

8536-43

04-28-2010

File 1/29



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

CERTIFIED MAIL

APR 28 2010

Mardel Belontinsky  
Soil Chemicals Corporation dba Cardinal Professional Products  
P.O. Box 782  
Hollister, CA 95024-0782

Subject: Pic-Clor 60 EC  
EPA Reg. No. 8536-43  
Pre-RED Mitigation Amendment dated December 1, 2009  
EPA Decision Number 430340

Dear Ms. Belontinsky:

The amended label referred to above, submitted in connection with reregistration of chloropicrin under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following label revisions are made and the following conditions are met:

**LABEL REVISIONS**

1. On page 2 in the company address, delete "8770 Highway 25 · Hollister · CA 95023".
2. On page 4, revise the section "IMPORTANT: For all handlers in numbers 1-4 an air-supplying respirator. . ." to read "IMPORTANT: For all handlers in numbers 1-4 a self-contained breathing apparatus (SCBA) is not permitted for routine handler tasks."
3. On page 5 under number 5, revise
  - a. the title to read, "Handlers exposed to high airborne concentrations of this product, e.g., emergencies such as a spill or leak or when corrective action is needed to reduce air levels to acceptable levels, and exposure to this product in poorly ventilated areas, must wear at a minimum:"
  - b. the last bullet under number 5 to read "A self-contained breathing apparatus (SCBA) with NIOSH approval number prefix TC-13F. See further respirator requirements in the *User Safety Requirements* and *Directions for Use* sections on this label."

4. On page 6 under the DIRECTIONS FOR USE section, revise the text above the Agricultural Use Requirements box as follows:

“DIRECTIONS FOR USE  
RESTRICTED USE PESTICIDE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the Agency responsible for pesticide regulation.”

5. On page 6 in the Agricultural Use Requirements box, add the following sentence after the last sentence, “PPE for Entry During the Entry Restricted Period: PPE for entry that is permitted by this labeling is listed in the Hazards to Humans and Domestic Animals section of this labeling.”
6. On page 7 in the Entry Restricted Period section under the fourth bullet, delete the word “until”.
7. On page 8 under GENERAL APPLICATION RESTRICTIONS, delete the first two sentences.
8. On page 10 under SUPERVISION OF HANDLERS, revise the sixth paragraph to read “The certified applicator must provide **Fumigant Safe Handling** information to each handler involved in the application or confirm that each handler participating in the application has received **Fumigant Safe Handling** information in a manner they can understand within the past twelve months. **Fumigant Safe Handling** information will be provided where this product is purchased, or at <http://www.epa.gov/fumigantraining>.”
9. On page 15, revise the subheading and text “Air-Rescue Device Availability. . .” to read “AVAILABILITY OF RESPIRATORS FOR EMERGENCIES”
  - The employer of any handler must confirm that at least one self-contained breathing apparatus (SCBA) is on-site and is ready for use in case of an emergency. This must be documented in the FMP.”
10. On page 17 under Weather Conditions, revise the fourth bullet to read “Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be obtained on-line at <http://www.nws.noaa.gov>, or by contacting your local National Weather Service Forecasting Office.”
11. On page 17 under Soil Preparation, revise the first sentence in the first bullet to read, “Soil must be properly prepared and at the surface generally be free of large clods.”

12. On page 19 under Requirements for Pre-Plant Greenhouse Soil Fumigation in the third bullet, change “with” to “within”.
13. On page 20, revise the last bullet to read, “Air purifying respirators, SCBAs, and other personal protective equipment (PPE) for handlers (handler task; protective clothing; respirator make, model, type, style, and size; respirator cartridge type; respirator cartridge replacement schedule; eye protection; gloves; and other PPE)”.
14. On page 21, revise the text “For handlers designated to wear air-purifying respirators. . .” to read “For handlers designated to wear respirators (air-purifying respirator or SCBA):
  - Date of medical qualification for respirator(s) that each handler is designated to wear,
  - Date of training for respirator(s) that each handler is designated to wear, and
  - Date of fit-testing for respirator(s) that each handler is designated to wear.”
15. On page 24, under SPILL AND LEAK PROCEDURES, revise the second and seventh sentences as follows:
  - a. “For entry into affected area to correct problems, wear the personal protective equipment specified in the *Hazards to Humans and Domestic Animals* section of this labeling.
  - b. Dispose of contaminated material on site or at an approved disposal facility.”
16. On page 21 under Good Agricultural Practices delete, “(registrants may also include optional GAPs).”
17. On page 24 of the STORAGE AND DISPOSAL section, revise the PESTICIDE STORAGE AND HANDLING section as follows: Store in a cool, . . . Remove the valve bonnet and safety cap only when fumigant is about to be removed from the cylinder. The safety cap and valve protection bonnet must be replaced when the cylinder is not in use. Do not subject cylinders to rough handling, or to abnormal mechanical shock such as dropping, bumping, dragging or sliding. Do not use ropes, slings, hooks, tongs, and similar handling devices for unloading cylinders. To transport heavier cylinders, use a hand truck, fork truck or similar device to which cylinders can be firmly secured.”

## CONDITIONS

1. EPA has determined that the risk mitigation measures on the revised label for this product are necessary to adequately protect human health and the environment. Therefore, pursuant to 40 CFR § 152.130(d), EPA has decided that no product bearing previously approved labeling may be sold or distributed (release for shipment) by its registrant after December 1, 2010. Wherever state approval is required for sale or distribution of this product with this new labeling, EPA strongly encourages you to submit an application to the state authority as soon as possible. You should be aware that the Agency does not intend to modify the December 1, 2010, deadline because of any failure to obtain necessary state approvals.

2. Submit one copy of the final printed label that incorporates the required changes before the product is released for shipment.

One copy of the label stamped "Accepted with comments" is enclosed for your records. If you have any questions, please contact Andrea Carone by phone at (703) 308-0122 or via email at [carone.andrea@epa.gov](mailto:carone.andrea@epa.gov) or Mary Waller by phone at (703) 308-9354 or via email at [waller.mary@epa.gov](mailto:waller.mary@epa.gov).

Sincerely,



Mary L. Waller  
Product Manager (21)  
Fungicide Branch  
Registration Division (7504P)

Enclosure

**RESTRICTED USE PESTICIDE**  
**DUE TO ACUTE TOXICITY AND CARCINOGENICITY**  
 For retail sale to and use by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

**ACCEPTED  
 with COMMENTS  
 In EPA Letter Dated  
 APR 28 2010**

*Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 8536-43*

# Pic-Clor 60 EC

*A multi-purpose liquid fumigant to be used in drip irrigation systems only for pre-plant treatment of soil to control nematodes, symphylians, wireworms and certain soil-borne diseases in cropland.*

**ACTIVE INGREDIENTS:**

Chloropicrin .....	56.7%
1,3-Dichloropropene .....	37.1%
<b>OTHER INGREDIENTS:</b> .....	6.2%
<b>TOTAL:</b> .....	100.0%

One gallon of Pic-Clor 60 EC weighs about 11.81 lbs./gal. at 20° C.  
 Contains 4.49 pounds of 1,3-Dichloropropene and 6.73 pounds of Chloropicrin per gallon.

### KEEP OUT OF REACH OF CHILDREN



**DANGER                      PELIGRO**

**POISON** [Note : « Poison » will be printed in red.]

*Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle.  
 (If you do not understand the label, find someone to explain it to you in detail.)*

**IN ALL CASES OF OVEREXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY.  
 TAKE PERSON TO A DOCTOR OR TO AN EMERGENCY TREATMENT FACILITY.**

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<ul style="list-style-type: none"> <li>• For additional information in case of an emergency, call toll free (1-800-424-9300.)</li> </ul>	

• Note: Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**NOTE TO PHYSICIAN**

Because rapid absorption may occur through lungs if product is aspirated and cause systemic effects, the decision to induce vomiting or not should be made by a physician. Probable mucosal damage may contraindicate the use of gastric lavage. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

*SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS.*



**Soil Chemicals Corporation dba Cardinal Professional Products**  
 P. O. Box 782 • Hollister • CA 95024-0782 -- 8770 Highway 25 • Hollister • CA 95023  
 (831) 630-2258

EPA Reg. No. 8536-43  
 EPA Est. 11220-CA-4; 11220-CA-8

NET CONTENTS.....LBS.

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS:**  
**HAZARDOUS LIQUID AND VAPOR**

- CORROSIVE TO EYES AND SKIN
- CAUSES IRREVERSIBLE EYE DAMAGE
- CAUSES SKIN BURNS
- FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN
- PROLONGED OR FREQUENTLY REPEATED SKIN CONTACT MAY CAUSE ALLERGIC REACTIONS IN SOME INDIVIDUALS.
- PROLONGED CONTACT MAY CAUSE LUNG, LIVER, AND KIDNEY DAMAGE AND RESPIRATORY SYSTEM IRRITATION.
- DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.
- DO NOT TAKE INTERNALLY.
- DO NOT BREATHE VAPOR.
- THE USE OF THIS PRODUCT MAY BE HAZARDOUS TO YOUR HEALTH. THIS PRODUCT CONTAINS 1,3-DICHLOROPROPENE, WHICH HAS BEEN DETERMINED TO CAUSE TUMORS IN LABORATORY ANIMALS. RISKS CAN BE REDUCED BY EXACTLY FOLLOWING DIRECTIONS FOR USE, PRECAUTIONARY STATEMENTS, AND BY WEARING THE PERSONAL PROTECTIVE EQUIPMENT SPECIFIED IN THIS LABELING.
- THIS PRODUCT ALSO CONTAINS CHLOROPICRIN, A STRONG LACHRYMATOR (TEAR-PRODUCING EYE IRRITANT), WHICH HAS THE CAPACITY TO CAUSE MARKED IRRITATION TO THE UPPER RESPIRATORY TRACT. LOW CONCENTRATIONS ARE CAPABLE OF CAUSING PAINFUL EYE IRRITATION. THE

EFFECT MAY BE SO POWERFUL THAT A PERSON MAY BECOME TEMPORARILY BLINDED AND PANIC-STRICKEN. THAT, IN TURN, MAY LEAD TO ACCIDENTS.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. For more options, follow the instructions for Category H on the chemical resistance category selection chart. PPE constructed of saranex, neoprene, and chlorinated polyethylene provide short-term contact or splash protection against liquid in this product. Longer-term protection is provided by PPE constructed of viton, Teflon, and EVAL barrier laminates (for example, responder suits manufactured by Life-guard or silvershield gloves manufactured by North). Where chemical-resistant materials are required, leather, canvas, or cotton materials offer no protection from this product and must not be worn as the sole article of protection when contact with this product is possible. Where coveralls are required, they must be loose-fitting and constructed of woven fabrics (e.g., tight knit cotton or cotton/polyester), non-woven fabrics (e.g., tyvek or sontara), or fabrics containing microporous Teflon.

**1. Handlers Performing Mechanical Transfer of Product – Closed Delivery Systems – must wear at minimum:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Protective eyewear (**do not** wear goggles)
  
- Coveralls must be immediately available to the handler in case of emergency.
  
- If sensory irritation (tearing, burning of the eyes or nose) is experienced and handlers remain in the application block, handlers must wear at a minimum either:
  - A full-face respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or
  - A full-face respirator with a canister approved for pesticides (NIOSH approval number prefix TC-14G).

*(See Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers, number 1, Handlers Performing Mechanical Transfer of Product – Closed Delivery Systems for when a full-face respirator is required)*

**2. While Performing Tasks With Liquid Contact Potential, All Handlers (Including Applicators) must wear at a minimum:**

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron
- Protective eyewear (**do not** wear goggles)
- A half-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved

for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

- If sensory irritation (tearing, burning of the eyes or nose) is experienced and handlers remain in the application block, handlers must wear at a minimum either:
  - A full-face respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or
  - A full-face respirator with a canister approved for pesticides (NIOSH approval number prefix TC-14G).

(See *Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers*, number 2, *While Performing Tasks With Liquid Contact Potential All Handlers (Including Applicators)* for when a full-face respirator is required)

**3. Handlers in Treated Area Within 5 Days After Application must wear at a minimum:**

- Coveralls
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter. (See *Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers*, number 3, *Handlers in Treated Area Within 5 Days After Application* for respirator monitoring and stop work requirements)

**4. Handlers in the Treated Area 5 Days After Application Until the Entry Restricted Period Ends must wear:**

- Long-sleeved shirt and long pants
- Shoes and socks
- Do not wear jewelry, gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Chloropicrin is heavier than air and can be trapped inside clothing and cause skin injury.
- If sensory irritation (tearing, burning of the eyes or nose) is experienced and handlers remain in the application block, handlers must wear at a minimum either:
  - A full-face respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or
  - A full-face respirator with a canister approved for pesticides (NIOSH approval number prefix TC-14G).

(See *Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers*, number 4, *Handlers in the Treated Area 5 Days After Application Until the Entry Restricted Period Ends* for when a full-face respirator is required)

**IMPORTANT:** For all handlers in numbers 1-4 an air-supplying respirator [i.e., a respirator connected directly to a clean air source or a self-contained breathing apparatus (SCBA)] is not



permitted for routine handler tasks. Such respirators are only permitted in emergencies such as a spill or leak or when corrective action is needed to reduce air levels to acceptable levels.

**5. Handlers exposed to high airborne concentrations of this product, such as cleanup following large spills and exposure to this product in poorly ventilated areas, must wear at a minimum:**

- Chemical-resistant suit
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear
- Supplied-air respirator with NIOSH approval number prefix TC-19C or self-contained breathing apparatus (SCBA) with NIOSH approval number prefix TC-13F. See further respirator requirements in the *User Safety Requirements* and *Directions for Use* sections on this label.

**Note:** In-tank cleaning of bulk tanks must be performed only by persons who have been specifically trained for this activity. Refer to OSHA 29 CFR Part 1910.146.

**USER SAFETY REQUIREMENTS**

1. Never Fumigate Alone: It is imperative to always have an assistant and proper protective equipment in case of accidents.
2. Dispose of Contaminated Clothing: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.
3. Clean and Maintain PPE: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
4. Contact With Mouth: Never siphon this product by mouth or use mouth to blow out clogged lines, nozzles, etc.
5. Heat Illness Avoidance: Use measures to avoid or minimize heat illness while using this product. These measures include gradual adjustment to heat and respirator stress, fans for cooling, cooling vests, frequent breaks to cool down, frequent intake of drinking water, and maintaining weight from day to day.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets on clothing. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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### ENVIRONMENTAL HAZARDS

- This pesticide is toxic to mammals and birds. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.
- Chloropicrin has certain properties and characteristics in common with chemicals that have been detected in groundwater (chloropicrin is highly soluble in water and has low adsorption to soil).
- Groundwater Advisory: 1,3-dichloropropene is known to move through soil and under certain conditions has the potential to reach groundwater as a result of agricultural use. Application in areas where soils are permeable and groundwater is near the surface could result in groundwater contamination.

### PHYSICAL OR CHEMICAL HAZARDS

- Combustible. Do not use or store near heat or open flame.
- Do not mix or allow coming in contact with oxidizing agent. A chemical reaction hazard may occur.
- Handle carefully! Do not drop or let container be impacted by heavy objects. An explosion hazard may occur.

### DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN ANY MANNER INCONSISTENT WITH ITS LABELING. FOR ANY REQUIREMENTS SPECIFIC TO YOUR STATE OR TRIBE, CONSULT THE AGENCY RESPONSIBLE FOR PESTICIDE REGULATION.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements in this labeling about personal protective equipment (PPE), restricted-entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS). **No instructions elsewhere on this labeling relieve users from complying with the requirements of the WPS.**

For the entry restricted period and notification requirements, see the *Entry Restricted Period* and *Notification* sections of this labeling.

**NOTICE:** READ THE ENTIRE LABEL AND LABEL BOOKLET BEFORE USING THIS PRODUCT. USE ONLY ACCORDING TO LABEL AND LABEL BOOKLET DIRECTIONS. BEFORE BUYING OR USING THIS PRODUCT, READ "WARRANTY DISCLAIMER" AND "LIMITATION OF REMEDIES".

**ENTRY RESTRICTED PERIOD AND NOTIFICATION**

**ENTRY RESTRICTED PERIOD**

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 listed on this labeling – is PROHIBITED – from the start of the application until:

- 5 days (120 hours) after application is complete if tarps are not perforated and removed for at least 14 days following application. Note: Persons installing, repairing, or monitoring tarps are handlers until 14 days after the application is complete if tarps are not perforated and removed during those 14 days, or
- 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.

NOTE: see *Tarp Perforation and/or Removal* section on this labeling for requirements about when tarps are allowed to be perforated.

**NOTIFICATION**

Notify workers of the application by warning them orally and by posting Fumigant Treated Area signs. The Fumigant Treated Area signs must bear the skull and crossbones symbol and state:

- "DANGER/PELIGRO",
  - "Area under fumigation, DO NOT ENTER/NO ENTRE",
  - " 1,3-Dichloropropene and Chloropicrin Fumigants in USE",
  - the date and time of fumigation,
  - the date and time entry restricted period is over,
  - "PIC-CLOR 60 EC", and
  - Name, address, and telephone number of the certified applicator in charge of the fumigation.
- Post the Fumigant Treated Area sign instead of the WPS sign for this application but follow all WPS requirements pertaining to location, legibility, size, and timing of posting and removal. Post the Fumigant Treated Area signs at all entrances to the application block (i.e., the greenhouse or field or portion of a field treated with a fumigant in any 24-hour period).

**GENERAL INFORMATION**

This product is a multi-purpose liquid fumigant for preplant treatment of soil to control nematodes, symphylans, wireworms and certain soil borne diseases in cropland. This product may be applied as a preplant soil treatment to control or to aid in reducing the damaging effects of certain soil borne diseases [soil rot (soil pox) of sweet potatoes; *Streptomyces scabies* (potato scab or common scab of potatoes); Granville (bacterial) wilt, black root rot, black shank diseases of tobacco; *Verticillium* wilt of mint, pink root of onions, pod rot of peanuts]; plant parasitic nematodes [root-knot, root lesion, citrus, cyst formers (golden, sugar beet, soybean), burrowing, lance, reniform, ring, spiral, sting, pin, stubby root, stilet, dagger and certain others]; symphylans (garden centipedes) and wireworms. Before fumigation, soil sampling for the type and number of pests present is recommended. In fields where pre-treatment soil samples indicate the presence of high population levels of nematodes, a successful fumigation cannot be expected to eradicate entire populations. Therefore, post-treatment sampling is recommended to determine the need for additional pest management practices. Consult State Agricultural Experiment Station or Extension Service specialists for information on other practices such as

post-harvest destruction of crop residues, weed control or other cultural practices, and use of nematode resistant crop varieties that may aid in reducing crop losses from soil borne pests.

**GENERAL APPLICATION RESTRICTIONS**

DO NOT APPLY THIS PRODUCT IN A WAY THAT WILL CONTACT WORKERS OR OTHER PERSONS, EITHER DIRECTLY OR THROUGH DRIFT. ONLY PROTECTED HANDLERS MAY BE IN THE AREA DURING APPLICATION. Soil fumigation using this product must be conducted only according to directions and conditions of use described in this labeling. DO NOT FORMULATE THIS PRODUCT INTO OTHER END-USE PRODUCTS. Because 1,3-dichloropropene is corrosive under certain conditions, flush all application equipment with fuel oil, kerosene or a similar type of petroleum solvent immediately after use. Fill pumps and meters with new motor oil or a 50% motor oil/fuel oil mixture before storing. DO NOT USE WATER.

DO NOT APPLY WITHIN 100 FEET OF ANY WELL USED FOR POTABLE WATER. DO NOT APPLY THIS PRODUCT WITHIN 100 FEET FROM THE EDGE OF KARST TOPOGRAPHICAL FEATURES. Karst topography is identified from landscape features that result from the dissolving activity of water in carbonate rock formations (limestone, dolomite, and marble). Surface features that are associated with karst topography include sinkholes, caverns, springs, and sinking or disappearing streams. In North Dakota, South Dakota, Wisconsin, Minnesota, New York, Maine, New Hampshire, Vermont, Massachusetts, Utah, and Montana: Where groundwater aquifers exist at a depth of 50 feet or less from the surface, do not apply this product where soils are Hydrologic Group A.

**USE RESTRICTIONS FOR PIC-CLOR 60 EC IN CERTAIN FLORIDA COUNTIES**

For the following Florida counties: Brevard, Broward, Charlotte, Citrus, Collier, Dade, DeSoto, Glades, Hardee, Hendry, Hernando, Highlands, Hillsborough, Indian River, Lake Lee, Manatee, Martin, Monroe, Okeechobec, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Sarasota, Seminole, St. Lucie, Sumter, and Volusia, use PIC-CLOR 60 EC only on soils that have a relatively shallow hard pan or soil layer restrictive to downward water movement (such as spodic horizon) within six feet of the ground surface and are capable of supporting seepage irrigation regardless of irrigation method employed. DO NOT APPLY WHERE SUBSURFACE DRIP IRRIGATION EQUIPMENT MIGHT RELEASE THE FUMIGANT DIRECTLY INTO SHALLOW SUBSURFACE IRRIGATION WATER. For all other Florida counties, follow the label affixed to the product container for PIC-CLOR 60 EC.

**RECONTAMINATION PREVENTION**

This product will control pests that are present in the soil treatment zone at time of fumigation. It will not control pests that are introduced into soil after fumigation. To avoid reinfestation of treated soil do not use irrigation water, transplants, seed pieces, or equipment that could carry soil borne pests from infested land. Avoid contamination from moving infested soil onto treated beds through cultivation, movement of soil from below the treated zone, dumping contaminated tare soil in treated fields and soil contamination from equipment or crop remains. Clean equipment carefully before entering treated fields.

## FERTILITY INTERACTIONS

Fumigation may temporarily raise the level of ammonia nitrogen and soluble salts in the soil. This is most likely to occur when heavy rates of fertilizer and fumigant are applied to soils that are either cold, wet, acid, or high in organic matter. To avoid injury to certain crops including red beets, carrots, corn, radishes, cole crops, legumes (beans), lettuce, onions, and sugar beets, fertilize as indicated by soil tests made after fumigation. To avoid ammonia injury or nitrate starvation (or both) to crops grown on high organic soils, do not use fertilizers containing ammonium salts. Use only fertilizers containing nitrates until after the crop is well established and the soil temperature is above 65 degrees F. In mineral soils, do not apply more than 2/3 of the nitrogen requirements from fertilizers containing ammonium salts until the crop is well established and the soil temperature is above 65 degrees F.

When using high rates of this product as required by certain state nursery regulations, liming of highly acid soils before fumigation may stimulate nitrification and reduce the possibility of ammonia toxicity. Certain nursery crops such as citrus seedlings, *Cornus* sp., *Crataegus* sp., spruce, and vegetable crops such as cauliflower have shown evidence of phosphorus deficiency following fumigation. To avoid this possible effect, additional phosphate fertilizer (foliar applied) is recommended where experience indicates a deficiency may occur.

## **HANDLERS**

The following activities are prohibited from being performed in the application block (i.e., the greenhouse or the 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: persons installing, perforating, removing, repairing, and monitoring tarps are considered handlers for the durations listed below). Those activities include those persons:

- Participating in the application as supervisors, loaders, drivers, tractor co-pilots, shovelers, cross ditchers, or as other direct application participants (the application starts when the fumigant is first introduced into the soil and ends after the fumigant has stopped being delivered/dispensed to the soil);
- 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;
- Cleaning, handling, adjusting, or repairing the parts of fumigation equipment that may contain fumigant residues;
- Installing, repairing, operating, or removing irrigation equipment in the fumigant application block;
- Entering the application site to perform scouting, crop advising, or monitoring tasks;
- 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/or Removal* section on this labeling for requirements about when tarps are allowed to be perforated.
- Performing any handling tasks as defined by the WPS.

## PROTECTION FOR HANDLERS

### SUPERVISION OF HANDLERS

For water-run applications (e.g., drip), the certified applicator must be at the fumigation site to start the application including set-up, calibration, and initiation of the application. The certified applicator may leave the site but must return at least every two hours to visually inspect the equipment to ensure proper functioning and must directly supervise all WPS-trained handlers on-site until the fumigation has stopped being delivered/dispensed into the soil. WPS-trained handlers may perform the monitoring functions in place of the certified applicator, but must be under the supervision of the certified applicator and be able to communicate with the certified applicator at all times during monitoring activities via cell phone or other means.

The results of monitoring activities must be captured in the Fumigant Management Plan's (FMP) post-application summary.

For handling activities that take place after the fumigant has been delivered/dispensed into the soil until the entry restricted period expires, the certified applicator does not have to be on-site, but must have communicated, in a manner that can be understood, to the site owner/operator and handlers responsible for carrying out those activities the information necessary to comply with the label and procedures described in the FMP (e.g., emergency response plans and procedures).

Communication activities must be captured in the FMP.

**IMPORTANT:** This requirement does not override the requirements in the Worker Protection Standard for Agricultural Pesticides for information exchange between owners/operators of agricultural establishments and commercial pesticide applicators.

The certified applicator must provide **Fumigant Safe Handling** information to each handler involved in the application or confirm that each handler participating in the application has received **Fumigant Safe Handling** information in a manner they can understand within the past twelve months. **Fumigant Safe Handling** information will be provided where this product is purchased.

For all handling tasks at least two handlers trained under the provisions of the WPS 40 CFR 170.230 must be present.

### RESPIRATORY PROTECTION AND STOP WORK TRIGGERS

#### **1. Handlers Performing Mechanical Transfer of Product – Closed Delivery Systems**

The following procedures must be followed to determine whether a full-face air-purifying respirator is required or if operations must cease:

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- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) then either:
  - A full-face air-purifying respirator must be worn by all handlers, or
  - Operations must cease.
- Handlers can remove full-face 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. During the collection of air samples a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the irritation is first experienced.
- When using monitoring devices to monitor air concentration levels, a direct reading detection device, such as a Matheson-Kitagawa, Dräger, or Sensidyne device, must be used. The devices must have a sensitivity of at least 0.15 ppm for chloropicrin.
- When breathing zone samples are required, they must be taken outside respiratory protection equipment and within a ten inch radius of the handler's nose and mouth.
- When full-face air-purifying respirators are worn, then air monitoring samples must be collected at least every two hours in the breathing zone of a handler performing a representative handling task.
- If at any time: (1) a handler experiences any sensory irritation when wearing a full-face air-purifying respirator, or (2) an air sample is greater than or equal to 1.5 ppm, then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
- Handlers can resume work activities without full-face air-purifying respirators if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart show levels of chloropicrin have decreased to less than 0.15 ppm, provided that handlers do not experience sensory irritation. During the collection of air samples a full-face air purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.
- Work activities can resume if all of the following conditions exist provided that a full-face 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, a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.

## 2. While Performing Tasks With Liquid Contact Potential All Handlers (Including Applicators)

The following procedures must be followed to determine whether a full-face air-purifying respirator is required or if operations must cease for handlers wearing a half-face respirator:

- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) while wearing a half-face respirator then either:
  - A full-face air-purifying respirator must be worn by all handlers who remain in the application block or
  - Operations must cease and handlers not wearing full-face air-purifying respirators must leave the application block.
  
- When full-face air-purifying respirators are worn, then air monitoring samples for chloropicrin must be collected at least every two hours in the breathing zone of a handler performing a representative handling task.
  
- When using monitoring devices to monitor air concentration levels, a direct reading detection device, such as a Matheson-Kitagawa, Dräger, or Sensidyne device must be used. The devices must have a sensitivity of at least 0.15 ppm for chloropicrin.
  
- When breathing zone samples are required, they must be taken outside respiratory protection equipment and within a ten inch radius of the handler's nose and mouth.
  
- If at any time (1) a handler experiences any sensory irritation when wearing a full-face air-purifying respirator; or (2) an air sample is greater than or equal to 1.5 ppm, then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
  
- Handlers can remove full-face air-purifying respirators or resume work activities if all of the following conditions exist provided that a half-face 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,
  - Handlers do not experience sensory irritation, and
  - Air-purifying respirator cartridges have been changed.
  - During the collection of air samples a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.

## 3. Handlers in Treated Area Within 5 Days After Application:

- When full-face air-purifying respirators are worn, then air monitoring samples for chloropicrin must be collected at least every two hours in the breathing zone of a handler performing a representative handling task.



- When using monitoring devices to monitor air concentration levels, a direct reading detection device, such as a Matheson-Kitagawa, Dräger, or Sensidyne device must be used. The devices must have a sensitivity of at least 0.15 ppm for chloropicrin.
- When breathing zone samples are required, they must be taken outside respiratory protection equipment and within a ten inch radius of the handler's nose and mouth.
- If at any time (1) a handler experiences any sensory irritation when wearing a full-face air-purifying respirator; or (2) an air sample is greater than or equal to 1.5 ppm, then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
- Work activities can resume if all of the following conditions exist provided that a full-face 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,
  - Handlers do not experience sensory irritation, and
  - Air-purifying respirator cartridges have been changed.
  - During the collection of air samples a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.

**4. Handlers in the Treated Area 5 Days After Application Until the Entry Restricted Period Ends**

The following procedures must be followed to determine whether a full-face air-purifying respirator is required or if operations must cease:

- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) then either:
  - A full-face air-purifying respirator must be worn by all handlers who remain in the application block or
  - Operations must cease and handlers not wearing respiratory protection must leave the application block.
- Handlers can remove full-face 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. During the collection of air samples a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the irritation is first experienced.
- When using monitoring devices to monitor air concentration levels, a direct reading detection device, such as a Matheson-Kitagawa, Dräger, or Sensidyne device, must be used. The devices must have a sensitivity of at least 0.15 ppm for chloropicrin.

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- When breathing zone samples are required, they must be taken outside respiratory protection equipment and within a ten inch radius of the handler's nose and mouth.
- When full-face air-purifying respirators are worn, then air monitoring samples must be collected at least every two hours in the breathing zone of a handler performing a representative handling task.
- If at any time: (1) a handler experiences any sensory irritation when wearing a full-face air-purifying respirator, or (2) an air sample is greater than or equal to 1.5 ppm, then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
- Handlers can resume work activities without full-face air-purifying respirators if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart show levels of chloropicrin have decreased to less than 0.15 ppm, provided that handlers do not experience sensory irritation. During the collection of air samples a full-face air purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.
- Work activities can resume if all of the following conditions exist provided that a full-face 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, a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.

**EXCLUSION OF NON HANDLERS FROM APPLICATION BLOCK**

The certified applicator supervising the application and the owner/operator of the establishment where the fumigation is taking place must make sure that all persons who are not trained and PPE-equipped and who are not performing one of the handling tasks as stated in this labeling are excluded from the application block during the entry restricted period.

**PROVIDING, CLEANING, AND MAINTAINING PPE**

The employer of any handler (as stated in this label) must make sure that all handlers are provided and correctly wear the required PPE. The PPE must be cleaned and maintained as required by the Worker Protection Standard for Agricultural Pesticides.

**AIR-PURIFYING RESPIRATOR AVAILABILITY FOR PRE-PLANT SOIL USES**

The employer of any handler must confirm that an air-purifying respirator and appropriate cartridges of the type specified in the PPE section of this label are immediately available for each handler who will wear one. These handlers must be fit-tested, trained, and medically examined.

This must be documented in the FMP. Cartridges or canisters must be replaced when odor or irritation from this product becomes apparent, if the measured concentration of chloropicrin is greater than 1.5 ppm, or after 8 hours of use, whichever occurs first.

**AIR-RESCUE DEVICE AVAILABILITY FOR PRE-PLANT SOIL USES**

The employer of any handler must confirm that at least one air-rescue device (e.g., SCBA) is on-site and is ready for use in case of an emergency. This must be documented in the FMP.

**RESPIRATOR FIT TESTING, MEDICAL QUALIFICATION, AND TRAINING**

Employers must verify 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. A qualified medical practitioner is a physician or other licensed health care professional who will evaluate the ability of a worker to wear a respirator. The initial evaluation consists of a questionnaire that asks about medical conditions (such as a heart condition) that would be problematic for respirator use. If concerns are identified, then additional evaluations, such as a physical exam, might be necessary. The initial evaluation must be done before respirator use begins. Handlers must be reexamined by a qualified medical practitioner if their health status or respirator style or use-conditions change. Upon request by local/state/federal/tribal enforcement personnel, employers must provide documentation demonstrating how they have complied with these requirements.

**TARP PERFORATION AND/OR REMOVAL**

**IMPORTANT:** Persons perforating, repairing, removing, and/or monitoring tarps are defined, within certain time limitations, as handlers (see handlers as stated in this labeling) and must be provided the PPE and other protections for handlers as required on this labeling and in the Worker Protection Standard for Agricultural Pesticides.

- 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 drip lines have been purged and tarps have been laid) unless a weather condition exists which necessitates the need for early tarp perforation. See *Early Tarp Perforation for Flood Prevention Activities* section. For optimum control, the tarp should remain in place for a minimum of 14 days.
- 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.
- Tarps used for fumigations may be perforated manually **ONLY** for the following situations:
  - At the beginning of each row when a coulter blade (or other device which performs similarly) is used on a motorized vehicle such as an ATV.

- In fields that are 1 acre or less.
- During flood prevention activities.
- In all other instances tarps must be perforated (cut, punched, poked, or sliced) only by mechanical methods.
- 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.

**MANDATORY GOOD AGRICULTURAL PRACTICES (GAPS)**

The following GAPS must be followed during all fumigant applications. All measurements and other documentation planned to ensure that the mandatory GAPS are achieved must be recorded in the FMP and/or the post-application summary.

**Use Precautions**

- Apply this product only through drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
- Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
- If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- The certified applicator or WPS trained handlers under the supervision of and in communication with the certified applicator shall shut the system down and make necessary adjustments should the need arise.

**Application Timing:** This product can be applied at any time of the year as long as all of the mandatory GAPS can be achieved. Conditions that allow rapid diffusion of the fumigant as a gas through the soil normally give the best results. Because this product does not provide residual control of soil pests, it should be used as a preplant application before planting each crop.

**Bulk and Non-Bulk Containers:** With all bulk and non-bulk containers, PIC-CLOR 60 EC must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid product.

- All hoses, piping, and tanks used in connection with this product shall be of type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of this product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move this product beyond a pump must not exceed the manufacturer's maximum pressure specification.

**Tarps** (tarps are required for all PIC-CLOR 60 EC applications). A written tarp plan must be developed and included in the FMP. The plan must include:

- schedule and procedures for checking tarps for damage, tears, and other problems
- plans for determining when and how repairs to tarps will be made, and by whom

- minimum time following injection that tarp will be repaired
- minimum size of tarp damage that will be repaired
- other factors used to determine how and when tarp repair will be conducted
- schedule, equipment, and methods used to perforate tarps
- aeration plans and procedures following perforation of tarp, but prior to tarp removal or planting/transplanting
- schedule, equipment, and procedures for tarp removal

#### **Weather Conditions**

- Prior to fumigation the weather forecast for the day of the application and the 48-hour period following the fumigation must be checked to determine if unfavorable weather conditions exist (see *Identifying Unfavorable Weather Conditions* section) or are predicted and whether fumigation should begin.
- Wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach at least 5 mph during the application.
- Do not apply if a shallow, compressed (low-level) temperature inversion is forecast to persist for more than 18 consecutive hours for the 48-hour period after the start of application, or if there is an air stagnation advisory issued by the National Weather Service in effect for the area in which the fumigation is planned.
- Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be obtained on-line at: <http://www.nws.noaa.gov>. For further guidance, contact your local National Weather Service Forecasting Office.

#### **Identifying Unfavorable Weather Conditions**

- Unfavorable weather conditions block upward movement of air, which results in trapping fumigant vapors near the ground. The resulting air mass can move off-site in unpredictable directions. These conditions typically exist prior to sunset and continue past sunrise and persist as late as noontime. Unfavorable conditions are common on nights with limited cloud cover and light to no wind and their presence can be indicated by ground fog or smog and can also be identified by smoke from a ground source that flattens out below a ceiling layer and moves laterally in a concentrated cloud.

#### **Soil Preparation**

- Soil must be properly prepared and at the surface generally be free of clods that are golf ball size or larger. The area to be fumigated must be tilled to a depth of 5 to 8 inches.
- Till fields with known plowpans because they can lead to puddling of the fumigant due to inadequate soil drainage.
- Beds should be listed, shaped and ready for planting.
- Soil moisture should when possible be at 50% of field capacity in the top 2-3" at time of PIC-CLOR 60 EC application.
- 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. Removing the crop residue prior to fumigation is important to limit the natural "chimneys" that occur in the soil when crop residue is present. These "chimneys" allow the soil fumigants to move through the soil quickly and escape into the atmosphere. This 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. 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 the length of time that the soil would be exposed to potentially erosive weather conditions.

**Soil Temperature:**

- The minimum soil temperature at the depth of injection is 40 degrees F.
- The maximum soil temperature at the depth of injection must not exceed 90 degrees F at the beginning of the application.
  - If air temperatures have been above 100 degrees F in any of the three days prior to application, then soil temperature must be measured and recorded in the FMP.

**Product and Dosage**

- Plan the application by calculating the amount of PIC-CLOR 60 EC required at the appropriate rate for the crop, acreage and target pest. PIC-CLOR 60 EC must be metered into the water supply line and then passed through a mixing device, such as a centrifugal pump or static mixer, to assure proper agitation.
- Apply PIC-CLOR 60 EC through surface or buried drip irrigation systems, being sure to wet the soil thoroughly in the area being treated. Drip emitters should be spaced 8-12" apart.
- Meter PIC-CLOR 60 EC into the drip system according to the dosage. An adequate concentration of active ingredient must be present in order to be effective. At no time should the concentration of active ingredient exceed 1,500 ppm in the drip line. For example, a 300 pounds per acre rate would require 24,000 gallons of water per acre for 1,500 ppm.

**System Controls and Integrity**

- The irrigation system (main lines, headers, drip tape) must be thoroughly checked for leaks before the start of application. Leak detection requires that the irrigation system be at full operating pressure. The amount of time needed at full operating pressure will vary by irrigation system design. Look for puddling along major pipes (holes in pipes or leaky joints), at the top and ends of rows (leaky connection, open drip tape), and on the bed surface (damaged drip tape, malfunctioning emitters). Any leaks discovered during the pre-application check must be repaired prior to fumigant application.
- To inject fumigant, use a metering system (such as a positive pressure system, positive displacement injection pump, diaphragm pump, or a Venturi system) effectively designed and constructed of materials that are compatible with the fumigant and capable of being fitted with system interlocking controls. Do not use containers, pumps, or other equipment made of aluminum, magnesium, or their alloys as chloropicrin and 1,3-dichloropropene can be corrosive to such metals. Do not use drip tube materials made of aluminum, magnesium, zinc, cadmium, tin and alloys, or vinyl. Use drip irrigation components made only of copper, stainless steel, steel, polypropylene, polyethylene, nylon, Teflon, rigid PVC, EPDM, and Viton. Rigid PVC should not be exposed to undiluted PIC-CLOR 60 EC or more than 1,500 ppm PIC-CLOR 60 EC in the diluted form.
- The system must contain:
  - A functional check valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination and backflow;
  - A functional, automatic, quick-closing check valve to prevent the flow of fluids back toward the fumigant container;

- A functional, normally closed valve located on the intake side of the injection point and connected to the system interlock to prevent the fumigant from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down;
- Functional interlocking controls to automatically shut off the fumigant injection when the irrigation water flow stops or decreases to the point where fumigant distribution is adversely affected.

**Site of Injection and Irrigation System Layout**

- Site of injection must be as close as practical to the area being treated (such as direct injection of fumigant into the header pipe/manifold or into an aboveground delivery pipe attached to the header). If the fumigant is injected into a main line, make sure the irrigation pipe is able to be cleared of all fumigant as the fumigant may pool in low sections of the pipe. Also make sure that valves on lateral lines of the main line are closed, if these lateral lines lead to areas not being fumigated at the time of the application.

**System Flush**

- After application of PIC-CLOR 60 EC, continue to drip-irrigate the area with water to flush the irrigation system. Do not allow PIC-CLOR 60 EC to remain in the irrigation system after the application is complete. The total volume of water, including the amount used for flushing the irrigation system, must be adequate to completely remove the fumigant from the lines, but should be less than the amount that could over-saturate the beds (bed collapse can occur from over-saturation) and should not exceed 1.5 acre-inches (40,000 gallons) of water per acre. If common lines are used for both the fumigant application and water seal (if a water seal is applied) these lines must be adequately flushed before starting the water seal and/or normal irrigation practices.

**Soil Sealing**

- Tarps must be put in place before the fumigation begins.
- Tarp edges must be buried along the furrow and at the ends of rows.

**Planting Interval**

After fumigation, to prevent phytotoxicity, allow the fumigant to dissipate completely before planting the crop. Do not disturb treated soil for at least 2 weeks. Under optimum soil conditions for dissipation, 1 week for each 10 gallons/acre is recommended, with a minimum interval of 14 days following application. Wet soil retards diffusion of the fumigant thus requiring a longer aeration period. Aeration is usually complete when the odor of the fumigant is no longer evident. Seed may be used as a bioassay to determine if the product is present in the soil at concentrations sufficient to cause plant injury. Do not plant if odor of the product is present within the zone of fumigation.

**REQUIREMENTS FOR PRE-PLANT GREENHOUSE SOIL FUMIGATION**

- The maximum area that can be treated is 50,000 square feet.
- All applications must be tarped.
- During the application keep doors, vents and windows to the outside open and fans or other mechanical ventilation systems running with the application block.
- Leaks through which gases could enter adjacent enclosed areas must be sealed.

### SITE-SPECIFIC FUMIGATION MANAGEMENT PLAN (FMP)

Prior to the start of fumigation, the certified applicator supervising the application must verify that a site-specific FMP exists for each application block (i.e., a greenhouse or field or portion of a field treated with a fumigant in any 24-hour period). In addition, an agricultural operation fumigating multiple application blocks may format the FMP in a manner whereby all of the information that is common to all the application blocks is captured once, and any information unique to a particular application block or blocks is captured in subsequent sections.

The FMP must be prepared by the certified applicator, the site owner/operator, registrant, or other party.

The certified applicator must verify in writing (sign and date) that the site-specific FMP(s) reflects current site conditions before the start of fumigation.

#### Each site-specific FMP must contain the following elements:

- ❖ Applicator information (name, phone number, pesticide applicator license and/or certificate number, employer name, employer address)
- ❖ General site information
  - Application block location (e.g., county, township-range-section quadrant), address, or global positioning system (GPS) coordinates
  - Name, address, and phone number of owner/operator of the application block
- ❖ General application information (target application date/window, brand name of fumigant, EPA registration number)
- ❖ Tarp information and procedures for repair, perforation, and removal
  - Brand name, lot number, thickness
  - Name and phone number of person responsible for repairing tarps
  - Schedule for checking tarps for damage, tears, and other problems
  - Maximum time following notification of damage that the person(s) responsible for tarp repair will respond
  - Minimum time following application that tarp will be repaired
  - Minimum size of damage that will be repaired
  - Other factors used to determine when tarp repair will be conducted
  - Name and phone number of person responsible for perforating and/or removing tarps (if other than certified applicator)
  - Equipment/methods used to perforate tarps
  - Schedule and target dates for perforating tarps
  - Schedule and target dates for removing tarps
- ❖ Soil conditions (description of soil texture in application block, method used to determine soil moisture)
- ❖ Weather conditions (summary of forecasted conditions for the day of the application and the 48-hour period following the fumigant application)
  - Wind speed
  - Inversion conditions (e.g., shallow, compressed (low-level) temperature inversion)
  - Air stagnation advisory
- ❖ Air-purifying respirators, air-rescue devices, and other personal protective equipment (PPE) for handlers (handler task, protective clothing, air-purifying respirator type, respirator)



- cartridge type, respirator cartridge replacement schedule, air-rescue device type, eye protection, gloves, other PPE)
- ❖ Emergency procedures (evacuation routes, locations of telephones, contact information for first responders, local/state/federal/tribal contacts, key personnel and emergency procedures/responsibilities in case of an incident, equipment/tarp/seal failure or complaints, or other emergencies)
- ❖ Fumigant Treated Area posting procedures (person(s) who will post Fumigant Treated Area signs, location of Fumigant Treated Area signs, procedures for Fumigant Treated Area sign removal)
- ❖ Plan describing how communication will take place between applicator, land owner/operator, and other on-site handlers (e.g., tarp perforators/removers, irrigators) for complying with label requirements (e.g., timing of tarp perforation and removal, PPE)
  - Name and phone number of persons contacted
  - Date contacted
- ❖ Authorized on-site personnel
  - Names, addresses and phone numbers of handlers
  - Names, addresses, and phone numbers for employers of handlers
  - Tasks that each handler is authorized and trained to perform
  - For handlers designated to wear air-purifying respirators:
    1. date of medical qualification to wear an air-purifying respirator,
    2. date of air-purifying respirator training, and
    3. date of fit-testing for the air-purifying respirator.
- ❖ Air monitoring plan
  - If sensory irritation is experienced, indicate whether operations will be ceased or operations will continue with an air-purifying respirator.
  - If the intention is to cease operations when sensory irritation is experienced, provide the name, address, and phone number of the handler that will perform monitoring activities prior to operations resuming.
  - When air-purifying respirators are worn:
    1. Representative handler tasks to be monitored
    2. Monitoring equipment to be used and timing of monitoring
- ❖ Good Agricultural Practices (GAPs)
  - Description of applicable mandatory GAPs (registrants may also include optional GAPs)
  - Measurements and documentation to ensure GAPs are achieved (e.g., measurement of soil and other site conditions)
- ❖ Description of hazard communication. (The application block has been posted in accordance with the label. Pesticide product labels and material safety data sheets are on-site and readily available for employees to review.)
- ❖ Record-keeping procedures (the owner/operator of the application block as well as the certified applicator must keep a signed copy of the site-specific FMP for 2 years from the date of application).

For situations where an initial FMP is developed and certain elements do not change for multiple fumigation sites (e.g., applicator information, authorized on-site personnel, record-keeping procedures, emergency procedures) only elements that have changed need to be updated in the site-specific FMP provided the following:

- The certified applicator supervising the application has verified that those elements are current and applicable to the application block before it is fumigated.
- Record-keeping requirements are followed for the entire FMP (including elements that do not change).

Once the application begins, the certified applicator must make a copy of the FMP available for viewing by handlers involved in the fumigation. The certified applicator or the owner/operator of the application block must provide a copy of the FMP to any local/state/federal/tribal enforcement personnel who request the FMP. In the case of an emergency, the FMP must be made immediately available when requested by local/state/federal/tribal emergency response and enforcement personnel.

Within 30 days of completing the application portion of the fumigation process, the certified applicator supervising the application must complete a post-application summary that describes any deviations from FMP that have occurred, measurements taken to comply with GAPs, monitoring results as well as any complaints and/or incidents that have been reported to him/her.

**The Post-Application Summary must contain the following elements:**

- ❖ Actual date of the application, application rate, and size of application block fumigated
- ❖ Summary of weather conditions on the day of the application and during the 48-hour period following the fumigant application
- ❖ Soil temperature measurement (if air temperatures were above 100 degrees F in any of the 3 days prior to the application)
- ❖ Tarp damage and repair information (if applicable)
  - Location and size of tarp damage
  - Description of tarp/tarp seal/tarp equipment failure
  - Date and time of tarp repair
- ❖ Tarp perforation/removal details
  - Description of tarp removal (if different than in the FMP)
  - Date tarps were perforated
  - Date tarps were removed
- ❖ Complaint details (if applicable)
  - Person filing complaint (e.g., on-site handler, person off-site)
  - If off-site person, name, address, and phone number of person filing complaint
  - Description of control measures or emergency procedures followed after complaint
- ❖ Description of incidents, equipment failure, or other emergency and emergency procedures followed (if applicable)
- ❖ Details of elevated air concentrations monitored on-site (if applicable)
  - Location of elevated air concentration levels
  - Description of control measures or emergency procedures followed
  - Air monitoring results
    1. When sensory irritation experienced:
      - Date and time of sensory irritation
      - Handler task/activity
      - Handler location where irritation was observed

- Resulting action (e.g., cease operations, continue operations with air-purifying respirators)
2. When using a direct read instrument:
- Sample date and time
  - Handler task/activity
  - Handler location
  - Air concentration
  - Sampling method
- ❖ Date of Fumigant Treated Area sign removal
  - ❖ Any deviations from the FMP
  - ❖ Record-keeping procedures (the owner/operator of the application block as well as the certified applicator must keep a signed copy of the post-application summary for 2 years from the date of application).

**APPLICATION DIRECTIONS**

**BUFFER ZONE**

An application of this product shall not be made within 100 feet of an occupied structure, such as a school, hospital, business or residence. No person shall be present at this structure at any time during the seven consecutive day period following application. *This buffer zone does not apply to use on soils that will not experience an additional 1,3-D treatment for at least three years. For example, on soils to be planted with perennial crops.* **Note:** This product shall not be applied to soils more frequently than once each year.

TABLE 1 PIC-CLOR 60 EC MAXIMUM PRODUCT APPLICATION RATES			
Crop	Soil Type	Gallons/Acre <sup>1</sup>	Lbs./Acre <sup>1</sup>
Vegetable	Mineral	19.5 to 31.5 <sup>2</sup>	230.3 to 372.0
Field <sup>3</sup>	Mineral	19.5 to 31.5	230.3 to 372.0
Fruit and Nut	Mineral	19.5 to 44.5	230.3 to 525
Nursery	Mineral	19.5 to 44.5	230.3 to 525

<sup>a</sup>Note: To control symphylans (garden centipedes) apply at 38.5 or more gallons per acre (454.7 lbs./acre), and apply during late summer or early fall when the soil is warm. To suppress wireworms, use dosages recommended for nematodes. Do not exceed maximum rates given per acre.

<sup>1</sup> Rates given are the maximum broadcast equivalent rate. Based on the width of the area to be treated, reduce the broadcast rates proportionately.

<sup>2</sup> For cyst-forming nematodes, increase dosage to 39 gallons per acre (460.6 lbs./acre).

<sup>3</sup> For mint, apply 44.5 gallons per acre (525 lbs./acre).

### SPILL AND LEAK PROCEDURES

Evacuate everyone from the immediate area of the spill or leak. For entry into affected area to correct problem, wear the personal protective equipment (including prescribed respirator) specified in the *Hazards to Humans and Domestic Animals* section of this labeling. Move leaking or damaged containers outdoors or to an isolated location. Observe strict safety precautions. Work upwind, if possible. Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility. Only correctly trained and PPE-equipped handlers are permitted to perform such 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.

### STORAGE AND DISPOSAL

*DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.*

**PESTICIDE STORAGE AND HANDLING:** Store in a cool, dry, well-ventilated area under lock and key. Post as a pesticide storage area. Persons moving, handling, or opening containers must wear the personal protective equipment (including prescribed respirator) specified in the *Hazards to Humans and Domestic Animals* section of this labeling. Open container only in a well-ventilated area. The valve protection bonnet and safety cap should be removed only when fumigant is about to be removed from the cylinder. The safety cap and valve protection bonnet must be replaced when the cylinder is not in use. Cylinders should never be subjected to rough handling or to abnormal mechanical shock such as dropping, bumping, dragging, or sliding. Ropes, slings, hooks, tongs, and similar handling devices should not be used for unloading cylinders. A suitable hand truck, fork truck, or similar device to which the cylinders can be firmly secured should be used for transporting the heavier cylinders.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide and rinsates is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance. Because 1,3-dichloropropene is corrosive under certain conditions, flush all application equipment with fuel oil, kerosene or a similar type of petroleum solvent immediately after use. Fill pumps and meters with new motor oil or a 50% motor oil/fuel oil mixture before storing. Do not use water. Dispose of rinsate by applicable Federal, State and local regulations. Never introduce rinsate or unused product into surface or underground water supplies.

**REFILLABLE CONTAINER:** Only the registrant is authorized to refill cylinders. Return cylinders to registrant. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**CONTAINER DISPOSAL:** To clean the container before final disposal, remove any remaining liquid from the container, using dry air pressure if necessary. Allow container to aerate for at least 5 days. After aeration, wash container using hot water; then offer container to qualified reconditioner or dispose of as directed by State or local regulations.

**WARRANTY DISCLAIMER**

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. **SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

**INHERENT RISKS OF USE:** It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.) abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

**LIMITATION OF REMEDIES:** To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at the company's election, one of the following: (1) Refund of purchase price paid by buyer or user for product bought, or (2) Replacement of amount of product used. To the extent consistent with applicable law, the company shall not be liable for losses or damages resulting from handling or use of this product unless the company is promptly notified of such loss or damage in writing. To the extent consistent with applicable law, the company shall not be liable for consequential or incidental damages or losses. The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of the company or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.