PENNSYLVANIA PEST CONTROL
ASSOCIATION
YEAR 2000
WATER CONTAMINATION
AWARENESS PROGRAM

March 1, 2000
ACKNOWLEDGEMENTS:

The Pennsylvania Pest Control Association wishes to acknowledge the selfless contributions of the J. C. Ehrlich Company and Terminix in the design and preparation of The Pennsylvania Pest Control Association's Year 2000 Water Contamination Awareness Program.

The materials contained herein were derived in whole or in part from the existing programs of these two companies and reproduced with their express permission.

A special thank you goes to Paul Kilar, Vice-President of J. C. Ehrlich and Chairman of The Pennsylvania Pest Control Associations Year 2000 Water Contamination Awareness Program. It was through his expertise, direction, guidance and advice that this program was made possible.

The PPCA, also wishes to thank Chris Anfinsen, of Terminix, for his immense contribution of time and knowledge in the formulation and implementation of this program.

The Pennsylvania Pest Control Association is forever grateful to J. C. Ehrlich and Terminix for their sharing of materials, resources and manpower in the development of this program.

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HOW TO USE THIS PUBLICATION

This publication is designed to provide accurate and timely information on the topic of water contamination.

Section’s I & II quickly highlight the serious consequences associated with an accidental release and how contaminations occur.

Section III outlines prevention techniques that should prove useful for any size operation. This section also provides a sample of a prevention check list, that when properly completed, will provide a wealth of information on many aspects of the facility while “flagging” various areas that might need special consideration. We have also included a prevention checklist for equipment. These checklists are only tools to assist you in your evaluation of work to be performed and should be completed for every termiticide job. This obviously does not preclude the use of common sense.

Section IV begins with a brief outline of emergency response procedures with tips on general clean up of surface chemical spills, solid leaks and emergency decontamination procedures. This section also includes a general outline of the emergency response checklist for the technician and emergency coordinator.

Section V outlines the various types of termiticide treatments. This section gives the reader a quick understanding of the many treatment options available.

Section VI gives you a step by step outline of how you can create your own Spill Control Manual. It includes specific examples of procedures to be used by both the technician and emergency coordinator.

Section VII provides an overview of alternative treatment methods.

Section VIII provides an outline of what constitutes a good spill control kit.
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CONSEQUENCES
SECTION I

CONSEQUENCES

Regulatory Pressures:

There has always been a significant amount of interest on behalf of state and federal agencies, charged with the responsibility of monitoring our waterways. However, recent civil settlements with a few of the larger pest control companies, operating within the State, has sent a loud and clear message that the industry will be expected to operate under a "Zero Tolerance" policy when it comes to environmental spills! In layman's terms, this means that any incident of a discharge, accidental or not, will be viewed as an illegal discharge of industrial waste into the waters of the Commonwealth.

In a recent letter from the Southwest Region of the Department of Environmental Protection, Counsel is on record as stating that it is the DEP's hope that all pest control operators in Pennsylvania would consider adopting a policy where no liquid injection application methods be used for any structure, if structure is located within 200 feet of a stream, lake or pond; or where the structure has foundation drains that discharge within 150 feet of a waterway; or any structure that is within 100 feet of a well.

Effect on Customers:

A spill of any magnitude has a significant impact on the customer. Instead of them having the satisfaction that they have finally resolved their termite problems, they are now surrounded with government officials, hazardous material contractor, and environmental specialist. Their allegiance to your company can quickly change. You are no longer the solution to their problems, but you are the problem! They are concerned about their own financial liabilities for the incident, possible devaluation of their property due to the contamination and long term health issues. And just about the time you need the most cooperation from the customer, you might find your relationship to be severely strained.

Public Pressures:

For the most part, the public is made aware of environmental spills via the news media. And while any spill is serious, the press has a way of escalating the magnitude of the incident with eye catching headlines....15 Miles of Muddy Creek contaminated, killing thousands of fish and tens of thousands of crayfish! This obviously creates a negative opinion of the Pest Control Industry in general, and not a very good impression of your company on a local level.
Financial Impact:

As outlined earlier, the financial impact on a company can have far reaching consequences. The average cost for initial clean up of a termicide spill can quickly reach the $50,000 to $75,000 range. Follow-up containment could be ongoing for months or even years. The cost for qualified hazardous material processors is expensive. And the cost to capture and discard spent materials is high. Cost to process a tanker full of residue could cost in the range of $6,000 to $8,000 per load. Periodic lab sampling starts at $400 to $600 per sample. (Current DEP acceptable detection levels are at Zero (0) Parts Per Billion PPB). And remediation of the actual structure could range from your installing a new septic system to buying the entire house! When completed, an incident could easily reach $300,000 to $500,000. With some recently reported at over $1,000,000!

And these costs are before any civil penalties are charged against you from the Pennsylvania Fish & Boat Commission and the DEP. Recent serious spills have dictated civil settlements in the $250,000 range!
SECTION II

HOW CONTAMINATIONS OCCUR
SECTION II

HOW CONTAMINATIONS OCCUR

The following is a review of a number of potential water hazards that could lead to a water source or waterway contamination.

Wells:

In rural areas, wells are often the primary water source for most properties. Wells are usually constructed by drilling to the bedrock and installing a well casing. The bedrock is then drilled below where the casing meets it exposing cracks or openings in the rock that contain water. As the water feeds into the bore hole, a pump sometimes located deep in the well pumps water through a feed line up and over to the foundation of the structure. (Some pumps are located above ground or in the structure.) The feed line penetrates the foundation moving water to a pressurized holding tank. As water is used the pressure drops to a point where the pump automatically turns on, refilling and re-pressurizing the tank usually up to around fifty pounds per square inch. The holding tank then feeds the structure on demand. The well casing usually is located outside the structure. (The well head) However, sometimes the well head may be buried underground and the location of the well may only be estimated.

Feed lines are usually buried below the frost line, and the soil around them can settle leaving gaps. When liquid termiticides are applied to soil outside a structure or to foundation voids, the material could find its way to the feed line and follow the gap to the well casing. From there it falls to the water source. The closer the structure is to the well the more the hazard.

Even wells that are located up hill from a structure can become contaminated. Shale or other rock formations buried along a structure can have cracks that allow moisture to flow downward to a location at the casing deep underground.

Cisterns:

Cisterns are another water supply system. A cistern is an artificial reservoir for storing liquids fed by ground water, springs or rainwater. They may be located inside or outside a structure. Cisterns also may have a pump and feed line system and may be contaminated by materials following the feed line or by direct termiticide seepage into the reservoir.
French Drains:

French drains are systems designed to carry water away from the inside or outside soil around a structure. Inside a basement, normally a one or two foot trench along the foundation is filled with gravel that surrounds a perforated pipe. Weep holes may be drilled at the base of foundation voids to allow moisture to seep into the French drain. The gravel filled trench is covered with a layer of cement. As water enters either from under the slab or from the foundations it travels the pipe to a sump pit, and when the water level rises to a certain point a float kicks on the sump pump. Water is then pumped up and outside the structure. Some French drains are pumped directly into sewer systems or a nearby stream or pond.

Exterior French drains are usually installed before the backfill is placed along the foundations of a structure during its original construction. Again, a perforated pipe and gravel installed at the base of the foundation are used to absorb and move moisture to an outlet downhill and away from the structure. These drain systems may empty into or nearby streams or other bodies of water and must be inspected carefully.

French drain systems can be contaminated by applying liquid termiticides to foundation voids where the material falls to the base of the foundation and seeps through weep holes into the system. Contaminations also occur when termiticides are applied to the soil beneath basement floors causing direct contact with a French drain, or when termiticides are injected into exterior soil where they may filter down to an exterior water removal system. The drain-lines for some of these systems may travel as much as several hundred feet from a structure. Outlets are often found along the banks of streams, ponds, rivers or other bodies of water.

French drains are extremely dangerous contamination hazards and must be evaluated carefully. Even the French drain that seems to pump harmlessly out onto the back lawn may have an outlet uphill from a body of water and a heavy rain may move recently applied termiticides causing a contamination.

Rain Gutter Systems:

Roof drains are another system that directs water away from a structure. Downspouts either empty into channels or pipes that lead water above ground or direct water through pipes below ground. A roof gutter system can collect and channel hundreds of gallons of water during a major rain event. Their outlets may drain into storm sewers, onto lawns, or into streams or other bodies of water.

Contaminations can result when liquid termiticides are applied to soil near underground drain lines that empty into or near water sources and waterways. Rainwater drains are not always very well sealed which increases the hazard so it's important to determine where they empty. Defective downspouts that allow water to build up along foundations can be a source of contamination as well. A
heavy rain event might lift recently applied still wet termiticides directing them to an offsite location.

Gray Water Drains and Floor Drains:

It is not uncommon in some rural areas to find drain systems that drain all sink, washing machine, and shower/bath water into a nearby stream or other body of water. Some simply direct gray water onto the back lawn. Solid waste may be channeled to an acceptable on lot sewage system and to prevent overloading the septic system, gray water waste is directed elsewhere. Drainage ditches or small creeks are favorite outlet sites for these gray water "disposal systems". Property owners may be reluctant to provide information regarding these systems to avoid the possibility of government regulatory intervention. Fixing these normally prohibited systems can be extremely expensive. This makes a careful inspection even more critical. Like other drain systems termite applications near them can pose a serious contamination hazard.

Floor drains may also be designed to drain into waterways or near water sources providing another contamination hazard. The soil under a slab tends to settle over the years creating a gap that termiticides might follow to a poorly sealed floor drain. Also, drain lines may follow an unknown path and can be punctured by a hammer drill followed by a termite application directly into the pipe.

On Lot Sewage Disposal Systems:

On lot sewage disposal systems may not normally pose a hazard to water sources or waterways, but they do provide another drain system that may carry termiticides from the treatment site. Spent leach fields may force sewage above ground and termiticides can potentially follow these systems to the location where the sewage has surfaced. Cases like this have happened, one where some termiteicide was carried by sewage to a creek that fed a small pond. These systems should be located and checked carefully during a site evaluation.

Springs:

Springs are a source of water issuing from the ground. The path that a spring travels underground is often unknown so these can be particularly hazardous when conventional liquid termitecide treatments are planned.

Frozen or Saturated Soil:

Most labels usually prohibit applying termitecides to frozen or saturated soil. It is important to check the soil along the foundation of a structure however. The warmth generated by heating systems may keep the exterior soil from freezing during cold winter weather and an application can in fact be made. On the other hand, when soil is either saturated or frozen, there is the danger of an off site movement of liquid termitecides. Saturated soil is soil that will not accept any more moisture, so when termiticides are applied they will run off. Frozen soils will
not absorb liquid termiticides so the same run off may result. Before an application is performed these conditions must be evaluated.

**Vehicles and Equipment:**

Liquid termiticide applications are made using a pressurized system with a number of fittings that have the potential to leak. Pumps may leak. Hose clamps may leak. Pipe fittings at the tank may leak. Hose reels may leak. Treating equipment may leak. Pressure relief valves may leak. Pressure gauges may leak. Hoses may develop leaks. Tank lids may leak. Before any application is made, the system should be inspected carefully while its running preferably for several minutes. A checklist has been provided as part of the Water Contamination Program specifically for contamination prevention materials and equipment inspections.
SECTION III
SPILL PREVENTION
SECTION III
SPILL PREVENTION

PREVENTION

The best way to control a product or a chemical spill is through prevention. Stop the spill before it occurs. Prevention can best be achieved by having a good understanding of how contaminations occur (See Section II), adhering to label directions, maintaining application equipment in good working order and taking correct safety precautions. While most of this is common sense, there are several key items to remember:

1. Maintain equipment in good working order. Make repairs as soon as possible.
2. Mix and apply products according to label directions.
3. Never take product concentrate inside a house. Calibrate the pressure and flow rate (seconds per gallon) of termite application equipment at least once a week.
4. Be alert to signs of a well or cistern on the property to be treated.
5. Do NOT drill or treat the slab -of homes, which have below slab or imbedded heating ducts until you have determined their exact location.
6. Consider not treating homes with plenum crawl spaces.
7. When applying termiticide to foundation voids, watch for seepage through cracks, holes or expansion joints.
8. Properly seal all treatment holes.

Perhaps the best tool for identifying potential problem areas is through the use of a checklist. These checklists usually have dual purposes. They are initially completed by the salesperson or inspector assigned to inspect the property. The form is then reviewed by the appropriate manager for his/her approval. This then becomes a working document for the technician, assigned to complete the work. It is his/her responsibility to take a final walk through of the property, using the checklist as a guide, to assure that the work being performed is appropriate for the conditions of the site. The technician has the final responsibility to continue with the work as prescribed or not begin the work and immediately state his/her concerns to the immediate supervision.

Checklists similar to those outlined in this manual have been in use throughout the industry for many years and have proven to be valuable tools.

While not specifically stated in the checklist, many companies have determined safe distance requirements (from the nearest water source) before using liquid type treatments. This is an issue that each company will have to address, based on their geographic area.
PREVENTION CHECKLIST

The appropriate company representative should inspect and evaluate the prospective site of treatment, including all structures and potential pathways that may carry termicide away from the structure located at all Pre-Construction or Post-Construction treatments or re-treatment locations. These practices and provisions are not meant to suggest that an individual traverse private property without permission of the owner or to cover terrain that would pose a hazard to his/her safety.

ANY YES CHECKED SHOULD SUGGEST A MORE THOROUGH EXAMINATION OF THE SITE, FOCUSING ON THE CHECKED AREA FOR POTENTIAL ACCIDENTAL DISCHARGES.

Property Owner __________________________ Telephone __________________________
Property Address __________________________ Date of Inspection _______________ Branch _______________
Inspector __________________________

☐ Pre-Construction Treatment ☐ Post-Construction Treatment ☐ Retreatment

YES NO UNKNOWN

☐ ☐ ☐ WELLS, SPRINGS, CISTERNs

There is a well(s), cistern(s) or spring(s) associated with the structure to be treated. Identify which: ________________.
Distance from the structure ________________.

☐ ☐ ☐ The well(s), cistern(s), or spring(s) serves or previously served the structure to be treated.
Describe: ________________

☐ ☐ ☐ The well(s), cistern(s), or spring(s) is on the property to be treated but serves or previously served another structure.
Describe: ________________

☐ ☐ ☐ The well(s) or cistern(s) has not been properly abandoned following state recommended procedures.
Documentation for the abandonment exists? ________________.
Company that performed the abandonment: ________________.

THE FOLLOWING BODIES OF WATER ARE KNOWN:

☐ ☐ ☐ Stream or River
☐ ☐ ☐ Pond or Lake
☐ ☐ ☐ Similar Body of Water
☐ ☐ ☐ Spring
☐ ☐ ☐ Culvert
☐ ☐ ☐ Retention Pond
☐ ☐ ☐ Known Channel of Surface Water
Identify which: ________________.
Distance from the structure: ________________.
DRAINAGE SYSTEMS
The following drain into a stream, pond, lake, or similar body of water, culvert, retention pond, or channel of surface water:

☐ ☐ ☐ Foundation Drains
☐ ☐ ☐ French Drains
☐ ☐ ☐ In-Ground Drainage Systems
☐ ☐ ☐ Rain Gutter Downspouts
☐ ☐ ☐ Sump Pumps
☐ ☐ ☐ Water Collection Pits
☐ ☐ ☐ Gray Water Drainage Systems

INSPECTOR’S INITIALS

ADDITIONAL INSPECTION REQUIREMENTS
An inspection has been completed to identify any foundation drains, storm water piping, or waste water piping associated with the structure to be treated.
Comments: ____________________________________________________________

An inspection has been completed to identify the presence of discharge pipe outfalls along stream banks, ponds, lakes, or similar bodies of water, or swales associated with the structure to be treated.
Comments: ____________________________________________________________

Soil conditions are neither saturated nor frozen precluding liquid termicide use in accordance with label directions.

The inspection determined by the location of any on-lot sewage disposal system. (Currently in use).

This inspection included a walk around the perimeter of the real property to be treated. (Hazards or private property may limit the inspection.)
Comments: ____________________________________________________________

PROPERTY OWNER INTERVIEW
The owner of the property to be treated has indicated his or her knowledge of one or more of the following:

☐ Well(s) ☐ Cistern(s) ☐ Foundation Drain(s)
☐ Sewage System(s) ☐ Stream(s) ☐ Pond(s)
☐ Gutter Discharge(s) ☐ Sump Pump(s) ☐ Waste Water Pipe(s)
☐ Drainage System(s) ☐ Culvert(s) ☐ Spring(s)
☐ Swale(s) ☐ Previous Flooding in or around the Structure

Comments: ____________________________________________________________

Property Owner’s Signature: ____________________________________________ Date: ______________
Inspector’s Signature: ________________________________________________ Date: ______________
Technician’s Signature: ______________________________________________ Date: ______________
Manager’s Signature: ________________________________________________ Date: ______________
PREVENTION
EQUIPMENT CHECKLIST

VEHICLE __________ DRIVER __________ INSPECTOR __________ DATE __________

All termite vehicles used for conventional liquid applications will be inspected at least monthly by management to identify any equipment defects that could lead to a spill and to ensure that all clean up/containment equipment is on board. This checklist deals with spill/corntamination equipment and clean up equipment only. Applicators should check equipment daily before leaving the branch.

DOCUMENTS:

YES NO

☐ ☐ WATER CONTAMINATION PREVENTION CHECKLISTS
☐ ☐ EMERGENCY RESPONSE PROCEDURE CHECKLIST
☐ ☐ LABELS FOR ALL MATERIALS ON BOARD
☐ ☐ MSDS FOR ALL MATERIALS ON BOARD
☐ ☐ POISON CONTROL NUMBER
☐ ☐ TANK DECAL, "IN THE EVENT OF SPILL, CONTAIN PRODUCT, DO NOT WASH DOWN"
☐ ☐ EMERGENCY RESPONSE TELEPHONE NUMBERS
☐ ☐ EMPLOYEE GUIDE FOR HANDLING SPILLS

EQUIPMENT CHECKS:

OK NEEDS REPAIR

☐ ☐ PUMPS WERE RUN FOR 5 MINUTES AT 50 PSI FOR LEAK CHECK
☐ ☐ HOSE COMPLETELY UN-REELED FOR CONDITION CHECK
☐ ☐ CLAMPS AND QUICK DISCONNECTS CHECKED
☐ ☐ TANK LID CHECKED FOR TIGHT SEAL
☐ ☐ FILL HOSE CHECKED FOR CONDITION
☐ ☐ ALL TREATING RODS CHECKED FOR LEAKS AND CONDITION
☐ ☐ ALL VEHICLE LOCKS AND STORAGE COMPARTMENT LOCKS CHECKED
☐ ☐ TRUCK BED FREE OF SPILLED MATERIALS
☐ ☐ CONCENTRATES/PESTICIDES SECURELY STORED
REPAIRS PERFORMED TODAY

SAFETY AND CLEAN UP EQUIPMENT:

YES   NO

☐    ☐ COMPLETE SPILL CONTROL KIT

COMMENTS: ________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

DRIVER’S SIGNATURE: ______________________________________________________

INSPECTOR’S SIGNATURE: _________________________________________________
SECTION IV

EMERGENCY RESPONSE PROCEDURES
Section IV

EMERGENCY RESPONSE PROCEDURES

In the event of a pesticide spill or contamination, it is vital that the appropriate steps be taken to clean up the spill or contamination and that the appropriate notifications be made promptly. Even if the pesticide incident is only suspected as being pesticide related, the same response procedures should be followed as if there were a confirmed pesticide related incident.

We call this the Three C’s.

Containment:
Fast action must be the rule! The quicker the containment of a spill, the less likely its effects will escalate. In the case of a stream contamination, for example, delays can not only be costly to wildlife, but significant penalties can be assessed for delay in responding and reporting a spill.

All termite applicators should be provided training on spill containment and clean up procedures. Vehicles should be inspected once a month to be sure the required equipment is on board and to inspect application equipment for defects that may lead to leaks or spills. There will be other sections later in this water contamination prevention program devoted to spill containment/cleanup training and vehicle inspections.

Contact:
This section will review the guidelines for emergency response procedures for Owners, technicians and emergency coordinators, those most likely to get the call or be at the site during the application when an incident occurs.

Each truck should have a list of "Emergency Response Telephone Numbers" that will include the CHEMTREC 800 number, an emergency coordinator(s) contact and the appropriate numbers for Pennsylvania Department of Environmental Resources, Pennsylvania Boat & Fish Commission and the Pennsylvania Department of Agriculture. While you can establish your own telephone call tree, the general consensus is to have the technician on site, call the emergency coordinator with notification of the spill. This then frees the technician to follow-up on the containment efforts. The coordinator then assumes the responsibility of calling the appropriate authorities, contacting the Owner/Manager and following up on providing additional help to the spill site.

Clean up:
Clean-up procedures will vary depending on the extent of the spill and whether outside agencies are involved. Following is a general overview of clean up procedures.
Surface Chemical Spills:

a. Rope off the contaminated area and confine entry to those persons who are properly protected. A number of people may be involved: fire, law enforcement highway department, health, medical, and regulatory agencies. Unless properly protected, no one should be allowed into the immediate area.

b. If prompt medical attention is necessary make sure that the paramedics at the scene have the MSDS information.

c. If the leak or spill involves a vehicle, and it is possible to move it without extending the exposure or contributing to the occurrence of secondary accidents, the vehicle should be moved to a clean-up area having an adequate water supply.

d. Proper personal protective equipment must be worn at all times. Do not enter a closed truck involving a spill without proper respiratory protection. Volatile materials or Class B poisons should not be handled, unless a self-contained breathing unit is used. Remember that many pesticides will penetrate through clothes, through the skin, and into the blood system. The proper protective clothing should be used when needed.

e. The leak or spill should be confined to the smallest area possible, utilizing natural terrain, diking or covering with a plastic tarp.

f. Washing down spills with hose streams or large amounts of water should be avoided or kept to a minimum and only after as much as possible of the spill has been picked up. Runoff water should not be permitted to enter bodies of water such as rivers or lakes or to flow indiscriminately into storm sewers. Use dirt from lawns, roadside or fields to contain and sop-up spill, if you have to.

g. Contaminated ground areas should be dug out to a depth of 3 to 4 inches. The depth will vary depending on amount spilled, soil type, and regulatory issues.

h. RCRA, and/or state law regulate all contaminated solid and spilled pesticide under federal law. After waste is containerized and the spill emergency is abated, waste must be properly solidified to be acceptable at RCRA landfills. Early discussions may save time and money later.

i. Clean up spill by surrounding the spill with absorbent and working it into the center. Work the absorbent into the surface with a stiff broom, soaking up as much of the liquid spill as possible. Sweep the absorbent into a shovel and place the sweepings into a container for disposal. Use soil/dirt from any available area.
Solid Leaks or Spills:

a. Separate broken containers from the rest.

b. Carefully transfer remainder of contents of leaking container(s) into a drum or heavy plastic bag.

c. If wind conditions contribute to spread of the spill, dampen the dust and cover the area with a plastic tarp.

d. Shovel the major portion of spillage into a disposal container. Sweep up remaining material and place sweepings into a disposal container.

e. Decontaminate any remaining residue as indicated in paragraph 8.

Emergency Decontamination:

Organic Phosphorous and Carbamate spills, in the absence of manufacturers' recommendations, may be decontaminated as follows:

1. After removing all traces of the spill with an absorbent, saturate the swept surface with Clorox. Note: Clorox and water 1:1 will do the job and extend the amount of Clorox on hand.

2. Cover the surface with soda ash or Clorox.

3. Work the Clorox or soda ash into the surface with a stiff broom.

4. Shovel the sweepings into a disposal container adding absorbent clay if necessary to obtain a dry sweep.

Repeat steps #1 through #4 until all contamination is secured.

6. Flush surface with water if feasible.

There are pesticides that are not easy to break down. One should contact the manufacturer for recommendations, and if emergency decontamination is not practical, then efforts should be confined to removing as much of the spill as possible. If feasible, flush surface with water.

Note: When decontaminating a spill, one may need to go through the procedures more than twice. In the case of hazardous chemicals, the degree of toxicant allowed to remain may be dictated by a regulatory agency: Although lye or caustic soda may be used instead of soda ash alone, it should only be used with extreme caution. When used with water a heat-releasing reaction and splattering will result—the mixture is highly corrosive.

4-3
Termiticide Spill

All chemical spills need to be treated in a serious and expeditious manner, with the utmost concern for the welfare of people and the environment. However, the most challenging type of spill is that of a termiticide discharge into a waterway. Such a spill gets the immediate attention of at least three state regulatory agencies. They are the PA Department of Environmental Protection, PA Fish and Boat Commission and the PA Department of Agriculture. Each agency expects you to respond in a professional and timely manner. This includes your having a predefined plan on how to contain the spill, and remediate the site. In the event that you don’t have such a plan, you will be expected to secure such services from knowledgeable service providers who handle environmental clean ups. While you will need such assistance very early in the incident, your understanding of the process and the many clean up alternatives will have a significant impact on end costs. With that in mind, we have developed an Emergency Response Procedures checklists to be used at the onset of a spill. When properly completed, the checklists assure you that you have acted in a timely and professional manner. The checklists guide you in a systematic way to contain the spill, contact the necessary authorities and begin with the immediate clean up of the spill.
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EMERGENCY RESPONSE PROCEDURES
Checklist

TECHNICIAN

Technician’s Name. _______________________________________________________

Should a spill or contamination occur or be suspected of occurring, follow these procedures and check off the boxes as steps are completed. Sign and date the checklist when all appropriate procedures have been completed.

☐ Stop treatment immediately.
☐ Stop the source of the spill or contamination.
☐ Divert or contain contaminated water away from any body of water.
☐ Be sure to wear the appropriate personal protective equipment when containing or cleaning up spills or contaminations.
☐ Keep people and pets out of the spill/contamination area until clean up has been completed.
☐ Explain the situation to the customer, and that you are following the appropriate clean up procedures.
☐ Notify your company’s Emergency Coordinator
☐ Clean up spills with the materials contained in the Spill Control Kit. (Be sure your vehicle has the necessary materials on board before any treatment is performed.)

Technician’s Signature_________________________________________________

Date __________________________


EMERGENCY RESPONSE PROCEDURES
Checklist

TECHNICIAN

Technician's Name. ____________________________________________

Should a spill or contamination occur or be suspected of occurring, follow these procedures and check off the boxes as steps are completed. Sign and date the checklist when all appropriate procedures have been completed.

☐ Stop treatment immediately.

☐ Stop the source of the spill or contamination.

☐ Divert or contain contaminated water away from any body of water.

☐ Be sure to wear the appropriate personal protective equipment when containing or cleaning up spills or contaminations.

☐ Keep people and pets out of the spill/contamination area until clean up has been completed.

☐ Explain the situation to the customer, and that you are following the appropriate clean up procedures.

☐ Notify your company’s Emergency Coordinator

☐ Clean up spills with the materials contained in the Spill Control Kit. (Be sure your vehicle has the necessary materials on board before any treatment is performed.)

Technician's Signature _________________________________________

Date __________________________
EMERGENCY RESPONSE PROCEDURES
Checklist

EMERGENCY COORDINATOR

Emergency Coordinator's Name

In the event you receive a call about a pesticide incident, follow these procedures and check off the boxes as steps are completed. Sign and date the checklist when the appropriate procedures have been completed.

☐ Take the name, address, telephone number and fax number of the customer and the exact location of the spill or contamination. Read this information back to the caller to confirm. Ask if the spill/contamination source has been contained or cleaned up. If not, direct the technician to perform the appropriate containment/clean up procedures immediately.

☐ Identify the materials involved and the estimated amount involved. Obtain these from the service report or verbally from the technician.

☐ Attempt to obtain as much information as possible. Have the technician describe the situation. Write down this description exactly as he gives it.

☐ If a person or non-target animal has been injured, advise the individual to seek medical attention from the appropriate health care provider.

☐ Locate and inform the Owner or Immediate Manager immediately.

☐ Complete an incident report for the files.

☐ Contact the DEP, PA Fish & Boat Commission and the PA Department of Agriculture.

☐ Evaluate your resource needs to maintain the containment of the spill. Determine any need for additional help such as an Emergency Hazmat Contractor for water capture, power vacuuming etc. This is also a good time to contact your environmental lawyer, and environmental services company. While your main focus is to maintain the spill, and to begin to remediate the site, it is also an appropriate time to begin to create an environmental “bench mark” for purposes of establishing a legal defense. This includes site reconnaissance, sediment/stream sampling and biological and chemical sampling of the effected waters. This process needs to be started as soon as possible.

Since each spill will dictate a number of possible clean up options, it is important that you discuss these options with your environmental consultant or hazardous clean up consultant. When picking such a consultant, be sure that he has your best interest in mind. If you sense that he has not “stepped out of the box” to explore other possible alternatives, you might be wise to seek someone else’s services.
SECTION V

TYPES OF TREATMENTS
SECTION V
TYPES OF TREATMENTS

CONVENTIONAL LIQUID TERMITICIDE TREATMENTS:

At sites where pre-construction treatments, post-construction treatments or retreatments are planned, there may be conditions that could potentially lead to an off site contamination of a water source or body of water. When these conditions are identified, (using the "Water Contamination Prevention Checklist"), alternative termite control procedures other than conventional liquid termiteicide applications should be used. First it is important to define what conventional liquid termiteicide treatment refers to.

There are a number of termiteicides produced that are designed to be injected into the soil, foundation voids, or wood members of a structure to control termites. Most of these can be toxic to fish and aquatic invertebrates in very small quantities. Some of these termiteicides have very broad labels and can be used to control other pests besides termites. These instructions, however, will refer to termite applications only.

Conventional liquid termiteicides are usually mixed with water to prepare a finished mix in a 50 or 100 gallon tank that is pumped through a hose and applied to the soil, foundation voids or wood members of a structure. For the sake of contamination prevention, "conventional" will refer only to liquid termiteicide soil injection or surface applications made during a termite treatment, pre-treatment or retreatment, or liquid termiteicide void treatments to foundations of a structure. Above ground treatments to wood members will not apply.

ALTERNATIVE TERMITE CONTROL PROCEDURES:

When the selection of an alternative termite control program or procedure is required, there are many different approaches that may be used including some new and very effective baiting programs. Below is a list of alternative treatment procedures or programs with a brief definition for each:

In-Ground or Above-Ground Baiting Systems:

These are systems where stations are placed either in the soil surrounding a structure or on actual termite mud tubes. The most popular system currently used is the Sentricon System where stations in the soil are monitored until termites are discovered at which time a bait material is inserted into the station. Above ground stations already contain bait when they are placed over active termite foraging locations. The bait is consumed and ultimately the colony is
eliminated. There are other bait systems such as First Line and Exterra that work in much the same manner.

**Borate Wood Injection and Surface Applications:**

There are several effective borate products such as Timbor or BoraCare. These are applied to the surface of wood members to prevent termite infestations or injected into wood members to prevent or kill existing termites. They are designed to absorb into at least the surface areas of unpainted wood members when applied or they can be injected into wood members using drills and injection equipment. Timbor can be used as a dust applying it to foundation voids in sensitive situations. Borate treatments of structural members of homes under construction may be a viable alternative to pretreats where contamination hazards exist. Borates often work well in conjunction with other treatment procedures.

**Termiteicide/Pesticide Above Ground Wood Injection and Surface Applications:**

A number of conventional termiticides allow wood injection and above ground applications to wood members. As long as it is determined that termite movement from the treated wood will not occur, they are also an alternative treatment method. However, care must be taken when treating a sill that rests on an open hollow block foundation. Material could potentially drop from a termite gallery into the block foundation leading to a French drain system. Above ground wood applications will usually not pose a contamination hazard, but a careful evaluation should be made before these procedures are used.

**Aerosol Wood Injection:**

Products that come in aerosol formulations can work well. Good coverage using drills and injection equipment will kill existing termites in wood and provide some protection for a period of time.

**Borate Gels and Impel Rods:**

Borate Gels and Impel Rods are injected into galleries or drilled and injected into wood members. Impel rods are more solid and will hold up fairly well under moist conditions. These injectable materials may provide an answer when wood is painted restricting surface applications. They make a good addition as alternative termite control measures.
Biological Controls, Nematodes, Bioblast:

These are examples of organisms that feed on termites or produce a fungus infestation that spreads throughout a colony killing the termites. The success of biological controls may be somewhat dependent on environmental conditions at the application site.

Physical Barriers:

There are many non-chemical measures that can be taken to reduce the potential for a termite infestation or help eliminate one. For example, one very effective way to handle a dirt filled porch where other controls may have failed is to physically void the dirt and debris under them. There are materials designed for construction that termites are unable to penetrate or feed on. Most termites can not penetrate Sand with a particle size of "10 to 16 mesh (2.5 to 1.6mm). The removal of wood to ground contact or moisture conditions are vital parts of a termite control program. These are a few examples of physical barriers or non-chemical procedures.

Foam applications:

Foam applications use conventional termiticides combined with a foaming agent that creates a shaving cream like material. Foam applications can be made to above ground wall voids; however if foam is selected as an alternative method to conventional foundation void treatments or slab treatments, there may be the potential for the foam to travel and combine with a water source that could pose a contamination hazard.
SECTION VI

CREATION OF A SPILL CONTROL MANUAL
SECTION VI

CREATION OF A SPILL CONTROL MANUAL

Information presented thus far provides a solid foundation for the development of your own, custom designed Spill Control Manual. The manual has to fit the needs of your company and organizational structure. Regardless of how simple or complex you make the document, you will find the creation of such a document to be very good insurance for the future.

Following is a brief outline of a generic spill control manual.

ABC PEST CONTROL COMPANY
SPILL CONTROL MANUAL OUTLINE:
February 4, 2000

I. Emergency Response Procedures

TECHNICIAN

Should a spill or contamination occur or be suspected of occurring, follow these procedures and check off the boxes as steps are completed. Sign and date the checklist when all appropriate procedures have been completed.

☐ Stop treatment immediately.

☐ Stop the source of the spill or contamination.

☐ Divert or contain contaminated water away from any body of water.

☐ Be sure to wear the appropriate personal protective equipment when containing or cleaning up spills or contaminations.

☐ Keep people and pets out of the spill/contamination area until clean up has been completed.

☐ Explain the situation to the customer, and that you are following the appropriate clean up procedures.

☐ Notify (company coordinator name) of the incident.

Frank Smith (xxx) xxx xxxx Work
             (xxx) xxx.xxx Home
             (xxx) xxx.xxx Pager
EMERGENCY COORDINATOR

In the event you receive a call about a pesticide incident, follow these procedures and check off the boxes as steps are completed.

☐ Take the name, address, telephone number and fax number of the customer and the exact location of the spill or contamination. Read this information back to the caller to confirm. Ask if the spill/contamination source has been contained or cleaned up. If not, direct the technician to perform the appropriate containment/clean up procedures immediately.

☐ Identify the materials involved and the estimated amount involved. Obtain these from the service report or verbally from the technician.

☐ Attempt to obtain as much information as possible. Have the technician describe the situation. Write down this description exactly as he gives it.

☐ If a person or non-target animal has been injured, advise the individual to seek medical attention from the appropriate health care provider.

☐ Locate and inform the Owner or Immediate Manager immediately.

☐ Complete an incident report for the files.

☐ Contact the following government authorities:

    PA DEP    (xxx) xxx xxxx
    PA Department of Agriculture    (xxx) xxx xxxx
    PA Fish & Boat Commission    (xxx) xxx xxxx

☐ Evaluate your resource needs

    ABC Geoscience Consultants    Water Quality Spec.    (xxx) xxx xxxx
    XYZ Hazardous Materials Consultants    Clean-up    (xxx) xxx xxxx
    Attorney Fred Smith    (xxx) xxx xxxx.

I. Clean up Procedures (As outlined in Section V)

II. Copies of Material Safety Data Sheets & Specimen Label

III. Standard Tank Mixture Ratios
SECTION VII
SPILL CONTROL KIT
SECTION VII

SPILL CONTROL KIT

The creation of a spill control kit for each service vehicle is both inexpensive and invaluable when confronted with a spill. Following is an outline of the suggested contents of such a kit:

- Copy of the Spill Control Procedures
- Absorb All material
- Dust pan & small broom
- Detergent solution
- Plastic bags
- Throw-away coveralls
- Rubber Gloves
- Clean Rags
- Plastic Spray Bottle (With Detergent for cleaning small residue spills)

Optional:

- Small Trenching Shovel
- Clorox
- Cones & Tape
APPLICATION FOR MEMBERSHIP IN THE
PA PEST CONTROL ASSOCIATION AND
THE NATIONAL PEST MANAGEMENT ASSOCIATION

DATE:________________________

COMPANY NAME:____________________________________

CONTACT PERSON:____________________________________

ADDRESS:____________________________________________

_____________________________________________________

TELEPHONE:____________________ FAX:____________________

PA BUSINESS LICENSE NUMBER:________________________

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| Allied Members | $195           | Associate Members | $ 90          |
| Affiliate Members | $195         | In-House Members  | $225          |
| Home Inspectors | $195           |

Division Officer's Signature:________________________ Date:____________________

Division:__________________________________________

Please check the appropriate membership category and mail your check to:
Linda J. Snyder
PA Pest Control Association
509 N. Second Street
Harrisburg, PA 17101
800-842-9090

Dues rates are subject to change without notice.