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Safety Information for Handlers

The U.S. Environmental Protection Agency requires that certified applicators provide safety information to handlers of soil fumigants. Providing this information to handlers in a manner they can understand meets this requirement for methyl bromide and chloropicrin soil fumigants.

Prepared By:

The Chloropicrin Manufacturers' Task Force

&

The Methyl Bromide Industry Panel

Information and Training Requirements for Soil Fumigant Handlers

- Chloropicrin and Methyl Bromide labels require that all handlers receive safe handling information training BEFORE participating in a field fumigation. Handlers applying soil fumigants must also be trained according to the requirements of the Worker Protection Standard (WPS). This information alone does not satisfy the WPS required handler training. This review is only a reference and is not intended to be a substitute for product labels. The label is the law. Comply with all label requirements. Always refer to the label for detailed information about requirements for safe use of the product, first aid, and information for physicians.
- This presentation includes an overview of
  - Soil fumigants
  - Handler Job Descriptions
  - Good Agricultural Practices relevant to handlers

Soil Fumigants

- Pesticides injected into the soil before planting to control pests such as nematodes, fungi, and weed seeds.
- Chloropicrin may be a liquid or gas at ambient temperatures. Methyl Bromide is a gas at ambient temperatures. But once placed in the soil they form gasses that move through the soil to control pests.
- Some gas may escape from the soil after it has been injected into the soil and move off-site.

Type of Fumigants

- Chloropicrin
  - Colorless to amber liquid at room temperature, but once injected into the soil, it volatizes into a gas.
  - Strong, pungent odor.
  - Chloropicrin has exceptional fungicidal activity and is effective against certain nematodes, weeds, and bacteria.
  - Often applied in combination with other fumigants in a shank application or via drip application.

Types of Fumigants

- Methyl Bromide and Chloropicrin Combination
  - Methyl Bromide is a colorless, odorless gas at ambient temperature.
  - It is a general biocide providing control of many different types of pests. For soil applications it is always used in combination with chloropicrin.
  - Methyl Bromide and Chloropicrin mixtures for which both Chloropicrin and Methyl Bromide have pesticidal activity range from 33% Methyl Bromide and 67% Chloropicrin (“33/67”) to 80% Methyl Bromide and 20% Chloropicrin (“80/20”).

Types of Fumigants

- 1,3-Dichloropropene (1,3-D)
  - Colorless to straw colored liquid at room temperature but volatilizes quickly when injected into the soil.
  - Sweet, penetrating odor.
  - Excellent activity against nematodes and aids in the management of certain diseases and weeds.
  - May be used in combination with Chloropicrin. Combinations with 1,3-D typically contain 17 to 60% Chloropicrin. (See the Safety Information for Handlers Participating in a Field Fumigant Application for 1,3 Dichloropropene (1,3-D)/chloropicrin Combination Products when using these formulations.)

Types of Fumigants

- Iodomethane
  - Colorless to pale yellow liquid at room temperature, but once injected into the soil, it volatilizes into a gas and moves throughout the soil profile.
  - Strong, acrid odor.
  - General biocide, providing control of many different types of soil-borne pests including nematodes, insects, weed seeds and diseases.
  - Iodomethane is used in combination with chloropicrin. (See the Safety Information for Handlers for iodomethane/ chloropicrin combination products when using these formulations.)

Resources for More Information

- **Application Supervisor (Certified Applicator)**
  - Chloropicrin, Methyl Bromide, 1,3-D and Iodomethane are restricted use pesticides.
  - Applications must be supervised on-site by someone who has completed the state specific training and has been certified by a state program as a “Certified Applicator.”
  - In addition, the Application Supervisor will have additional specific training in soil fumigation application.

Resources for More Information

- **Pesticide Label**
  - A copy is available from the certified applicator (supervisor).
- **Material Safety Data Sheet (MSDS)**
  - The information on the MSDS applies to the product in the cylinders and is available from the certified applicator (supervisor).
- **Fumigant Management Plan (FMP)**
  - Indicates how the certified applicator will comply with the label requirements.
  - Includes information on the response plan in the event of an unexpected incident.
  - ***A copy of the FMP is available at each application site for handler review.***

Understanding Application Method and Equipment

- Chloropicrin may be applied via shank injection or via drip applications. Methyl bromide and Chloropicrin mixtures also may be applied via shank application.

- Good Agricultural Practices (GAPs) must be followed during all fumigant applications. These include the following specifically applicable to handlers:

Understanding Application Method and Equipment

- Soil Preparation
  - Soil must be properly prepared.
  - Surface must be generally be free of large clods.
  - Area to be fumigated must be tilled to a depth of 5 to 8 inches.

Understanding Application Method and Equipment

- Field trash must be properly managed.
- Residue from a previous crop must be worked into the soil to allow for decomposition prior to fumigation.
- Little or no crop residue shall be present on the soil surface.
- Crop residue that is present must not interfere with the soil seal.

Understanding Application Method and Equipment

- Removing the crop residue prior to fumigation is important to limit the natural “chimneys” that occur in the soil when crop residue is present.
- “Chimneys” allow the soil fumigants to move through the soil quickly and escape into the atmosphere.
  - May create potentially harmful conditions for workers and bystanders and limit the efficacy of the fumigant.
- However, crop residue on the field serves to prevent soil erosion from both wind and water and is an important consideration.

Understanding Application Method and Equipment

- To accommodate erosion control, fumigant efficacy, and human health protection, clear fields of crop residue as close to the timing of the fumigation as possible to limit length of time that the soil would be exposed to potentially erosive weather conditions.
- For shank applications, trash pulled by the shanks to the ends of the field must be covered with tarp, or soil, depending on the application method, before making the turn for the next pass.

Understanding Application Method and Equipment

- Soil Sealing - *Broadcast Untarped Applications:*
  - Use a disc or similar equipment to uniformly mix the soil to at least a depth of 3 to 4 inches to eliminate the chisel or plow traces.
  - Following elimination of the chisel trace, the soil surface must be compacted with a cultipacker, ring roller, and roller in combination with tillage equipment.

Understanding Application Method and Equipment

- Soil Sealing - *For Bedded Applications*:
  - Preformed beds must be sealed by disruption of the chisel trace using press sealers, bed shapers, cultipackers, or by re-shaping (e.g., relisting, lifting, replacing) the beds immediately following injection. Beds formed at the time of application must be sealed by disrupting the chisel trace using press sealers or bed shapers.

Understanding Application Method and Equipment

- *For Tarped Applications*:
  - The use of a tarp does not eliminate the need to minimize chisel traces prior to application of the tarp, such as by using a Nobel plow or other injection shank that disrupts the chisel traces.

Understanding Application Method and Equipment

- Application Depth
  - *For Tarped-Broadcast and Tarped-Bedded Applications:* Injection point must be a minimum of **8** inches from the nearest final soil/air interface.
  - *For Untarped-Bedded Applications*: Injection point must be a minimum of **12** inches from the nearest final soil/air interface.
  - *For Untarped-Broadcast Applications*: Injection point must be a minimum of **10** inches from the nearest final soil/air interface.
  - *For Untarped-Broadcast Deep Applications:* The injection point must be a minimum of **18** inches from the nearest final soil/air interface.
  - Note: Untarped applications are not for formulations with methyl bromide except for orchard replant in California.

Understanding Application Method and Equipment

- Prevention of End Row Spillage
  - Do not apply or allow fumigant to spill onto the soil surface.
  - For each injection line either have a check valve located as close as possible to the final injection point, or drain/purge the line of any remaining fumigant prior to lifting injection shanks from the ground.
  - Do not lift injection shanks from the soil until the shut-off valve has been closed and the fumigant has been depressurized (passively drained) or purged (actively forced out via air compressor) from the system.

Understanding the Roles of Handler Categories

- The following activities are prohibited from being performed in the application block (i.e., the greenhouse or field or portion of a field treated with a fumigant in any 24-hour period) by anyone other than persons who have been appropriately trained and equipped as handlers in accordance with the requirements in the Worker Protection Standard (40 CFR Part 170), from the start of the application until the entry restricted period ends.
- Note: Application starts when the fumigant is first introduced into the soil and ends after the fumigant has stopped being delivered/dispensed to the soil.

Understanding the Roles of Handler Categories: Prohibited Activities for Handlers Without Training

- Participating in the application as supervisors, loaders, drivers, tractor co-pilots, shovelers, cross ditchers, or as other direct application participants.
- Using devices to take air samples to monitor fumigant air concentrations.
- Cleaning up fumigant spills (this does not include emergency personnel not associated with the fumigation application).
- Handling or disposing of fumigant containers.

Understanding the Roles of Handler Categories: Prohibited Activities for Handlers Without Training

- Cleaning, handling, adjusting, or repairing the parts of fumigation equipment that may contain fumigant residues.
- Installing, repairing, or operating irrigation equipment in the fumigant application block.
- Entering the application site to perform scouting, crop advising, or monitoring tasks.

Understanding the Roles of Handler Categories: Prohibited Activities for Handlers Without Training

- Installing, perforating (cutting, punching, slicing, poking), removing, repairing, or monitoring tarps:
  - Until 14 days after application is complete if tarps are not perforated and removed during those 14 days, or
  - Until tarp removal is complete if tarps are **both** perforated **and** removed less than 14 days after application, or
  - Until 48 hours after tarp perforation is complete if they will not be removed within 14 days after application.
  - NOTE: see Tarp Perforation and Removal section on this labeling for requirements about when tarps are allowed to be perforated.
  - Performing any handling tasks as defined by the WPS.

Understanding the Roles of Handler Categories: Example Roles

- Tractor Driver ("Pilot"): Responsible for maneuvering the fumigation rig and controls the valves that dispense the fumigant through the closed system and into the soil.
- Tractor Co-Pilot: Assists the tractor driver in field alignment and other tasks to ensure the fumigation is completed and the equipment is functioning properly.
- Shovelers: Shovelers are needed when the application involves the use of tarps. Shovelers typically stand at the end of the fields and help cut the tarp at the field edge then bury the edge of the cut tarp with soil to seal the treated field.
- Tarp repairers and/or removers are those handlers responsible for cutting and removing the tarp from the field.

Understanding the Roles of Handler Categories: Tarp Repair and Removal

- A tarp may become ripped or torn, which may result in a hole through which the fumigant vapor may escape. During high winds, the edge of a tarp may lift from the field along the glue seam that connects two different passes of tarp material.
- In both cases, a tarp repair is usually needed to patch the hole or re-secure the tarp so that it functions properly.

Understanding the Roles of Handler Categories: Tarp Removal

- Cutting (or splitting) may be done manually with a knife ONLY: (1) at the beginning of each row when a coulter blade or similar device is used on a motorized vehicle such as a ATV; or, (2) in fields that are 1 acre or less; or, (3) during flood prevention activities.
- In all other situations cutting or splitting will be done mechanically using an all-terrain vehicle with tarp-cutting knives attached to the back-end of the vehicle.

Re-Entry Restrictions for a Fumigant Field

- Entry (including early entry that would otherwise be permitted under the WPS) by any person – other than a correctly trained and PPE-equipped handler who is performing a handling task is PROHIBITED – from the start of the application until:
  - **5 days** (120 hours) after the application is complete for untarped applications or if tarps are not perforated and removed for at least 14 days following application
  - **48 hours** after tarp perforation is complete if tarps will not be removed for at least 14 days following application, or
  - Until tarp removal is completed if tarps are both perforated and removed less than 14 days after application.
    - See Tarp Perforation and/or Removal section for requirements about when tarps are allowed to be perforated.

Tarp Perforation and Removal

- Tarps must not be perforated until a minimum of **5 days** (120 hours) have elapsed after the fumigant injection into the soil is complete (e.g., after injection of the fumigant and tarps have been laid or after drip lines have been purged and tarps have been laid).
  - If weather condition exists which necessitates the need for early perforation or removal, see *Early Tarp Removal for Broadcast Applications Only* and *Early Tarp Perforation for Flood Prevention Activities.*

Tarp Perforation and Removal

- If tarps **will be** removed before planting, tarp removal must not begin until at least 2 hours after tarp perforation is complete.
- If tarps **will not be** removed before planting, planting or transplanting must not begin until at least 48 hours after the tarp perforation is complete.
- If tarps are left intact for a minimum of 14 days after fumigant injection into the soil is complete, planting or transplanting may take place while the tarps are being perforated.

Tarp Perforation and Removal

- Each tarp panel used for broadcast fumigation must be perforated.
- Tarp perforation for broadcast fumigations must be completed before noon.
- For broadcast fumigation, tarps must not be perforated if rainfall is expected within 12 hours.

Tarp Perforation and Removal

- **Early Tarp Removal for Broadcast Applications Only:**
  - Tarps may be removed before the required 5 days (120 hours) if adverse weather conditions have compromised the integrity of the tarp, provided that the compromised tarp poses a safety hazard.
  - *Adverse weather* includes high wind, hail, or storms that blow tarps off the field and create a hazard, e.g., tarps blowing into power lines and onto roads. A *compromised tarp* is a tarp that due to an adverse weather condition is no longer performing its intended function and is creating a hazard.
  - If tarps are removed before the required 5 days have elapsed due to adverse weather, the events must be documented in the post-application summary.

Tarp Perforation and Removal

- Early Tarp Perforation for Flood Prevention Activities
  - Tarp perforation is allowed before the 5 days (120 hours) have elapsed.
  - Tarps must be immediately retucked and packed after soil removal.

Air Monitoring

- Sensory Irritation: For formulations with 20% or greater Chloropicrin, a respirator need not be worn unless sensory irritation is experienced.
- Equipment Used for Air Monitoring: Varies by the fumigant.
  - Fumigant vapors are detected using small tubes that change color once they are exposed to air by means of a pump that passes a known volume of air through the tube. The tube contents will change color if the fumigant is detected at a certain concentration or range of concentrations.

Respiratory Protection

- For Chloropicrin:
  - A full-face respirator with an organic vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C)
  - A full face respirator with a canister approved for pesticides (NIOSH approval number prefix TC-14G).

Respiratory Protection

- For methyl bromide products with at least 20% chloropicrin
  - NIOSH-approved full-face, or hood-style respirator with a cartridge or canister certified by the manufacturer for protection from exposure to methyl bromide at concentrations up to 5 ppm (e.g., a 3M air-purifying respirator equipped with 3M Model 60928 Organic Vapor/Acid Gas/P100 cartridges).

Respiratory Protection

- For methyl bromide products with less than 20% chloropicrin
  - NIOSH-approved half-face, full-face, or hood-style respirator with a cartridge or canister certified by the manufacturer for protection from exposure to methyl bromide at concentrations up to 5 ppm (e.g., a 3M air-purifying respirator equipped with 3M Model 60928 Organic Vapor/Acid Gas/P100 cartridges).

Respiratory Protection

- IMPORTANT: A self-contained breathing apparatus (SBCA) is not permitted for routine handler tasks. Wear a SCBA and PPE required for liquid contact potential in emergencies such as a spill or leak or when corrective action is needed to reduce air levels to acceptable levels.

Respiratory Protection

Respirator fit testing, medical qualification, and training

- Employers must ensure that any handler who uses a respirator is:
  - Fit-tested and fit-checked using a program that conforms to OSHA's requirements (see 29 CFR Part 1910.134).
  - Trained using a program that conforms to OSHA's requirements (see 29 CFR Part 1910.134).
  - Examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.

Respiratory Protection

- When to Wear Respiratory Protection
  - For 100% Chloropicrin and for Chloropicrin and Methyl Bromide mixture with 20 percent or more of Chloropicrin, the following procedures must be followed to determine whether an air-purifying respirator is required or if operations must cease for any person performing a handling task.

Respiratory Protection

- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) then either:
  - An air-purifying respirator must be worn by all handlers who remain in the application block, or
  - Operations must cease and handlers not wearing air-purifying respirators must leave the application block.
- When air-purifying respirators are worn, air monitoring samples must be collected at least every 2 hours in the breathing zone of a handler performing a handling task.

Respiratory Protection

- All handler activities must cease and handlers must be removed from the application block if:
  - a handler experiences any sensory irritation when wearing an air-purifying respirator, or
  - for chloropicrin only formulations, a chloropicrin air sample is greater than or equal to 1.5 ppm, or
  - for chloropicrin/methyl bromide formulations with 20% or more chloropicrin, a chloropicrin air sample is greater than or equal to 1.5 ppm or a methyl bromide air sample is greater than 5 ppm.
- If operations cease the emergency plan detailed in the FMP must be implemented.

Respiratory Protection

- In emergency situations, a SCBA should be worn if the Applicator or Handler must enter an area of potentially hazardous fumigant air concentrations
  - Such as if a valve malfunctioned or a dispensing line broke and released fumigant into the air or onto the soil.
- In such an event, the Certified Applicator will instruct you what to do.

Respiratory Protection

- Requirements for Removing Respiratory Protection for formulations of chloropicrin only
  - Handlers can remove air-purifying respirators or resume operations if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart show that levels of chloropicrin have decreased to less than 0.15 ppm, provided that handlers do not experience sensory irritation.
- Requirements for Removing Respiratory Protection for chloropicrin/methyl bromide formulations that have 20% or more chloropicrin
  - Handlers can remove air-purifying respirators or resume operations if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart show that levels of methyl bromide have decreased to less than 1 ppm and levels of chloropicrin have decreased to less than 0.15 ppm, provided that handlers do not experience sensory irritation.

Respiratory Protection

- For chloropicrin only formulations work activities can resume if the following conditions exist provided that the appropriate air-purifying respirator is worn:
  - Two consecutive breathing zone samples for Chloropicrin taken at the handling site at least 15 minutes apart must be less than 1.5 ppm but are greater than 0.15 ppm,
  - Handlers do not experience sensory irritation while wearing the air-purifying respirator, and
  - Cartridges have been changed.
  - During the collection of air samples an air-purifying respirator must be worn by the handler taking the air samples.
  - Samples must be taken where the irritation is first experienced.

Respiratory Protection

- For chloropicrin/methyl bromide formulations that have 20% or more chloropicrin work activities can resume if the following conditions exist provided that the appropriate air-purifying respirator is worn:
  - Two consecutive breathing zone samples for methyl bromide taken at the handling site at least 15 minutes apart are less than 5 ppm.
  - Two consecutive breathing zone samples for chloropicrin taken at the handling site at least 15 minutes apart must be less than 1.5 ppm.
  - Handlers do not experience sensory irritation while wearing the air-purifying respirator, and
  - Cartridges have been changed.
  - During the collection of air samples an air-purifying respirator must be worn by the handler taking the air samples.
  - Samples must be taken where the irritation is first experienced.

Respiratory Protection

- For chloropicrin/methyl bromide formulations that have less than 20% chloropicrin, air-purifying respirators must be worn during all handler tasks, and the following air monitoring procedures must be followed to ensure that the upper protection limit of the air purifying respirator plus respirator cartridge is not exceeded (i.e. 5 ppm for Methyl Bromide and 1.5 ppm for Chloropicrin):
  - Air monitoring samples for Methyl Bromide and Chloropicrin must be collected at least every hour in the breathing zone of a handler performing a representative handling task.

Respiratory Protection

- For chloropicrin/methyl bromide formulations that have less than 20% chloropicrin
  - If at any time (1) a handler experiences any sensory irritation while wearing an air-purifying respirator, or (2) any air sample is greater than or equal to 5 ppm for Methyl Bromide, or (3) any air sample is greater than or equal to 1.5 ppm for Chloropicrin, then all handler activities must cease and handlers must be removed from the application block.
  - Work activities can resume if all the following conditions exist, provided the appropriate air-purifying respirator is worn.

Respiratory Protection

- For chloropicrin/methyl bromide formulations that have less than 20% chloropicrin
  - Two consecutive air samples for Methyl Bromide and Chloropicrin taken in the treatment area at least 15 minutes apart must be less than 5ppm for Methyl Bromide and less than 1.5 ppm for Chloropicrin.
  - During the collection of samples an air-purifying respirator must be worn by the handler taking air samples.

Respiratory Protection

- Hot gas tarped applications: Once the fumigation has started, if entry into the greenhouse enclosure or the outdoor treatment area is required to perform a function necessary for the application, a SCBA must be worn. Handlers must wear SCBA to reenter the greenhouse/treated areas for a minimum of 48 hours after the fumigant has stopped being delivered/dispensed to the soil.

Other PPE Considerations

- Clothing and Attire
  - All handlers must wear:
    - Long-sleeved shirt and long pants;
    - Shoes and socks.
  - When handling liquid (e.g. connecting or disconnecting pressurized hoses, or repairing equipment), all handlers must also wear:
    - Chemical-resistant gloves;
    - Chemical-resistant apron
    - Chemical-resistant footwear and socks
    - Protective eyewear such as safety glasses with temple and brow protection or full face shields (Do NOT wear goggles)
- All handlers must be provided the proper PPE as specified on the label.

Other PPE Considerations

- Personal Hygiene
  - Follow manufacturer's instructions for cleaning/maintaining PPE.
  - Use detergent and hot water if no such instructions for washables exist.
  - Keep and wash PPE separately from other laundry.
  - Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Other Health Considerations

- Heat Illness
  - Heat illness is caused by working in air temperatures that are excessively hot, and it can occur in both humid and dry conditions.
  - Symptoms of heat illness include dizziness, headache, fatigue, weakness, clammy skin, nausea, vomiting, hyperventilation, and irritability.
  - Keep hydrated - drink sufficient water or other suitable liquids when working under hot conditions.

Other Health Considerations

- Dust and other Sensory Irritants
  - Dust, pollen, and many other things can cause sensory irritation of the eyes, nose, throat, and respiratory tract.
  - If you experience sensory irritation while engaged as a handler participating in a fumigation, take the necessary precautions by leaving the immediate area, moving upwind of the fumigation site, and donning an air-purifying respirator.

Early Symptoms

- **Chloropicrin**: Early symptoms of overexposure to Chloropicrin are sensory irritation (teary eyes, stinging sensation in the eyes and/or throat), nausea and possible vomiting.
- **Methyl Bromide**: Early symptoms of overexposure to Methyl Bromide are dizziness, headache, nausea and vomiting, weakness, and collapse.

Exposure Mitigation

- **Working Safely Around Fumigations**
  - Soil fumigants are hazardous materials and must be handled with care only by those individuals experienced with their proper use.
  - As a handler, it is the responsibility of both you and the Certified Applicator to ensure that you have received the proper training to assist in fumigation activities before any such fumigation activity takes place.
  - Contact the your supervisor if you have any questions or concerns.

Spill and Leak Procedures

- Evacuate everyone from the immediate area of the spill or leak.
- Observe strict safety precautions.
- For entry into affected area to correct problem, wear the correct PPE (including prescribed respirator).
- Move leaking or damaged containers outdoors or to an isolated location.
- Work upwind, if possible.

Spill and Leak Procedures– Chloropicrin

- Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material.
  - Dispose of material on site or at an approved disposal facility.
- Only correctly trained and PPE-equipped handlers are permitted to perform cleanup.
- Do not permit entry into the spill or leak area by any other person until the concentration of Chloropicrin is measured to be less than 0.15 ppm.

Spill and Leak Procedures—Methyl Bromide

- In case of a rupture of hose or fitting while applying fumigant, immediately stop tractor and motor. Evacuate everyone from the immediate area of the spill or leak. Wear the personal protective equipment (including prescribed respirators) specified in the *Hazards to Humans and Domestic Animals* section of the product labeling for entry into affected area to correct problem. Approach from upwind to make necessary repairs. Do not enter area without the required PPE until the spill has evaporated or the leak has been fixed. Contaminated soil, water, and other cleanup debris is a toxic hazardous waste. Report spill to the National Response Center (800-424-8802) if the reportable quantity of 1000 lbs. is exceeded.

Preparing for Emergencies

- For all emergencies, follow the proper steps to make sure you and other handlers are properly protected.
  - Quick access to respiratory protection.
  - Know what mitigation steps can be taken to reduce exposure (e.g., leaving the area and going upwind).
  - Know how to evacuate yourself from the immediate area if needed.
  - Understand first aid and other emergency procedures.
  - Know how to contact emergency responders.

Examples of Emergency Situations

- Equipment Failure
  - Valve malfunctions or a connecting hose or line break may result in an immediate release of fumigant vapor or liquid into the surrounding area.
  - Take immediate steps to avoid exposure, such as moving upwind of the release.
  - Certified Applicator will instruct when it is safe to resume activities by correcting the problem, taking air monitoring samples, and/or removing all personnel from the exposure area.

Notifying the Application Supervisor of a Suspected or Known Emergency Situation

- If you suspect or know that you, another handler, or another person has been exposed to a fumigant and are experiencing the signs and symptoms of fumigant over exposure, **stop all work and contact the supervisor** (Certified Applicator) **immediately**.

Requirements for Reporting an Incident

- By law, all exposure incidents must be reported to the USEPA.
- If you suspect or know an incident occurred, contact the supervisor (Certified Applicator) immediately, and he/she will gather the required information that must be submitted.

Reporting an Incident

- In general, when an incident occurs, the following information are needed: your name, the applicator's name, the location of the incident, the date of the incident, the product used that is suspected or known to be involved in the incident, the names of the people experiencing symptoms, and a description of the symptoms experienced.
- Supervisor (Certified Applicator) will gather the information needed and will assist you in determining what course of action that may be needed to resolve the incident, including mitigation steps to be followed and any medical-related concerns.

Handler Training

- ***This review is only a reference for training purposes and is not intended to be a substitute for product labels.***
- ***Always refer to the label for detailed information and requirements***