numbers are excellent sources for health and environmental guidelines when an emergency involves a hazardous chemical.
- E. Determine if additional help is needed: fire department; rescue crews; ambulances; company response team. Phone numbers are posted near each phone and on the outside of the office. When calling for assistance, be sure to do the following:
 1. Provide your name.
 2. Tell the responder that your emergency plan is on file.
 3. Provide your address and specific directions to the facility.
 4. Describe the type of emergency.
 5. Provide information on injuries or deaths resulting from the emergency.
 6. Advise the responder if the situation poses a human health threat to the surrounding community.
 7. Explain any potential impact on surrounding waterways or wellheads.
 8. Describe prevailing weather conditions at the site.
- F. Be sure to notify the Local Emergency Planning Committee in your county.
- G. Secure the emergency site until help arrives:
 1. Seal off the area to keep unauthorized persons at a safe distance.
 2. Keep people upwind of the site.
 3. Post company employees along the main road to direct emergency vehicles and to prevent unauthorized people from entering the area.

4. Document the name and agency affiliation of each person admitted on-site during the emergency.
- H. Initiate emergency diking procedures to keep contaminated runoff on-site. Direct contaminated runoff away from wells, storm sewers, ditches, and creeks.
- I. Turn off utilities within the emergency area. They are marked with a red star(★) on the evacuation map (page 69). Call utility companies if assistance is warranted.
- J. Do not provide transportation to local hospitals for slightly injured employees or bystanders; if injuries are not life threatening, direct injured parties into an isolated area to await evaluation by emergency medical personnel. This lends continuity to the effort of accounting for everyone.
- K. Continue to coordinate on-site activities until help arrives, but relinquish control to the outside emergency coordinator if no one from the company has been trained as an emergency coordinator. This is termed *transfer of command*.
- L. Begin writing detailed notes as soon as possible, or assign an employee do so; someone should write down the chronology of all details of (and responses to) the emergency, as they occur. Assign someone the responsibility for taking still photographs and videos to supplement written documentation. If your camera has the option to print a date on each negative, use it; and make sure that the time recorder on the video camera is engaged. If your video camera is equipped with a voice recorder, be sure to speak very clearly. As a general rule for shooting video, do not zoom in and out frequently; and do not walk while shooting, if you can avoid it.
- M. Notify local, state, and federal authorities.
- N. Continue to document every detail in the days following the emergency. The more complete the file, the better the company will be able to address legal, safety, and environmental issues that may emerge days, weeks, months, or years later.
- O. Make arrangements for bulldozers, back hoes, and general labor, as required. Page 88 contains a list of sources for such equipment. Management personnel of the firms listed have been informed of, and have agreed to, services that they might be called upon to provide during an emergency or during cleanup procedures following an emergency. Safety meetings held with representatives of these firms, following the incident, should be documented. Typically, safety meetings include topics such as a briefing on the situation at hand; the objectives of procedures to be performed; the risk potential involved; precautions that participants will need to take; and the types of personal protective equipment that should be worn. All participants brought on-site must have been trained for hazardous material operations, as required by OSHA.
- P. Know your deadlines. But file written reports with appropriate agencies only after the company's legal counsel has reviewed them for accuracy and language. If you cannot make the deadline, request an extension; and follow up by confirming the extension via certified mail. Log all conversations pertinent to the incident: date, time, parties involved, and the details of each discussion.
- Q. Upon completion of all remedial actions following an emergency, debrief employees, critique the company's handling of the emergency, and investigate polices and reactions that failed. Make changes to the plan and train employees accordingly.
- R. Maintain a complete incident file of original documents, on-site, and send a copy of the file to company headquarters.
- S. (Name company spokesperson) has been designated as the company's media spokesperson.

EVACUATION

- A. The on-site emergency coordinator will promptly notify all employees and visitors that an emergency exists and order immediate evacuation of the premises. Notification will be by voice or telephone intercom, audible alarm, or flashing lights as predetermined in this plan.
- B. Visitors will be instructed to follow the lead of company employees.
- C. When asked to evacuate, employees are to proceed immediately to the nearest exit. All exits are clearly marked on the evacuation map (page 69).
- D. Once outside the building, and without delay, everyone should proceed to the first-choice rendezvous point as indicated by a check mark (✓) on the evacuation map (page 69). If that site is inaccessible due to the incident in progress, everyone should proceed to the second-choice rendezvous point indicated on the evacuation map with a red X.
- E. Once everyone is safely outside, employees should promptly inform their supervisors of any prevailing condition, inside, that might impact the situation: equipment left running, for example.
- F. Make sure to check in with the person designated to account for all employees.
- G. Anyone safely outside who realizes that another employee is unaccounted for should immediately tell the person taking count. That person is responsible for reconciling the employee count with whatever attendance verification exists for the day in question. If all records of attendance are inaccessible due to the emergency, the person taking count should canvass those at the rendezvous point and ask for names of employees who were known to be absent that day, as well as names of those known to have reported for work but who are not present at the rendezvous point.
- H. Remain at the evacuation site until dismissed by the company's emergency coordinator.

EMERGENCY CALL LIST

Internal Emergency Coordinators

Employees are to contact the person at the top of the company's emergency coordinator list (page 84) as soon as possible after an emergency situation is detected. In the event that that person is unavailable, try the second person on the list, then the third, etc., until contact is made. Assume responsibility until that person arrives on-site.

EMERGENCY CALL LIST

INFORMATION THAT MAY BE REQUESTED

- **Directions to the facility (County Map, p. 67)**
- **Exact on-site location of the incident (Site Map, p. 68)**
- **Date and time incident occurred or was discovered**
- **Chemicals involved**
 - Type
 - Quantity
 - Source
- **Death**
- **Human Injuries**
 - **Number of persons injured**
 - **Type and extent of injuries**
 - Respiratory arrest
 - Loss of consciousness
 - Burns
 - Bleeding
 - Broken bones
 - **Accessibility of injured persons**
- **Potential threat to humans**
 - **Chemical burns**
 - **Inhalation hazard**
 - **Acute toxicity**
 - **Explosion**
- **Potential environmental hazards**
- **Movement of hazardous materials off-site**
 - **Direction of flow**
 - **Areas likely to be contaminated**
 - Wells
 - Ground water
 - Streams, creeks, rivers, lakes, etc.
 - Sewers and storm drains
 - Soil
 - Air
- **Prevailing weather conditions**
- **Identity of responders already on-site**
- **Potential for explosion or fire**
- **Company representative serving as emergency coordinator on-site (page 84)**
- **Equipment necessary to deal with the emergency (page 89)**

~ NOTES ~

EMERGENCY CALL LIST

INTERNAL EMERGENCY COORDINATORS

Call the person at the top of the company's emergency coordinator list as soon as possible after an emergency situation is detected. If that person is unavailable, put an **X** in the box and try the second person on the list, then the third, etc.; put a check mark (✓) in the box beside the name of the person with whom contact is established.

Emergency Coordinator _____ (name)

Telephone _____ (work) _____ (home)

_____ (cell) _____ (pager)

Time notified (voice contact) _____ a.m.
_____ p.m. _____ (signature of caller)

Alternate Coordinator _____ (name)

Telephone _____ (work) _____ (home)

_____ (cell) _____ (pager)

Time notified (voice contact) _____ a.m.
_____ p.m. _____ (signature of caller)

Alternate Coordinator _____ (name)

Telephone _____ (work) _____ (home)

_____ (cell) _____ (pager)

Time notified (voice contact) _____ a.m.
_____ p.m. _____ (signature of caller)

Alternate Coordinator _____ (name)

Telephone _____ (work) _____ (home)

_____ (cell) _____ (pager)

Time notified (voice contact) _____ a.m.
_____ p.m. _____ (signature of caller)

EMERGENCY CALL LIST

EMERGENCY RESPONDERS

Fill in names and numbers as part of the emergency plan. During an incident, check each box as notification is accomplished.

<input type="checkbox"/> Fire Department	DIAL 911
<input type="checkbox"/> City Police	
<input type="checkbox"/> State Police	
<input type="checkbox"/> County Sheriff	
<input type="checkbox"/> Ambulance	

Local

- Hospital _____ (name) _____ (phone number)
- Local Emergency Planning Committee (LEPC)
 - Chairman _____ (work) _____ (home)
 - Other _____ (work) _____ (home)
- Local Emergency Management Agency _____ (phone number)

State

- Indiana Emergency Response Commission _____ (phone number)
- State Fire Marshal (24-hr. number)..... (800) 420-0765
- Office of the Indiana State Chemist..... (765) 494-1492
- Indiana Department of Environmental Management..... (888) 233-7745

Federal

- National Response Center..... (888) 233-7745
- EPA Region 5 CERCLA..... (888) 233-7745

Signature of Caller _____ (date)

EMERGENCY CALL LIST

ADJACENT LANDOWNERS AND TENANTS

Fill in names and numbers as part of the emergency plan. During an incident, check each box as notification is accomplished.

North of Emergency Site

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

South of Emergency Site

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

East of Emergency Site

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

West of Emergency Site

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

_____ (name of occupant or contact person)

_____ (phone number)

Signature of Caller _____ (date)

EMERGENCY CALL LIST

PESTICIDE MANUFACTURERS

Fill in names and numbers as part of the emergency plan. During an incident, check each box as notification is accomplished.

<input type="checkbox"/> AgroEvo _____ (phone number)	<p style="text-align: center;">~ NOTES ~</p>
<input type="checkbox"/> American Cyanamid _____ (phone number)	
<input type="checkbox"/> BASF _____ (phone number)	
<input type="checkbox"/> Bayer _____ (phone number)	
<input type="checkbox"/> Dow AgroSciences _____ (phone number)	
<input type="checkbox"/> DuPont _____ (phone number)	
<input type="checkbox"/> FMC _____ (phone number)	
<input type="checkbox"/> Griffin _____ (phone number)	
<input type="checkbox"/> Monsanto _____ (phone number)	
<input type="checkbox"/> Novartis _____ (phone number)	
<input type="checkbox"/> PBI Gordon _____ (phone number)	
<input type="checkbox"/> Rhone-Poulenc _____ (phone number)	
<input type="checkbox"/> Rohm and Haas _____ (phone number)	
<input type="checkbox"/> Zeneca _____ (phone number)	

Others:

<input type="checkbox"/> _____ (company name)	_____ (phone number)
<input type="checkbox"/> _____ (company name)	_____ (phone number)

Signature of Caller _____ (date)

EMERGENCY CALL LIST

MISCELLANEOUS CONTACTS

Insurance Company _____
(name of company or contact person) (phone number)

Heavy Equipment Provider _____
(name of company or contact person) (24-hour phone number)

Indiana Department of Health _____
(phone number)

Spill Recovery Contractor

(1) _____
(name of company or contact person) (24-hour phone number)

(2) _____
(name of company or contact person) (24-hour phone number)

ChemTrec (subscription required) (800) 424-9300

InfoTrac (subscription required) (352) 323-3500

Indiana Poison Control Center (800) 382-9097

National Pesticide Telecommunications Network (800) 858-7378

Physician _____
(name) (phone number)

Utilities

Electricity _____ **Water** _____
(phone number) (phone number)

Natural Gas _____ **Other** _____
(phone number) (phone number)

Contractors for

Fill Dirt or Sand _____
(name of company) (24-hour phone number)

Hazardous Waste Disposal _____
(name of company) (24-hour phone number)

Other:

(name of company) (phone number)

Signature of Caller _____ (date)

EMERGENCY SUPPLY SOURCES

ON-SITE

Item	Location at the Facility List the building and the exact interior location where the article can be found.
Chemical-resistant gloves	
Respirators	
Splash suits	
Barricade tape	
Portable pumps	
Absorbent	
Push brooms	
Shovels	
Fire extinguishers	
Medical kits	
Recovery containers	
Diking materials	
Spill kit	

EMERGENCY SUPPLY SOURCES

OFF-SITE

Item	Name of Company	24-hr. Phone
Medical supplies		
Pumps		
Safety equipment		
Explosion-proof flash lights		
Portable toilets		
Sand		
Bottled water		
Self-contained breathing apparatus		
Food (e.g., Red Cross)		
Decontamination equipment		
Air cylinders		
Sandbags		

Adjacent Areas

The evacuation of public areas should be handled by the fire and police departments, but it is important for company personnel to cooperate in the effort. Preplan so that everyone will know what is expected of them, and review the plan at least annually.

Direct residents to a safe location—perhaps a school or a church—for accountability purposes; and instruct them to stay there pending notification that they may go. It is a good idea to designate multiple sites in the emergency response plan, just in case the primary location is inaccessible for any reason.

Sometimes it is impossible to get people to leave their homes, but do the best you can. Record the names of people who enter the shelter as well as those who refuse to evacuate.

A shelter should be staffed with law enforcement and emergency management personnel, emergency medical staff, and company representatives to keep evacuees up-to-date on the emergency situation. They should be kept informed as to when they might be allowed to return to their homes.

PROCEDURES for HANDLING an UNCONTAINED LIQUID CHEMICAL SPILL

- **Send someone or call to inform the emergency coordinator that a chemical has been spilled.**
- **Call appropriate local agencies: fire department, police, local emergency planning committee.**
- **Consult the material safety data sheet and emergency response guidelines for the specific hazard(s), personal protective equipment, cleanup guidelines, and evacuation distances.**
- **Never physically contact an unknown material. Stay upwind when identifying a spilled substance.**
- **Inform the product manufacturer of the spill, and solicit advice in dealing with the accident and for cleanup suggestions. Keep the manufacturer on the line for easy access as the emergency unfolds.**
- **Control (stop) the spill at its source by shutting off leaking valves, etc. If the leaking substance is hazardous, only trained individuals should assume this task.**
- **Eliminate all ignition sources, including pilot lights and electrical lights.**
- **Evacuate all nonessential and unprotected employees to a predesignated site.**
- **Make certain that everyone who enters the spill area wears safety equipment as specified by the MSDS. If the chemical is unknown, emergency personnel must wear a respirator, chemical resistant gloves and boots, goggles, and a Tyvek suit. Under no circumstances are employees to assist in the area of the emergency if they have not received formal instruction (employee training) on how to wear a respirator properly and unless they have been trained in the appropriate HAZWOPER category.**
- **Do not allow smoking, eating, or drinking in the emergency area.**

(continued)

PROCEDURES for HANDLING an UNCONTAINED LIQUID CHEMICAL SPILL

- Do not allow nonessential personnel to walk or drive through the affected area.
- Persons trained in the proper HAZWOPER category can work outside the spill area to prevent the spill from spreading, e.g., by making a dike to contain it.
- Utilize all available spill control materials to contain the spill. Large spills may require the mobilization of bulldozers and backhoes to build larger berms.
- Be prepared to assist fire departments and police with equipment, MSDSs, extra personnel, and technical support.
- Initiate cleanup of a small spill according to directions provided by state and federal agencies, in-house specialists, or product manufacturers. Chemicals and contaminated absorbent materials may be placed in secure drums. Mark each drum with the date and the name of the product involved.
- Use remediation consultants where large spills are involved.
- Store debris from each spill separately. Combining chemicals can trigger adverse chemical reactions. Some waste may be considered hazardous and require special disposal. Check MSDSs for incompatibilities.
- Decontaminate all equipment and place the generated waste in labeled containers. These containers should then also be considered hazardous, so mark them “HAZARDOUS WASTE” and label them with the date and contents.
- Replace all equipment and supplies used during cleanup.
- Remember the three C’s:
 - Control the source.
 - Contain the flow.
 - Clean up the spill site.

PROCEDURES for HANDLING a CONTAINED LIQUID CHEMICAL SPILL

- Cease all loading operations.
- Control the source, e.g., shut off valves. Only HAZWOPER-trained employees may take this offensive action within the spill area; outside the area, anyone may operate valves.
- Turn off pilot lights on equipment if spill is flammable.
- Disconnect pumps and electricity if an explosion hazard exists.
- Turn on electricity and reassemble sump pumps after ensuring that the explosion or fire is unlikely.
- Wash spill material into sumps.
- Place recovered materials and contaminated water into containers, and label each container with the date, time, and type of material stored.
- Analyze the stored materials for identification and concentration, or consider the contents to be 100 percent concentrate.
- Consult with the Office of the Indiana State Chemist (765) 494-1492), if a pesticide is spilled, before making an application of the stored materials to an appropriate site of application. Never apply at rates that exceed label recommendations.
- Consult the Indiana Department of Environmental Management on all other materials requiring disposal.
- Use absorbent products properly and also understand that their use may create additional disposal problems. Consult the Office of the Indiana State Chemist or the Indiana Department of Environmental Quality for advice on absorbent disposal. Whenever possible, use absorbent products that can be recycled or field applied, such as oil dry, ground corn cobs, peat moss, and fly ash. Pillows and fiber booms must be processed or hauled to a special landfill.
- Remember the three C's:
 - Control the source.
 - Contain the flow.
 - Clean up the spill site.

PROCEDURES for HANDLING a CONTAINED DRY FERTILIZER SPILL

- Dry chemical releases from normal handling operations should be cleaned up immediately to prevent accumulation, especially prior to rain.
- Return recovered dry material to the appropriate bins, or add it to a load of the same material being applied that day.
- Any waters collected which came into contact with these materials should be handled as product rinse water, and applied to a labeled site.

PROCEDURES for HANDLING a FIRE or EXPLOSION

- Know the capabilities of the local fire department.
- Evacuate all employees and visitors to designated areas upwind of smoke.
- Only employees trained on the proper use of fire extinguishers shall attempt to contain a small fire.
- Evacuation maps show exact locations of fire extinguishers.
- Fires larger than a waste paper basket should be left to professional firefighters.
- Immediately report any fire to the on-site emergency coordinator. In the event you are unable to notify the emergency coordinator, it will be necessary for you to contact the local authorities by dialing 911 or local emergency number.
- Inform responders that limited supplies are on hand to assist emergency coordinators or professional firefighters in their efforts.
- Do not allow any person to walk or drive through the fire area. This may require the posting of guards around the perimeter of the fire area.
- Shut down all operations within the structure that is on fire. This should be done prior to everyone leaving.
- Turn off electricity and all other utilities associated with the building. Check the facility map for the location of the turn off connections. Turn off electrical power to LP gas tanks.
- Do not use water on chemical fires, except to protect human health. However, the final decision is left to the fire department or incident commander at the scene.
- Be prepared to assist firefighters, but do not enter or get close to a burning building.
- Notify fire department of the available water supply on-site.
- Be prepared to dike around burning buildings if water is used as the extinguishing medium.
- Do your best to keep any contaminated water out of nearby ditches, streams, or drains.
- Implement your emergency response plan, and spill notification to the environmental contractor.
- Do not enter the area until the incident commander gives permission.
- The only personnel allowed to clean up the debris from a contaminated area are those trained in the appropriate HAZWOPER category.

VEHICLE EMERGENCY

- Have MSDSs, pesticide labels, emergency phone numbers, and extra fuses in the vehicle.
- Stop immediately if a chemical leak is detected or if the vehicle is involved in an accident.
- Park the vehicle in a safe location.
- Turn off the ignition and set the parking brake.
- Turn on emergency flashers.
- Put out safety triangles.
- If the accident involves human injury, do the following:
 - a. Make sure that the person is breathing.
 - b. Do not move the person unless their position is life threatening, e.g., if the vehicle is on fire.
 - c. Call 911, then your supervisor or the emergency coordinator.
 - d. Be prepared to describe the location of the accident and to provide pertinent information.
 - e. Keep everyone except emergency personnel out of spill area.
 - f. Repair the leak, if possible, but only if you have been trained to do so.
 - g. Fill out your company's Incident/Accident Report form; it will contain information that your insurance company and/or company safety committee may need.
- If the accident involves an environmental release, follow these guidelines:
 - a. Wear safety equipment.
 - b. Repair the leak, if possible, but only if you have been trained to do so.
 - c. Use shovels and spill material to build berms to prevent the material from entering creeks, waterways, or drains.
 - d. Call 911, then your immediate supervisor or the emergency coordinator.
 - e. Call the emergency number on the MSDS, if the chemical enters a waterway, to determine any potential impact on water consumption and aquatic wildlife.
 - f. Fill out your company's Incident/Accident Report form; it will contain information that your insurance company and/or company safety committee may need.
- Provide police with the following driver information:
 - a. Your name and home address
 - b. Company name and business address
 - c. Your license number
 - d. Vehicle license number
 - e. Name of your immediate supervisor
 - f. In the presence of the police, and/or other officials involved at the scene, remember the following:
 - i. Be cooperative, but answer questions cautiously. Admit nothing!
 - ii. Exchange pertinent vehicle, insurance, and driver information with any other drivers involved.

PETROLEUM EMERGENCY

- Evacuate employees and visitors to prearranged areas.
- Check with supervisor for dealing with small spills; contact your local fire department for larger spills.
- Turn off all power and pilot lights. Remember that electrical switches create small arcs when being turned on or off, thereby producing a potential ignition source.
- Identify the product involved.
- Check the MSDS for hazard potential: pollution, fire, explosion, etc.
- Wear personal protective equipment as prescribed on the label.
- Use nonsparking tools.
- Contain the spill with absorbent materials or by whatever means possible.

LIQUID PROPANE OR NATURAL GAS EMERGENCY

- Check with supervisor for dealing with small spills; contact your local fire department for larger spills.
- Evacuate all employees and visitors to the designated location.
- Eliminate all ignition sources within a 500-foot radius of the release.
- Turn off main valve if it can be done safely.
- Contact the propane or natural gas company for assistance (page 88).

ANHYDROUS AMMONIA EMERGENCY

- **Anhydrous ammonia is a liquid stored under pressure that becomes a gas when exposed to the atmosphere.**
 - **For small leaks, stop the flow of gas.**
 - **For large leaks, call the fire department.**
- **Skin contact with anhydrous ammonia can cause frostbite; inhalation can cause severe respiratory symptoms or death. Use appropriate safety equipment when dealing with any anhydrous ammonia release:**
 - **nonvented goggles**
 - **PVC gloves**
 - **boots**
 - **respiratory protection**
 - **DO NOT WEAR CONTACT LENSES**
- **Evacuate an area of 1500 feet in all directions from around the anhydrous ammonia release. Keep all employees and others from entering an area with a 30-foot radius around the site. The local fire department will make a determination whether more or less distance is required.**
- **Evacuate to a location upwind of any anhydrous ammonia release.**
- **Do not re-enter the evacuated area until given permission by authorities.**

NATURAL DISASTERS

TORNADOES

Tornadoes can occur any time of the year. In Indiana, peak months are April, May, and June. They are most likely to occur between 3 and 9 p.m. but may strike at any hour of the day or night. The average tornado moves from southwest to northeast.

Before the Storm...

- Develop a plan.
- Conduct frequent drills.
- Keep a highway map nearby to follow storm movement reported in weather bulletins.
- Purchase a NOAA weather radio, with a warning alarm and battery backup, for receiving warnings.
- Listen to radio and television for information.

Listen for...

Tornado *Watch* = Tornadoes are possible in the area. Remain alert for approaching storms.

Tornado *Warning* = A tornado has been sighted or indicated by weather radar.

If a Tornado *Warning* Is Issued...

- Shut down all nonessential energy sources.
- Account for all employees and visitors.
- Move to your predesignated place of safety.
- If an underground shelter is not available, move to an interior room or hallway on the lowest floor and get under a sturdy piece of furniture.
- Stay away from windows.
- Do not try to outrun a tornado in your car: Pull over, get out of the vehicle, and lie flat in a ditch or depression.
- If caught outdoors, lie flat in a ditch or depression.

FLOODS

Nearly half of all flash flood fatalities are auto-related. When driving during a storm, or while a flood watch is in effect, look for flooding at highway dips, bridges, and low areas. Remember that two feet of water will carry away most automobiles.

Before the Flood...

- Determine your elevation above flood stage to establish your flood risk.
- Keep your vehicle fueled; if electric power is cut off, gas stations may not be able to operate pumps for several days.
- Keep first aid supplies on hand.
- Keep a NOAA weather radio, a battery-powered portable radio, and flashlights in working order.
- Install check valves in sewer traps to prevent flood water from backing up into the drains.

(continued)

NATURAL DISASTERS

FLOODS

Listen for...

Flash Flood or Flood *Watch*: Flash flooding or flooding is possible within the designated watch area—be alert.

Flash Flood or Flood *Warning*: Flash flooding or flooding has been reported or is imminent—take necessary precautions at once.

Urban and Small Stream Advisory: Flooding of small streams, streets, and low-lying areas, such as railroad underpasses and urban storm drains, is occurring.

Flash Flood or Flood Statement: Follow-up information regarding a flash flood/flood event.

Flash Flood *Warning*...

- If advised to evacuate, do so immediately.
- Move to a safe area before access is cut off by flood water.
- Continue monitoring NOAA weather radio, television, or an emergency broadcast station for information.

During the Flood...

- Avoid areas subject to sudden flooding.
- If you come upon a flowing stream where water is ankle-deep, STOP! Turn around and go another way.
- Do not attempt to drive over a flooded road because the depth of water is not always obvious and the roadbed may be washed out. You could become stranded.

After the Flood...

- If food has come into contact with flood water, throw it out.
- Boil all water for drinking and cooking. Wells should be pumped out and the water tested for purity before drinking. If in doubt, call your local public health authority.
- Do not visit disaster areas. Your presence might hamper rescue and other emergency operations.
- Check and dry electrical equipment before returning it to service.
- Use flashlights—not lanterns or matches—to examine buildings; this is a safeguard against igniting any flammables that may be present.
- Report broken utility lines to appropriate authorities.

NATURAL DISASTERS

THUNDERSTORMS AND LIGHTNING

A typical thunderstorm is 15 miles in diameter and lasts 30 minutes. All thunderstorms are dangerous. They produce lightning that kills more people each year than tornadoes, and heavy rain from thunderstorms can cause flash flooding. Danger from strong winds, hail, and tornadoes also is associated with thunderstorms.

Who Is Most at Risk from Thunderstorms?

Lightning: People who are outdoors, especially near or under tall trees; in or on water; on or near hilltops.

Flooding: People in vehicles.

Tornadoes: People in vehicles.

Listen For.....

Severe Thunderstorm *Watch*: A thunderstorm *watch* indicates that conditions are right for a severe thunderstorm to occur. Watch the sky and tune to a radio or television channel to receive a warning if one is issued. A *watch* is intended to heighten public awareness and should not be confused with a warning.

Severe Thunderstorm *Warning*: A thunderstorm *warning* is issued when severe weather has been reported by spotters or indicated by radar. A *warning* indicates imminent danger to life and property in the path of the storm.

Before the Storm...

- Know the county in which you live and the names of nearby major cities.
- Check the weather forecast before leaving for an extended period outdoors.
- Postpone outdoor activities if thunderstorms are imminent.
- Watch for signs of approaching storms.
- Listen for weather updates on an NOAA weather radio, an AM/FM radio, or television.

When Thunderstorms Approach...

- If you can hear thunder, you are close enough to the storm to be struck by lightning. Seek shelter immediately.
- Move to a sturdy building. Do not take shelter in small sheds or beneath isolated trees.
- If lightning is occurring and there is no sturdy shelter available, get inside a hard top vehicle and keep windows up.
- Get away from water.
- Telephone lines and metal poles can conduct electricity. Unplug appliances not necessary for obtaining weather information. Avoid using the telephone and electrical appliances. Use phones only in an emergency.
- Turn off air conditioners. Power surges from lightning can overload the compressors.
- Get to higher ground if flash flooding or flooding is possible. Once flooding begins, abandon vehicles and climb to higher ground. Do not attempt to drive to safety. Note: most flash flood deaths occur in automobiles.

(continued)

NATURAL DISASTERS

THUNDERSTORMS AND LIGHTNING

If Caught Outdoors Without Shelter...

- Find a low spot away from trees, fences, and poles. Make sure the place you pick is not subject to flooding.
- If you are in the woods, take shelter under the shorter trees.
- If you feel your skin tingle or your hair stand on end, squat low to the ground on the balls of your feet to minimize your contact with the ground. Place your hands on your knees and your head between them, i.e., make yourself the smallest target possible.

WINTER STORMS

Sometimes winter storms are accompanied by strong winds creating blizzard conditions with blinding wind-driven snow, severe drifting, and dangerous wind chill. Strong winds with these intense storms and cold fronts can knock down trees, utility poles, and power lines.

Everyone is potentially at risk during winter storms. The actual threat to you depends on your specific situation. Recent observations indicate the following are contributors to winter deaths.

Deaths Related to Ice and Snow:

- About 70% occur in automobiles.
- About 25% are people caught out in the storm.
- Majority are males over 40 years old.

Deaths Related to Exposure:

- 50% are people over 60 years old.
- Over 75% are males.
- About 20% occur in the home.

Listen for...

Winter Storm *Watch*: Severe winter conditions, such as heavy snow and ice, are possible. Prepare now!

Winter Storm *Warning*: Severe winter conditions have begun or are about to begin. Stay indoors!

Blizzard *Warning*: Snow and strong winds will combine to produce a blinding snow (near zero visibility), deep drifts, and life-threatening wind chill. Seek refuge immediately.

Winter Weather *Advisory*: Winter weather conditions are expected to cause significant inconvenience and may be hazardous. If caution is exercised, conditions should not become life-threatening. The greatest hazard often is to motorists.

Frost/Freeze *Warning*: Below freezing temperatures are expected and may cause significant damage to plants, crops, and fruit trees. In areas unaccustomed to freezing temperatures, people without heated homes need to take precautions.

(continued)

NATURAL DISASTERS

WINTER STORMS

Have Ready at Work...

- Flashlight and extra batteries
- Battery-powered NOAA weather radio and a battery-powered portable radio to receive emergency information
- Extra food and water. High energy food, such as dried fruit or candy, and food requiring no cooking or refrigeration is best.
- First aid supplies
- Ample heating fuel. Fuel carriers may not reach you for days after a severe winter storm.

Vehicles

- Fully check and winterize all vehicles before winter.
- Keep gas tanks near full to avoid ice in the tank and fuel lines.
- Try not to travel alone.
- Let someone know your timetable and primary and alternative routes when traveling in inclement weather.
- Carry a winter storm survival kit.

EARTHQUAKES

- Stay indoors. Take cover under furniture or brace yourself in a doorway.
- Stay near the center of the building and away from glass and windows.
- If outdoors, stay away from structures and electric lines.
- Keep employees together after earthquake is over.
- Keep all persons out of damaged buildings.
- Evacuate the area if necessary.
- Do not drink water or flush toilets until it is determined that lines are undamaged.
- Use binoculars to assess damage to tall structures.
- Notify fire departments when conditions warrant their assistance.
- Prepare a damage report, paying attention to downed power lines, especially, and potential fires, spills, and damaged buildings.
- Aftershocks can occur for several months after the main quake. Each occurrence may trigger additional damage to previously weakened structures.

BOMB THREATS AND THREATENING CALLS

- **Take all bomb threats seriously.**
- **In the event of a bomb threat, keep the caller on the line as long as possible, and record the call if you have that capability. If you cannot tape the call, listen for background noise. Write down as much of the conversation as possible (see checklist on page 106).**
- **Pass a note to a coworker, informing them of the threat and telling them to call the police and begin evacuation procedures.**
- **Try to make the caller understand that if the bomb is detonated many people could be seriously injured or killed. Ask the caller to tell you where the bomb is located so that the area can be evacuated.**
- **Wait until the state police have inspected the area before resuming normal activities.**
- **Complete the checklist on the following page.**

BOMB THREATS AND THREATENING CALLS

CHECKLIST

Your Name _____

Date _____ Time _____ a.m.
p.m.

Information on the caller: male female adult child

Was the call local? long distance? from within the building or facility?

Caller's voice characteristics: loud soft deep
 high-pitched clear raspy

Caller's speech characteristics: fast slow distinct
 clear slurred distorted

Language skills: excellent good poor

Accent characteristics: local foreign Possible race _____

Was the caller calm? angry? rational? irrational?
 cursing? deliberate? emotional?

Background Noise: factory? office machines? music? traffic?
 Airplanes? trains? animals? crowd Noise? silence?

• Ask the caller these questions:

- When will the bomb go off?
- Where is it located (e.g., in which building; where in the building; where on the grounds)?
- What kind of bomb is it?
- How do you know it will go off?
- How do you know so much about this facility?
- What is your name and address?

MEDICAL EMERGENCY

- Stop all activities immediately.
- Have someone call 911.
- Verify the safety of responders.
- Check on victims.
- Do not move victims unless their location puts their lives in danger.
- Calm the victims and stay with them until professional help arrives, but do not administer first aid unless you are trained to do so. First aid is to be administered only by trained personnel.
- Call the emergency number indicated on the product's MSDS. The manufacturer's medical personnel may offer valuable input on the immediate care of the injured; they also may advise what actions to take to guard against additional injuries as the emergency unfolds.
- Have nearby company employees assist in evacuating the area, directing emergency responders from the highway to the scene of the accident, keeping bystanders a safe distance away, etc.
- Establish the identity of all victims and notify their families.
- Try to find out exactly what took place and how the person was injured.

EMPLOYEE TRAINING GUIDELINES

Consider the following ideas when providing emergency response training for employees.

- The Emergency Response Plan is located in the main office and is posted on bulletin boards for quick access and reference.
- Employees will be trained annually on the contents of the plan and what is expected of them.
- New employees will be trained on the contents of the plan as part of their new employee orientation.
- All employees will be informed immediately of new safety procedures that impact them.
- It is important to act quickly, but safely, during an emergency.
- Emergency phone numbers are posted throughout the facility.
- Employees who have not been trained to deal with emergencies are not to get involved.
- Employees who have not received training on respirators are not to get involved during an emergency that requires one.
- Employees who have not been trained to use fire extinguishers are not to use them.
- Employees are expected to report to their supervisors any unsafe practices which could lead to employee injury or chemical release.
- All employees of other companies who unload fertilizers, pesticides, and fuels must show proof that they have been trained to safely load and unload the products.
- Employees will be trained on proper evacuation procedures at least on an annual basis.
- All new employees will receive in-house training on safety in handling, mixing, using, storing, and disposing of hazardous chemicals; employees will not be assigned such duties until training is completed.
- Employees will be taught the three C's in dealing with a spill: Control the source. Contain the flow. Clean up the spill site.
- Employees will receive awareness training and will be instructed how to recognize a problem, identify the cause, and secure the scene of an emergency; they also will be taught how to communicate the hazard (duty to warn).

MEDIA MANAGEMENT

OWNER OR MANAGER

Up-to-the-minute awareness of what is happening is crucial, and it is the responsibility of the emergency response coordinator to keep the Media Relations Representative apprised of an emergency situation as it unfolds.

The more significant an incident, the more media coverage you can expect, so make sure that your spokesperson is equipped with enough details to satisfy media curiosity.

- Cooperate by making your spokesperson available throughout the event to coordinate media response activities.
- Be prepared: Investigate all elements of the crisis and organize your facts to ensure that all important points are addressed with the Media Relations Representative.

MEDIA RELATIONS REPRESENTATIVE

Management must make sure that all employees know who is the company's Media Relations Representative, i.e., the designated company spokesperson, and that they know to defer all media questions to that individual.

If you are the spokesperson, don't wait for a crisis; make yourself known. It is important to develop a healthy relationship with the media, establishing yourself as a dependable and credible source of information. Positive communication heightens understanding and lessens confusion and mistrust in times of crisis. Good communication skills are essential.

When dealing with the media during a crisis, set a time and location for a news release, stick to it, and by all means tell the truth.

- Assume that microphones are on and cameras rolling.
- Respond quickly. Deal with an issue early to avoid misinterpretation and fear.
- Communicate by providing the media enough information to file their story.
- Let the media know the situation is under control. Anticipate questions and plan concise answers.
- Stay calm. Avoid confrontation. Never argue or lose your composure. If a question contains words you dislike, don't repeat them. Politely correct hostile or inaccurate remarks in your answer and avoid assigning blame.

MEDIA MANAGEMENT

MEDIA RELATIONS REPRESENTATIVE

- Be clear, concise, and consistent. Make sure your answers are easily understood. Don't use technical terminology or jargon unless you are prepared to explain it. If you must leave some information out, be sure to tell reporters what they need to know and use qualifiers so they don't feel misled by new information. State your policy and stick to it.
- Be factual. Avoid extreme positions. Don't be led into unfamiliar territory. Keep the interview on track by emphasizing the points you want to make.
- Never say "no comment." It invites speculation. Offer to update the media when more information is available.
- Don't say anything "off-the-record." There is no legal obligation for a reporter to keep anything off-the-record. If you have a comment that you do not want publicized, don't say it.
- Never speculate. If asked a hypothetical question, state what you know at the time and let the reporter know you'll be available, later, for follow-up questions.

LOCAL TELEVISION

Contact Person _____

Phone _____ Fax _____ E-Mail _____

LOCAL RADIO

Contact Person _____

Phone _____ Fax _____ E-Mail _____

LOCAL NEWSPAPER

Contact Person _____

Phone _____ Fax _____ E-Mail _____

CONCLUSION

Prevention of pesticide accidents is the first line of defense, but of equal importance is being prepared for emergencies; this can never be overemphasized. Preparation can make the difference between a controlled emergency and total chaos. Preplanning can minimize damage, injury, and the cost of cleanup.

But even with the best of training, accidents can and will occur. No company is immune to accidents around the shop, on the road, or on a customer's property.

Given the fact that fires and spills will occur, it is important that business owners and managers thoroughly understand their insurance coverage: what is covered and what is not, and what limitations or exclusions apply.

It is the sad truth that many who believe they are insured for fire, theft, and spills often are negatively surprised when they seek restitution for a loss. They may be told that a particular type of accident is not covered, that the amount of coverage is quite low, or that a steep deductible applies.

Emergencies are aggravating and stressful, and they often take longer than anticipated to resolve. It is impossible to predict how, when, and where an emergency will occur or how responders will deal with it. No two emergencies are exactly the same, but not knowing exactly how an emergency might unfold should not be used as an excuse to avoid preplanning.

Responders must be trained to assess each situation and make a decision on what action to take; it might mean proceeding as outlined in the emergency response plan or making split-second decisions to modify the plan.

It is imperative that emergency response plans be reviewed with employees on a regular basis. Information must be updated regularly so that management personnel and employees know precisely what procedures to follow if an emergency occurs. Stage a mock emergency



annually to confirm that your work force is adequately trained, and follow up by repeating training in weak areas.

We all hope never to face an actual emergency, but we must prepare for the possibility. Only a real-life emergency can put an emergency response plan to the test. Only in that experience can the effectiveness of our preventive measures, safety practices, and employee acceptance be measured, for it is only then that we truly implement the plan. And it is only then that our skills and knowledge—and those of our employees—must prevail. It is only then that we will be called upon to make quick decisions and to rely on the judgment of others trained to respond. Tip the scale in your own favor: Always be ready for the unexpected.

ACKNOWLEDGMENTS

Steven and Paula Adduci, i2i Interactive (illustrations)
Steve Banister, ServiceMaster
Joe Becovitz, Office of the Indiana State Chemist
Denny Belau, United Agri Products
Tom Delaney, Professional Lawn Care Association of America
Charles Grady, Indiana Department of Environmental Management
Paul Hardy, Orkin Pest Control
Stoy Hedges, Terminex International Company
Jerry Hebert, Indiana Department of Labor
David Hibbs, Rhone-Poulenc Ag Company
Bill Hoopes, Scotts LawnService
Ed Van Istendal, B. & D. A. Weisburger
John Lerner, Weber Manufacturing
Larry Lucas, The Andersons
Jesse McDaniel, Countrymark Cooperative
Tom Meltner, Indiana Department of Environmental Management
Dennis Meredith, Alliance Production
D. L. Paulson, Novartis
Matt Pearson, Office of the Indiana State Chemist
Larry Pinto, Pinto Associates
Terry Pollard, Nebraska State Patrol
Roger Powers, Allen County Emergency Management Agency
Craig Schroll, FIRECON
Dave Sieber, Morning Star Corporation
Brad Smith, Indiana Department of Environmental Management
Thomas Stanley, Countrymark Cooperative
Mark Stoddard, Indiana Department of Environmental Management
Gary Teeple, Central Soya
Tim Thomas, Office of the State Fire Marshal
Scott Wiedeman, Turfmaster by Wiedeman
Roger Yeary, TruGreen-ChemLawn

This publication is for educational purposes only. It is not intended to offer legal advice. Always read the regulation and, when in doubt, contact the regulatory agency or your legal counsel.

The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by the Purdue University Cooperative Extension Service is implied.

Cooperative Extension work in Agriculture and Home Economics, state of Indiana, Purdue University and U.S. Department of Agriculture cooperating. H.A. Wadsworth, Director, West Lafayette, IN. Issued in the furtherance of the acts of May 8 and June 3, 1914. The Cooperative Extension Service of Purdue University is an equal opportunity/equal access institution.