HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER. EXTERMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE. FATAL IF SWALLOWED OR INHALED. CORROSIVE. CAUSES SKIN BURNS AND IRREVERSIBLE EYE DAMAGE, WHICH MAY PRODUCE BLINDNESS. DO NOT BREATHE VAPOR OR GAS. INHALATION MAY CAUSE SERIOUS ACUTE ILLNESS OR DELAYED LUNG, NERVE, OR BRAIN INJURY. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING.

NOTE: CHLOROPICRIN MAY BE IRRITATING TO THE UPPER RESPIRATORY TRACT, AND EVEN AT LOW LEVELS CAN CAUSE PAINFUL IRRITATION TO THE EYES. PRODUCING TEARING. IF THESE SYMPTOMS OCCUR, LEAVE THE FUMIGATION AREA IMMEDIATELY.

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 is an example of long-term contact or splash protection against liquid in this product. Longer-term protection is provided by PPE constructed of Viton, Teflon, and EVAL barrier lamimates (for example, resperdor 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.

When performing tasks with NO potential for contact with liquid fumigant, all handlers (including applicators) must:
• Wear long-sleeved shirt, long pants, shoes and socks.
• Not wear jewelry, goggles, tight clothing, chemical-resistant gloves, rubber protective clothing, or rubber boots when handling. Methyl bromide can be trapped inside clothing and cause skin injury.

Handlers with no potential for contact with liquid fumigant (e.g. shovelers) may wear cotton, leather, or other porous, non-chemical-resistant gloves. If such gloves are exposed to liquid fumigant, they must immediately be removed and discarded.

When performing tasks with potential for contact with liquid fumigant, all handlers (including applicators) must wear:
• Long-sleeved shirt and long pants.
• Chemical-resistant gloves.
• Chemical-resistant apron.
• Protective eyewear (Do NOT wear goggles), and
• Chemical-resistant footware with socks.

In addition, when an air-purifying respirator is required under this label's Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers sections, handler (including applicators) must wear:
• A NIOSH-certified full-facepiece air-purifying respirator with cartridges certified by the manufacturer for protection from methyl bromide at concentrations up to 5 ppm (e.g., a 3M air-purifying respirator equipped with 3M Model 60528 Organic Vapor/Acid Gas/P100 cartridges).

IMPORTANT: A self-contained breathing apparatus (SCBA) is not permitted for routine handler tasks. If responding to an emergency when corrective action is needed to reduce air concentrations to acceptable levels, an SCBA is required. Escape-only SCBA respirators must not be used by handlers for responding to emergencies. In addition wear PPE required for potential contact with liquid fumigant.

See label booklet for additional Precautionary Statements.

NOTE: Contains methyl bromide, a substance which harms public health and the environment by destroying ozone in the upper atmosphere.

PRECAUTIONARY STATEMENTS

87994-2-11220 MBC-33 20150204_19_11220.pdf

RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY
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.

MBC-33
Pre-Plant Soil Fumigant

ACTIVE INGREDIENTS:
Methyl Bromide ........................................... 67.0%
Chloropicrin ................................................ 32.8%
OTHER INGREDIENTS: 0.2%
TOTAL: ................................................................ 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER
POISON
PELIGRO

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

IF INHALED:
• Move person to fresh air.
• If person is unconscious, do not give anything by mouth.

IF SWALLOWED:
• Call a poison control center or doctor immediately for further treatment advice.
• Give 2 full glasses of water or milk if able to swallow.
• Do not induce vomiting unless told to do so by a poison control center or doctor.

IF ON SKIN OR CLOTHING:
• Remove contaminated clothing.
• Rinse skin immediately with plenty of water for 15-20 minutes.
• Do not remove clothing if the person is unconscious.

IF IN EYES:
• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.
• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.
• Call a poison control center or doctor for treatment advice.

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

EMERGENCY PHONE NUMBER: Chemtrec 1-800-424-9300

NOTE TO PHYSICIAN
Early symptoms of overexposure to methyl bromide are dizziness, headache, nausea and vomiting, weakness, and collapse. Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities; these are the usual cause of death. Repeated overexposures can result in blurred vision, staggering gait, and mental imbalance, with probable recovery after a period of no exposure. Blood bromide levels suggest the occurrence, but not the degree, of exposure. Treatment is symptomatic.

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. All handlers may be in the application block from the start of the application until the entry restricted period ends, and in the buffer zone during the buffer zone period. 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 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Storage and Disposal
DO NOT CONTAMINATE WATER, FOOD, OR FEED
Pesticide Storage: Store in a dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area.

Pesticide Disposal: The wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate 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 of the nearest EPA Regional Office for guidance. When a cylinder is partially full, and there is no further requirement for the product, return the cylinder to the registrant or distributor.

Replace safety cap and check protection bonnet before shipping container.

Container Handling: Store cylinders upright, secured to a rack or wall to prevent tipping. Do not subject cylinders to rough handling or mechanical shock such as dropping, bumping, dragging, or sliding. Do not use rope slings, hooks, lons or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck, or other device to which the cylinder can be securely. Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and check protection bonnet when cylinder is not in use.

Return of Containers: Cylinders are the property of the registrant or distributor and must be returned promptly after use. Do not ship cylinders without safety caps or valve protection bonnets.

Refillable Container: Only the registrant or distributor is allowed to refill this container.

This container can be refilled 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 the air pressure if necessary. Allow contain- er 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.

See label booklet for complete Directions for Use.

Distributed by:
Trical, Inc.
8770 Highway 25
P. O. Box 1327
Hollister, CA 95042-1327

EPA Reg. No. 87994-2-11220
EPA Est. 11220-CA-4

Date of Labeling: December 11, 2014

NET CONTENTS ............................... LBS.
**WARRANTY**

Seller warrants that this product conforms to the chemical description on its label and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. To the extent consistent with applicable law, neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product in a manner contrary to its label.

**INDEX**

Precautionary Statements .................................................. 1
Hazards to Humans and Domestic Animals ......................... 2
Personal Protective Equipment (PPE) .................................. 2
User Safety Requirements .................................................. 2
User Safety Recommendations ........................................... 2
Environmental Hazards ..................................................... 2
Physical or Chemical Hazards ............................................. 3
Directions for Use
Agricultural Use Requirements ........................................... 3
Terms Used In This Labeling ............................................... 3
Application Restrictions ................................................... 4
Product Information .......................................................... 4
Use Precautions ................................................................ 4
Certified Applicator Training .............................................. 4
Handlers .......................................................................... 4
Protection for Handlers ...................................................... 5
Tarp Perforation and/or Removal ........................................ 7
Entry Restricted Period and Notification ............................... 8
Mandatory Good Agricultural Practices (GAPs) ..................... 8
Maximum Application Rates ............................................... 11
Calculating the Broadcast Equivalent Rate ......................... 13
Buffer Zone Requirements ............................................... 14
Buffer Zone Distances ...................................................... 15
Buffer Zone Tables .......................................................... 16-18
Buffer Zone Credits .......................................................... 18
Buffer Zone Posting ........................................................... 18
Restrictions for Difficult to Evacuate Sites ......................... 19
Emergency Preparedness and Response
Measures ........................................................................ 19
Notice to State and Tribal Lead Agencies ............................ 20
Emergency Response Plan ................................................ 20
Site-specific Fumigation Management Plan (FMP) ................ 20
Post-Application Summary ............................................... 23
Spill and Leak Procedures ................................................ 23
Ozone Notice .................................................................... 23
Storage and Disposal ......................................................... 24
Warranty ........................................................................... 24

---

**FIRST AID**

**IF INHALED:**
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

**IF SWALLOWED:**
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**IF ON SKIN OR CLOTHING:**
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

**IF IN EYES:**
- Hold eyes open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.
- Call a poison control center or doctor for treatment advice.

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

---

**EMERGENCY PHONE NUMBER:** Chemtrec 1-800-424-9300

---

**NOTE TO PHYSICIAN**

Early symptoms of overexposure to methyl bromide are dizziness, headache, nausea and vomiting, weakness, and collapse. Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities; these effects are the usual cause of death. Repeated overexposures can result in blurred vision, staggering gait, and mental imbalance, with probable recovery after a period of no exposure. Blood bromide levels suggest the occurrence, but not the degree, of exposure. Treatment is symptomatic.
PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER. EXTREMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE. FATAL IF SWALLOWED OR INHALED. CORROSIVE. CAUSES SKIN BURNS AND IRREVERSIBLE EYE DAMAGE WHICH MAY HAVE A DELAYED ONSET. DO NOT BREATH VAPOR OR GAS. INHALATION MAY CAUSE SERIOUS ACUTE ILLNESS OR DELAYED LUNG, NERVE, OR BRAIN INJURY. FUMIGANTS MAY CAUSE FUMIGATION AREA INHABITANTS TO LEAVE THE FUMIGATION AREA IMMEDIATELY.

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 EVA barrier laminates (for example, responder suits manufactured by LifeGuard or Silvershield gloves manufactured by Nalge Nunc). Where chemical protective 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.

When performing tasks with NO POTENTIAL for contact with liquid fumigant, all handlers (including applicators) must wear:
- Wear long-sleeved shirt, long pants, shoes and socks.
- Not wear jewelry, sunglasses, tight clothing, chemical-resistant gloves, rubber protective clothing, or rubber boots when handling. Methyl bromide can be trapped inside clothing and cause skin injury.

When performing tasks with NO POTENTIAL for contact with liquid fumigant, all handlers (including applicators) must wear:
- Long-sleeved shirt and long pants.
- Chemical-resistant gloves.
- Chemical-resistant apron.
- Protective eyewear (Do NOT wear goggles), and
- Chemical-resistant footwear with socks.

In addition, when an air-purifying respirator is required under the label’s Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers sections, handlers (including applicators) must wear:
- A NIOSH-certified full-facepiece air-purifying respirator with cartridges 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).

IMPORTANT: A self-contained breathing apparatus (SCBA) is not permitted for routine handler tasks.

If responding to an emergency when corrective action is needed to reduce air concentrations to acceptable levels, wear an SCBA. Escape-only SCBA respirators must not be used by handlers for responding to emergencies. In addition wear PPE required for potential contact with liquid fumigant.

USER SAFETY REQUIREMENTS
- 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.
- Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. 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.

ENVIRONMENTAL HAZARDS
This pesticide is toxic to mammals and birds. Do not apply directly to water, to or areas where surface water is present or to intolerable areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Methyl bromide and chloropicrin have certain properties and characteristics in common with chemicals that have been detected in groundwater (methyl bromide and chloropicrin are highly soluble in water and have low adsorption to soil).

For unapplied treatments of methyl bromide and chloropicrin, leaking and runoff may occur if there is heavy rainfall after soil fumigation.

PHYSICAL OR CHEMICAL HAZARDS
Do not use containers or application equipment made of magnesium, aluminum, or their alloys, as under certain conditions this fumigant may be severely corrosive to such metals. [See the Calibration, Set-up, Repair and Maintenance for Application Rigs section of this labeling for further requirements for application equipment.]

Do not permit water to be used to clean the fumigant pressure system, as corrosion will result. Diesel oil is satisfactory for this purpose.

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 handlers may be in the application block from the start of the application until the entry restricted period ends, and in the buffer zone during the buffer zone period. 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 similar sites. The “broadcast application rate” relates to only the rate of fumigant applied to the field that is fumigated (e.g., rate within the bed or strips). The “broadcast equivalent application rate” relates to the rate that the broadcast equivalent application rate is calculated to determine the buffer zone distance required by this labeling.

Start of the Application: The time at which the fumigant is first delivered/dispensed into the soil and the soil has been sealed.

Entry Restricted Period: This period begins at the start of the application and expires depending on the application method and if tarps are used when the targets are performed and removed. Entry into the application block during this period is only allowed for appropriately PPEEquipped handlers performing handling tasks. See the Entry Restricted Period and Notification sections for additional information.

Buffer Zone: An area established around the perimeter of each application block. The buffer zone must extend outward from the edge of the application block perimeter equally in all directions. Buffer Zone Period: Begins at the start of the application and lasts for a minimum of 48-hours after the application is complete. Non-handlers must be excluded from the buffer zone during the buffer zone period.

Difficult to Evacuate Sites: Pre-K to Grade 12 schools, state-licensed daycare centers, nursing homes, assisted living facilities, hospitals, in-patient clinics, and prisons.

Terms Used in This Labeling
Soil Fumigant Training Program: Certified applicator training that provides information on (1) how to correctly apply the fumigant, including how to comply with new label requirements; (2) how to use the label; (3) how to determine buffer zone distances; (4) how to complete an FMP and the post-application supervised entry period; (5) how to develop and implement emergency response plans. Fumigant Safe Handling Information: Information that must be provided annually to handlers must include the fumigant’s name, how they work, (2) safe application and handling of soil fumigants, (3) air monitoring and respiratory protection, (4) early signs and symptoms of exposure, (5) appropriate steps to take to mitigate exposures, (6) what to do in case of an emergency, and (7) how to report incidents. Application Block: Area within the perimeter of the fumigated portion of a field (including furrows, irrigation ditches, roadways). The perimeter of the application block is the border that connects the outermost edges of total area treated with the fumigant product.

Application Rate: The ratio of fumigant mass applied compared to the soil surface area (e.g., lbs of product per acre). The application rate is expressed on this labeling in terms of either the ‘treated area application rate’ or the ‘broadcast equivalent application rate’. "Treated area application rate" relates to only the rate of fumigant applied to the field that is fumigated (e.g., rate within the bed or strips). The "broadcast equivalent application rate" relates to the rate of the broadcast application rate that is treated. The broadcast equivalent application rate must be calculated to determine the buffer zone distance required by this labeling.

For Entry During the Entry-Restricted Period:

For the entry restricted period and notification requirements, see the Entry Restricted Period and Notification sections of this labeling. PPE For Entry During the Entry-Restricted Period: PPE for entry that is permitted by this labeling is listed in the Personal Protective Equipment (PPE) section of this labeling.

AGRICULTURAL USE REQUIREMENTS
- 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.
- Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. 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.

ENVIRONMENTAL HAZARDS
This pesticide is toxic to mammals and birds. Do not apply directly to water, to or areas where surface water is present or to intolerable areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Methyl bromide and chloropicrin have certain properties and characteristics in common with chemicals that have been detected in groundwater (methyl bromide and chloropicrin are highly soluble in water and have low adsorption to soil).

For unapplied treatments of methyl bromide and chloropicrin, leaking and runoff may occur if there is heavy rainfall after soil fumigation.
Use Precautions

- Comply with all local regulations and ordinances.
- Obtain an application permit from Agricultural Regulatory Agencies as required.
- Users should handle this fumigant in the open, with the operator ‘upwind’ from the container where there is good ventilation.
- When fumigating soil from a tractor, 5 gallons of water must be carried on the tractor and placed where it is readily accessible. In addition to water available on the tractor, at least 5 gallons additional water must be available from the service truck. This water must be potable and in containers marked “Decontamination water not to be used for drinking”.
- Keep pets, livestock, and other domestic animals out of the treated area during application and during tarp perforation and/or removal, if a tarp is used.
- 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 plant roots, fertilize as indicated by soil tests made after fumigation. To avoid ammonia injury and/or nitrate struvation to crops, avoid using fertilizers containing ammonia salts and use only fertilizers containing nitrates until after the crop is well established and the soil temperature is about 65 °F. Liming highly acid soils before fumigation stimulates nitrification and reduces the possibility of ammonia toxicity.

Certified Applicator Training

Any certified applicator supervising a soil fumigant application must have successfully completed one of the soil fumigant training programs listed on the following EPA website www.epa.gov/fumiganttraining for the active ingredient(s) in this product. The training must be completed in the time frames listed on the website. The FMP must document the date and location where the soil fumigant training program was completed.
Air Purifying Respirator Availability:
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 labeling are immediately available for each handler who will wear one. At a minimum two handlers must have the appropriate air-purifying respirator and cartridges available (see Respirator Fit Testing, Medical Qualification, and Training section for additional requirements).

Exception: Air-purifying respirators do not need to be available for handlers performing fumigant site monitoring tasks outside of the buffer zone.

Respirator Fit Testing, Medical Qualification, and Training:
Using a program that conforms to OSHA’s requirements (see 29 CFR Part 1910.134), employers must verify that any handler who uses a respirator is:
- Fit-tested and fit-checked, and
- Trained, and
- 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 medical examiner 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 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.

Respiratory Protection and Stop Work Triggers:
The following procedures must be followed to determine whether a full-facepiece air-purifying respirator must be worn by any handler who remains in the application block or surrounding buffer zone as stated in this label.
- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose), then either:
  - A full-facepiece air-purifying respirator must be worn by all handlers who remain in the application block or surrounding buffer zone.
  - Operations must cease and handlers not wearing an air-purifying respirator must leave the application block and surrounding buffer zone.
- Handlers can remove full-facepiece air-purifying respirators or resume operations if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart each must be less than 1.5 ppm.
- During the collection of air samples, a full-facepiece air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken at the location where the irritation was first experienced.
- When breathing zone samples are required, they must be taken outside of the buffer zone and within 10 inches of the handler’s face.
- When full-facepiece 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 representative handling task.
- If at any time: (1) a handler experiences sensory irritation when wearing a full-facepiece air-purifying respirator, or (2) a methyl bromide air sample is greater than 5 ppm or a chloropicrin 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 and surrounding buffer zone.
- Handlers can resume work activities without full-facepiece air-purifying respirators if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart show 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. During the collection of air samples a full-facepiece air-purifying respirator must be worn by the handler taking the air samples.
- Samples must be taken at the location where: (1) the irritation was first experienced, or (2) where the sample(s) were greater than 5 ppm for methyl bromide or, (3) where sample(s) were greater than or equal to 1.5 ppm for chloropicrin.
- Handlers can resume work activities if all of the following conditions exist provided a full-facepiece air-purifying respirator is worn by the handler:
  - two consecutive breathing zone samples for methyl bromide taken at the handling site at least 15 minutes apart each must be less than or equal to 5 ppm.
  - two consecutive breathing zone samples for chloropicrin taken at the handling site at least 15 minutes apart each must be less than or equal to 0.15 ppm.
- Operators do not experience sensory irritation while wearing the full-facepiece air-purifying respirator, and
- Filter cartridges/canisters have been changed.
- During the collection of air samples a full-facepiece air-purifying respirator must be worn by the handler taking the air samples.
- Samples must be taken at the location where: (1) the irritation was first experienced, or (2) where the sample(s) were greater than 5 ppm for methyl bromide or, (3) where sample(s) were greater than or equal to 1.5 ppm for chloropicrin.

Tarp Perforation and/or Removal
IMPORTANT: Persons perforating, repairing, removing, and/or monitoring tarps are defined, within certain time limitations, as handlers (see Handlers section), and they must be provided the same respirator and other protections as required on this labeling and in the Worker Protection Standard for Agricultural Pesticides.

- If tarps are perforated until a minimum of 5 days (120 hours) have elapsed after the application is complete, unless a weather condition exists which necessitates early tarp perforation or removal (see Early Tarp Removal for Broadcast Applications Only and Early Tarp Perforation during Flood Prevention Activities for Bedded Applications Only requirements).
- If tarps are perforated within 14 days after the application is complete, tarp removal must not begin until at least 2 hours after tarp perforation is complete and 2 consecutive methyl bromide air monitoring samples taken at least 15 minutes apart are less than 5 ppm. Air samples must be taken in the breathing zone of the handler. If the 2 consecutive air monitoring samples indicate that methyl bromide levels are:Less than 1 ppm and no sensory irritation is experienced, no respiratory protection is required to begin tarp removal.
- Between 1 ppm and 5 ppm, then an air-purifying respirator is required to begin tarp removal.

See the Respiratory Protection and Stop Work Triggers and Personal Protective Equipment (PPE) sections for additional requirements.

See www.tarpcredits.epa.gov for a list of tarps that have been tested and determined to qualify for buffer reduction credits.

Operations must cease and handlers not wearing an air-purifying respirator must leave the application block and surrounding buffer zone.

If when perforating any tarp that qualifies for a 60% or greater reduction in buffer zone distance following broadcast shank applications:
- All handlers must wear an air-purifying respirator when perforating the tarp; and
- Tarp removal must not begin until at least 2 hours after tarp perforation is complete and 2 consecutive air monitoring samples taken at least 15 minutes apart are less than 5 ppm. Air samples must be taken in the breathing zone of the handler. If the 2 consecutive air monitoring samples indicate that methyl bromide levels are:
  - Less than 1 ppm and no sensory irritation is experienced, no respiratory protection is required to begin tarp removal.
  - Between 1 ppm and 5 ppm, then an air-purifying respirator is required to begin tarp removal.

For broadcast applications, tarp removal must not be performed if rainfall is expected within 12 hours.

Early Tarp Removal for Broadcast Applications Only:
- Tars may be removed before the required 5 days (120 hours) if adverse weather conditions threaten 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 not performing its intended function and is creating a hazard.

Early Tarp Perforation during Flood Prevention Activities for Bedded Applications Only:
- If tarp perforation is allowed before the 5 days (120 hours) have elapsed.
- Tarp must be immediately retucked and packed after soil removal.

After soil removal.
**Entry Restricted Period and Notification**

Entry into the application block (including early entry time frame in place of the REI.

Mandatory Good Agricultural Practices (GAPs)

The following practices must be followed during all fumigant applications.

**Tarps**

- Tarps must be installed immediately after the fumigant is applied to the soil for bedded or broadcast applications.
- A written tarp plan must be developed and included in the FMP.
- Once a tarp is perforated, the application is no longer considered tarped.

**Weather Conditions**

To determine if unfavorable weather conditions exist or are predicted (see Identifying Unfavorable Weather Conditions section) and whether an application should proceed, the National Weather Service forecast must be checked by the certified applicator in charge of the fumigation.

- On the day of, or prior to the start of the application, and
- On a daily basis during the application if the time period from the start of the application until the application is complete is greater than 24 hours.

Do not apply if an air stagnation advisory issued by the National Weather Service is in effect for the area in which the application is planned, during the application, or the 48 hours after the application is complete.

Do not apply if light wind conditions (< 2 mph) are forecast to persist for more than 18 consecutive hours from the time the application starts until 48 hours after the application is complete.

**Soil Conditions**

Identifying Unfavorable Weather Conditions

Unfavorable weather conditions include:

- Unfavorable weather conditions:
  - Cool temperatures, wind, and/or precipitation.
  - Localized cloud cover.
  - No wind or light wind conditions.
  - Localized cloud cover.
  - No wind or light wind conditions.

For Broadcast Untarped Applications (CA orchard replant only): 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 tract. For broadcast applications, the soil surface must be compacted with a cultipacker, ring roller, and roller in combination with the broadcast equipment.

Bedded and Broadcast Shank Applications:

- Preformed beds must be sealed. The use of a tarp does not eliminate the need for tarping. The tarp must be removed and the soil must be banded, monitored, and treated as required.
- Soil moisture content in the lightest textured soil (sand) should be adjusted to no more than 50% available water capacity. The soil moisture content in the heaviest textured soil (sandy loam) should be adjusted to no more than 75% available water capacity. The soil moisture content in the intermediate textured soil (sandy clay loam) should be adjusted to no more than 65% available water capacity.
- Soil moisture content in the lightest textured soil (sand) should be adjusted to no more than 50% available water capacity. The soil moisture content in the heaviest textured soil (sandy loam) should be adjusted to no more than 75% available water capacity. The soil moisture content in the intermediate textured soil (sandy clay loam) should be adjusted to no more than 65% available water capacity.
- Soil moisture content in the lightest textured soil (sand) should be adjusted to no more than 50% available water capacity. The soil moisture content in the heaviest textured soil (sandy loam) should be adjusted to no more than 75% available water capacity. The soil moisture content in the intermediate textured soil (sandy clay loam) should be adjusted to no more than 65% available water capacity.

Field Soil Preparation

- Soil preparation is required before applying fumigant. Soil preparation is required before applying fumigant.
- Soil preparation is required before applying fumigant. Soil preparation is required before applying fumigant.
- Soil preparation is required before applying fumigant. Soil preparation is required before applying fumigant.
- Soil preparation is required before applying fumigant. Soil preparation is required before applying fumigant.

Bedded and Broadcast Shank Applications: Additional Mandatory GAPs

In addition to the GAPs required for all soil fumigation applications, the following GAPs apply for injection applications.

**Soil Preparation**

- Trash pulled by the shanks to the ends of the fields must be covered with tarp, or soil, depending on the application method and the type of residue present in the field.
- Trash pulled by the shanks to the ends of the fields must be covered with tarp, or soil, depending on the application method and the type of residue present in the field.
- Trash pulled by the shanks to the ends of the fields must be covered with tarp, or soil, depending on the application method and the type of residue present in the field.
- Trash pulled by the shanks to the ends of the fields must be covered with tarp, or soil, depending on the application method and the type of residue present in the field.
- Trash pulled by the shanks to the ends of the fields must be covered with tarp, or soil, depending on the application method and the type of residue present in the field.
Do not lift injection shanks from the soil until the
Prevention of End Row Spillage
For Untarped-Broadcast Applications (CA
• To prevent the backflow of fumigant into the
Rigs must include a flow meter or a constant
• Calibration, Set-up, Repair, and Maintenance
• Do not apply or allow fumigant to spill onto the
soil/air interface.
The injection point must
from the system.
has been depressurized (passively drained) or
shut-off valve has been closed and the fumigant
shanks from the ground.
the final injection point, or drain/purge the line
a check valve located as close as possible to
the shank spacing should be equal to the
application depth, but may be up to 1½
times the application depth, not to exceed 24
inches. When applying MBC-33 Soil Fumigant
with a Noble plow, use an outlet spacing of 9-12
inches along the sweeps.
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.
Calibration, Set-up, Repair, and Maintenance
• Brass, carbon steel, or stainless steel fittings
must be used throughout. Polyethylene tubing, polypropylene tubing, Teflon® tubing or Teflon®
-lined steel braided tubing must be used for all
low pressure lines, drain lines, and compressed
gas or air pressure lines. All other tubing must be the Teflon®-lined steel braided.
• Galvanized, PVC, nylon, or aluminum pipe
fittings must not be used.
• All rigs must include a filter to remove any
particulates from the fumigant and for pressurized systems a check valve to prevent backflow of the
fumigant into the pressurizing cylinder or the
compressed air system.
• Rigs must include a flow meter or a constant
pressure system with orifice plates to ensure the
proper amount of fumigant is applied.
• To prevent the backflow of fumigant into the
compressed gas cylinder (e.g., nitrogen, other
inert gas, compressed air), if used, applicators
must:
  o Ensure that positive pressure is maintained in the
compressed gas cylinder at not less than 200 psi during the entire time it is connected to the
application rig, if a compressed gas cylinder is used. (This is not required for a compressed air system that is part of the
application rig, because if the compressor system fails, the application rig will not be operable.)
  o Ensure that application rigs are equipped with properly functioning check valves between the
compressed gas cylinder or compressed air system and the fumigant cylinder. The check
valve is best placed on the outlet side of the pressure regulator, and is oriented to only
allow compressed gas to flow out of the cylinder
or compressed air out of the compressed air system.
  o A pressure relief valve must be installed between the
injector and the check valve to ensure
  a regulator failure does not over pressurize the
fumigant cylinder.
  o Always pressurize the system with compressed
gas or by use of a compressed air system before opening the fumigant cylinder valve.
  Before using a fumigation rig for the first time, or
when preparing it for use after storage, the operator
must check the following items carefully:
  o Check the filter, and clean or replace the filter
element as required.
  o Check all tubes and chisels to make sure they are free of debris and obstructions.
  o Check and clean the orifice plates and screen checks, if installed.
  o Pressure the system with compressed gas or
compressed air, and check all fittings, valves, and connections for leaks using soap solution.
  Install the fumigant cylinder, and connect and
secure all tubing. Slowly open the compressed gas
or compressed air valve, and increase the pressure
to the desired level. Slowly open the fumigant
cylinder valve, always watching for leaks.
• When the application is complete, close the fumigant
cylinder valve and blow residual fumigant out of the
fumigant lines into the soil using compressed gas or
compressed air. If the rig uses vacuum to gather a
instead of compressed gas to inject fumigant into the soil, you may clear residual fumigant from the
fumigant lines using an application wand connected to the system’s low point via a drain hose. Place
the wand in the soil until all residual fumigant has drained from the system. The wand and drain
hose must be free of dirt to allow proper drainage.
At the end of the application season, disconnect all
fumigant cylinders from the application rig. At the
end of the season, seal all tubing openings with
tape to prevent the entry of insects and dirt.
• Application equipment must be calibrated and all
control systems must be working properly. Proper
calibration is essential for application equipment to
deliver the correct amount of fumigant uniformly to
the soil. Refer to the manufacturer’s instructions
on how to calibrate your equipment. Usually
the equipment manufacturer, fumigant dealer,
or Cooperative Extension Service can provide
assistance.

Planting Interval
Planting or transplanting must not occur until at least
14 days after the application is complete. If odors of the
fumigant persist beyond this 14 day period (and
after tarps are perforated and/or removed), delay
planting and disc or plow the soil to help aeration.
See Tarp Perforation and/or Removal section on this
tabbing for further requirements.

Pre-Plant Soil Fumigation in Greenhouses:
Mandatory GAPs
• During the application keep all doors, vents, and
windows to the outside open, and keep all fans or
mechanical ventilation systems running within the
greenhouse.
• Seal gaps through which gases could leak into
adjacent enclosed areas.

Maximum Application Rates

<table>
<thead>
<tr>
<th>Crop/Use</th>
<th>Maximum Application Rate¹ (lbs Product/Treated Acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eggplant</td>
<td>522</td>
</tr>
<tr>
<td>Cucurbits (including muskmelons, cantaloupe, watermelon, cucumber, squash, pumpkin, and gourds)</td>
<td>373</td>
</tr>
<tr>
<td>Forest Nursery Seedlings</td>
<td>447</td>
</tr>
<tr>
<td>Orchard Nursery Seedlings (raspberry, deciduous trees, roses)</td>
<td>597 clay loam soils with less than 30% clay</td>
</tr>
<tr>
<td>Strawberry Nurseries</td>
<td>447</td>
</tr>
<tr>
<td>Orchard Replant (walnuts, almonds, stone fruit, table and raisin grapes, wine grapes)</td>
<td>298</td>
</tr>
<tr>
<td>Ornamentals</td>
<td>298</td>
</tr>
<tr>
<td>Peppers</td>
<td>298</td>
</tr>
<tr>
<td>Strawberry Fruit³</td>
<td>261 California³</td>
</tr>
<tr>
<td>Sweet Potato Slips</td>
<td>358 Eastern US</td>
</tr>
<tr>
<td>Tomato (grown for fresh market)</td>
<td>358</td>
</tr>
</tbody>
</table>

¹Do not exceed specified maximum application rates in Table 1. Row, bed or strip applications
may be made at the treated acre application rates, but their broadcast equivalent rates will be
proportionately less per acre depending on the spacing and width of treatment in the row, bed or
strip.
²The maximum rate to control infestation of Oak Root Fungus (Armillaria mellea) and/or
endoparasitic nematodes such as root-knot (Meloidogyne spp.), dagger (Xiphinema spp.), ring
(Pratylenchus spp.), or pin (Paratylenchus spp.) nematodes is 400 lbs methyl bromide/acre (cannot exceed 597 lbs MBC-33 per acre). Documentation of the pest(s) must be included in the site-specific fumigation management plan.
³The maximum rate to control infestation of Pisutorium, Macrophomina, and/or Verticillium is 350 lbs MBC-33 per treated acre. Documentation of these pest(s) must be included in the site-specific fumigation management plan.
Table 2. Maximum Application Rates for Quarantine Uses

<table>
<thead>
<tr>
<th>This product may be used as part of a quarantine program as described below.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarantine applications with respect to methyl bromide, are treatments to</td>
</tr>
<tr>
<td>prevent the introduction, establishment and/or spread of quarantine pests</td>
</tr>
<tr>
<td>(including diseases), or to ensure their official control, where: (i)</td>
</tr>
<tr>
<td>Official control is that performed by, or authorized by, a national</td>
</tr>
<tr>
<td>(including state, tribal or local) plant, animal or environmental</td>
</tr>
<tr>
<td>protection or health authority; (ii) quarantine pests are pests of</td>
</tr>
<tr>
<td>potential importance to the areas endangered thereby and not yet present</td>
</tr>
<tr>
<td>there, or present but not widely distributed and being officially</td>
</tr>
<tr>
<td>controlled. This definition excludes treatments of commodities not</td>
</tr>
<tr>
<td>entering or leaving the United States or any State (or political</td>
</tr>
<tr>
<td>subdivision thereof).</td>
</tr>
</tbody>
</table>

USDA-APHIS Quarantine Uses

| This product may be used as a soil fumigant at any crop or non-crop site  |
| as part of a quarantine program established by the United States         |
| Department of Agriculture-Animal and Plant Health Inspection Service    |
| (USDA-APHIS) under the Plant Protection Act (7 U.S.C. 7701 et seq.).     |
| Limitations including but not limited to application rates and methods   |
| and crops and cropping practices must be in accordance with those        |
| established by the USDA-APHIS quarantine program.                        |

Other Quarantine Uses (not USDA-APHIS Quarantine uses)

| Quarantine use of methyl bromide is restricted to fields used for the    |
| production of plant propagative material listed below and unplanted      |
| areas immediately adjacent thereto, where all production from the treated |
| fields will be shipped to areas where a plant regulatory authority       |
| requires the source or the incoming material to be free of quarantine   |
| pests or be accompanied by a certificate issued by a plant regulatory    |
| official.                                                               |

Forest Seedlings:

| Conifer and hardwood seedling for reforestation, Christmas tree         |
| seedlings                                                              |

Nursery Stock:

| Roses, strawberry transplants, sweet potato slips, caneberry and        |
| blueberry nursery stock, fruit and nut trees, garlic transplants,      |
| onion transplants, vineyard stock, seed potato, tobacco seed beds,     |
| food crop transplants, and other wild or cultivated trees, shrubs,     |
| vines, and forbs.                                                     |

Ornamental Plants:

| Caladiums, chrysanthemums, flower bulbs, flowering plants, ornamental   |
| grasses, rhizomes, shrubs, trees, and other perennials and annuals.     |

Turf or Sod:

| For interstate and intrastate shipments to areas that require          |
| fumigation with methyl bromide to meet quarantine/phytosanitary         |
| requirements                                                          |

The maximum application rate for quarantine uses shall be 597 lbs of MBC-33 per acre, or less if specified in the applicable quarantine/phytosanitary requirements.

The U.S. Federal, state, or local plant, animal, environmental protection or health authority requiring the quarantine application and the particular quarantine/phytosanitary requirement must be identified in the site-specific fumigant management plan. Additionally, the requirement for the treatment (e.g., the State or Federal law) must be listed in the site-specific fumigant management plan.

Calculating the Broadcast Equivalent Application Rate

To calculate the broadcast equivalent rate for bedded or strip applications the following information is needed:

- Pounds of product per treated acre
- Strip or bed bottom width (inches)
- Center-to-center row spacing (inches)
- Application block size (acres)

Pounds of product per treated acre is the ratio of total amount of product applied to the size of the total area treated (e.g., the rate of product applied in the bed). For bedded or strip applications, the total area treated is the summation of the area (i.e., length x width) of each treated bed bottom or strip that is located within the application block as shown by the black areas in Figure 1 (e.g., black areas are 0.6A or 60% of the area within the application block). The area of the space between the beds/strips is not factored in the total area treated.

The application block size is the acreage within the perimeter of the fumigated portion of a field (including furrows, irrigation ditches, roadways). The perimeter of the application block is the border that connects the outermost edges of total area treated with the fumigant product.

The “broadcast equivalent rate” must be calculated with the following formula:

\[
\text{broadcast equivalent rate} \quad \frac{\text{pounds of product}}{\text{per treated acre}} \quad \frac{\text{strip or bed bottom width}}{\text{(inches)}} \quad \times \quad \frac{\text{center-to-center row spacing}}{\text{(inches)}} \quad \div \quad \text{application block size (acres)}
\]

- The bed width must be measured from the bottom of the bed.
- The center-to-center row spacing must be calculated as shown in Figure 2.
- If there are any ditches, waterways, drive rows and other areas that are not fumigated that are in the application block, multiply the above broadcast equivalent equation by \((\text{total area of strips or beds} + \text{row spacing})/\text{(application block size)}\). A sample calculation is provided below.
Sample broadcast equivalent rate calculation

Assumptions:
- Application method is shank bedded.
- Bed width is 30 inches (measured at the bottom of bed).
- Center-to-center row spacing is 60 inches.
- 200 pounds of product per treated acre is applied in the beds.
- Total application block size is 10 acres.
- Ditch in the middle of application block is 0.25 acres.
- Area of beds + row spacing is 9.75 acres.

broadcast equivalent rate (pounds/acre) = strip or bed bottom width (inches) \times \text{area of strips or beds + row spacing} \times \text{pounds product/treated acre applied in the bed} \div \text{center-to-center row spacing (inches)} \times \text{application block size} \times 30\text{-inch width beds} \div 60\text{-inch row spacing} \times 97.5\text{ pounds product/treated acre} 

Buffer Zone Requirements

1. The buffer zone must be established for every fumigant application. The following describes the buffer zone requirements:
2. The buffer zone must extend outward from the edge of the application block perimeter equally in all directions.
3. All non-handlers, including field workers, residents, pedestrians, and other bystanders, must be excluded from the buffer zone during the buffer zone period except for transit (see Buffer Zone Exemption for Transit on Roadways section).
   o Local, state, or federal officials performing inspection, sampling, or other similar official duties are not excluded from the application block or the buffer zone by this labeling. The certified applicator supervising the application and the owner of the establishment where the application is taking place are not authorized to, or responsible for, excluding those officials from the application block or the buffer zone.
4. For broadcast shank applications using any tarp that qualifies for a 60% or greater reduction in buffer zone distance:
   1. The buffer zone period begins at the start of the application and ends after the tarps have been removed from the application block.
   2. As an alternative to (1), above, two buffer zone periods may be established where the first buffer zone period begins at the start of the application and lasts for a minimum of 48 hours after the application is complete. The second buffer zone period begins when the tarps are perforated and ends after the tarps have been removed from the application block.
5. For all other applications, the buffer zone period begins at the start of the application and lasts for a minimum of 48 hours after the application is complete.

See www.tarpcredits.epa.gov for a list of tarps that have been tested and determined to qualify for buffer reduction credits.

Buffer zone proximity

1. Before the start of application, the certified applicator must determine whether their buffer zone will overlap any methyl bromide buffer zone(s).
2. To reduce the potential for off-site movement from multiple fumigated fields, buffer zones from multiple methyl bromide application blocks must not overlap unless:
   1. A minimum of 12 hours have elapsed from the time the earlier application(s) is complete until the start of the later application, and
   2. Fumigant Site Monitoring or Response Information for Neighbors has been implemented if there are any residences or businesses within 300 feet of any of the buffer zones.

Buffer zones must not include agricultural areas such as parks, sidewalks, and areas such as parks, sidewalks, permanent walking paths, playgrounds, and athletic fields. Buffer zones must not include these areas unless:

1. The area is not occupied during the buffer zone period,
2. Entry by non-handlers is prohibited during the buffer zone period, and
3. Written permission to include the public area in the buffer zone is granted by the appropriate state and/or local authorities responsible for management and operation of the area.

Certified applicators must comply with all local laws and regulations. See the Posting section for additional requirements that may apply.

Buffer Zone Distances

Buffer zone distances must be calculated using the application rate and the size of the application block.

Applications in California:

Where a Restricted Materials Permit is required for soil fumigation (pursuant to citation for California law), use the buffer zone distance specified in the December 8, 2004 California Department of Pesticide Regulation Methyl Bromide Field Fumigation Guidance Manual (see http://www.cdpr.ca.gov/docs/county/training/methylbrom/mebrman.pdf) in accordance with Title 3, Division 6, Subchapter 4 of the California Code of Regulations in effect on January 1, 2011.

In all other cases, determine the buffer zone distance for your application using the directions under Applications outside California.

Applications outside California:

1. Buffer zone distances must be based on look-up tables in this labeling (25 feet is the minimum distance regardless of site-specific application parameters).
2. If after applying all applicable buffer zone credits the buffer zone is greater than ½ mile (2,640 ft), then the application is prohibited.
3. For all other applications, Tables 3, 4, or 5, as appropriate for the method of application must be used to determine the minimum buffer distances. Round up to the nearest rate and block size, where applicable. Applications are prohibited for rates or block sizes that exceed what is presented in the buffer zone tables.
Table 3. Tarped Broadcast Buffer Zone Distances (feet)

<table>
<thead>
<tr>
<th>Application Block Size (Acres)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
</table>

Table 4. Tarped Broadcast Buffer Zone Distances (feet)

<table>
<thead>
<tr>
<th>Application Block Size (Acres)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
</table>

Buffer zone distances cannot be greater than 1/2 mile (2,640 feet). If after applying applicable the applyable credits the buffer zone distances are still greater than 1/2 mile (2,640 feet) the application is prohibited.
Buffer Zone Credits

The buffer zone distances for MBC-33 applications may be reduced by the percentages listed below. Credits may be added, but credits cannot exceed 80%. Also, the minimum buffer zone distance is 25 feet, regardless of buffer zone credits available.

- 15% reduction in buffer zone distance, if potassium thiosulfate (KTS) is applied at a minimum rate of 300 pounds per acre.
- 10% reduction in buffer zone distance, if the organic content of the soil in the application block is > 3%.
- 10% reduction in buffer zone distance, if the clay content of the soil in the application block is > 3%.

Examples of Buffer Zone Calculations with Credits Applied

If the buffer zone is 50 feet, and the application qualifies for a buffer zone credit, then the buffer zone can be reduced by 20% (10% organic content credit + 10% clay content credit), i.e., reduced by 10 feet based on the following calculation 50 feet - (50 feet x 0.20) = 40 feet.

Posting Fumigant Buffer Zones

- Posting of a buffer zone is required unless there is a physical barrier that prevents bystander access to the buffer zone.
- Buffer block signs must be placed along or outside the perimeter of the buffer zone, at all usual points of entry and along likely routes of approach from areas where people not under the owner’s control may approach the buffer zone.
- Some examples of points of entry include, but are not limited to, roadways, sidewalks, paths, and bike trails.
- Some examples of likely routes of approach include, but are not limited to, the area between a buffer zone and a roadway, or the area between a buffer zone and a housing development.
- When posting, the certified applicator supervising the application must ensure compliance with all local laws and regulations.

Buffer Zone signs which meet the criteria above will be provided at points of sale for applicators to use. Templates may be downloaded from http://www.epa.gov/pesticides/reregistry/sol_fumigants/index.htm

- The Buffer Zone signs must contain the following information:
  - The ‘Do Not Walk’ symbol
  - DO NOT ENTER/NO ENTREE.
  - Methyl Bromide Fumigant [MBC-33] BUFFER ZONE.
- Contact information for the certified applicator in charge of the fumigation.

Exception: If multiple contiguous blocks are fumigated within a 14-day period, the entire periphery of the contiguous blocks’ buffer zones may be posted. Buffer Zone signs must be posted no sooner than 24-hours prior to the start of the first application. The signs must remain posted until the last buffer zone period expires, and the signs must be removed within 3-days after the buffer zone period for the last block has expired.

Restrictions for Difficult to Evacuate Sites

Difficult to evacuate sites are pre-K to grade 12 schools, state-licensed daycare centers, nursing homes, assisted living facilities, hospitals, in-patient clinics, and prisons.

- No fumigant application with a buffer zone greater than 300 feet is permitted within 1/4 mile (1320 feet) of difficult to evacuate sites unless the site is not occupied by children from state-licensed daycare centers, students (pre-K to grade 12), patients, or prisoners during the application and the 36-hour period following the end of the application.
- No fumigant application with a buffer zone of 300 feet or less is permitted within 1/8 mile (660 feet) of difficult to evacuate sites unless the site is not occupied by children from state-licensed daycare centers, students (pre-K to grade 12), patients, or prisoners during the application and the 36-hour period following the end of the application.

Fumigant Site Monitoring

NOTE: Fumigant Site Monitoring is ONLY required if the Emergency Preparedness and Response Measures are triggered AND directions from the Response Information for Neighbors section are not followed.

From the start of the application until the buffer zone period expires, a certified applicator or handler(s) under his/her supervision must:
- Monitor for sensory irritation in areas between the buffer zone outer perimeter and residences or businesses within 100 feet, and there are residences or businesses within 25 feet but less than or equal to 100 feet, and there are residences or businesses within 50 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 100 feet but less than or equal to 200 feet, and there are residences or businesses within 100 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 300 feet or the buffer zones overlap, and there are residences or businesses within 300 feet from the outer edge of the buffer zone.

Triggers for Emergency Preparedness and Response Measures

The certified applicator must either follow the directions under the Fumigant Site Monitoring section or follow the directions under the Response Information for Neighbors section if:
- the buffer zone is greater than 25 feet but less than or equal to 100 feet, and there are residences or businesses within 50 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 100 feet but less than or equal to 200 feet, and there are residences or businesses within 100 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 200 feet but less than or equal to 300 feet, and there are residences or businesses within 200 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 300 feet or the buffer zones overlap, and there are residences or businesses within 300 feet from the outer edge of the buffer zone.

Implement the emergency response plan immediately if a handler monitoring experiences sensory irritation.

18
Response Information for Neighbors

NOTE: Response Information for Neighbors is ONLY required if the Emergency Preparedness and Response Measures are triggered AND directions from the Fumigant Site Monitoring section are not followed.

The certified applicator supervising the application must ensure that residences and businesses that trigger the requirement have been provided the fumigant treatment at least 1 week before the application starts. The information provided may include application dates that range for no more than 4 weeks. If the application does not occur when specified, the information must be delivered again.

Information that must be included:
- The location of the application block.
- Fumigant(s) applied including the active ingredient, name of the fumigant product(s), and the EPA Registration number.
- Contact information for the applicator and property owner.
- Time period in which the application is planned to take place (must not range more than 4 weeks).
- Early signs and symptoms of exposure to the fumigant(s) applied, what to do, and who to call if you believe you are being exposed (911 in most cases).
- How to find additional information about fumigants.

The method used to share the response information for neighbors can be accomplished through mailings, door hangers, or other methods that will effectively inform the residences and businesses within the required distance from the edge of the buffer zone.

Notice to State and Tribal Lead Agencies

If your state or tribal lead agency requires notice, information must be provided to the appropriate state or tribal lead agency prior to the application. Please refer to www.epa.gov/fumigantstatenotice for a list of states and tribal lead agencies that require notice and information on how to submit the information.

The information that must be provided to state and tribal lead agencies includes the following:
- Location of the application blocks.
- Fumigant(s) applied including EPA registration number(s).
- Applicator and property owner/operator contact information, and
- Time period that fumigation may occur.

Emergency Response Plan

The certified applicator must include in the FMP a written emergency response plan that identifies:
- Evacuation routes.
- Locations of telephones.
- Contact information for first responders and local/state/federal/tribal personnel, and
- Emergency procedures/responsibilities (e.g., addition to the fumigating tarps, fixing equipment, evacuating upwind).

If there is an incident:
- Sensory irritation is experienced outside of the buffer zone, and/or
- There are equipment/tarp/seed failures or complaints, or other emergencies.

Site-Specific Fumigation Management Plan (FMP)

Prior to the start of application, the certified applicator supervising the application must verify that a site-specific FMP exists for each application block. 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, registrant, or other party.

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

Each site specific FMP must contain the following elements:
- Certified Applicator Supervising the Application:
  - Name, phone number.
  - Pesticide applicator license and/or certificate number.
  - Specify if commercial or private applicator.
  - Employer name.
  - Employer address, and
  - Date and location of completing EPA approved training program.
- General site information
  - Application block location (e.g., county, township/section/quadrant), address, or global positioning system (GPS) coordinates.
  - Name, address, and phone number of application block owner.
  - Map, aerial photo, or detailed sketch showing:
    - Application block location.
    - Application block dimensions.
    - Buffer zone dimensions.
    - Property lines.
    - Roads.
    - Rights-of-ways.
    - Sidewalks.
    - Permanent walking paths.
    - Bus stops.
    - Nearby application blocks.
    - Surrounding structures (occupied and non-occupied).
    - Locations of Buffer Zone signs, and
    - Locations of difficult to evacuate sites with distances from the application block labeled.
- General application information
  - Target application date/window.
  - Fumigant Product Name, and
  - EPA registration number.
  - Industry:
    - Qualifies for a critical use exemption (CUE) at the time of application and is listed in Table 1, or
    - Qualifies for a quarantine exemption and is listed in Table 2.
- If application qualifies for a quarantine exemption, identify:
  - U.S. Federal, state, or local plant, animal, environmental protection or health authority requiring the quarantine application and the particular quarantine/phytosanitary requirement.
  - Requirement for the treatment (e.g., the State or Federal law).
- Documentation of pest(s) for control of (if applicable):
  - Oak Root Fungus (Armillaria mellea) and/or endoparasitic nematodes such as root knot (Meloidogyne spp.), dagger (Xiphinema spp.), ring (Criconemoides spp.), lesion (Pratylenchus spp.), and pin (Paratylenchus spp.) nematodes for orchard replant.
  - Fusarium, Macrophomina, and/or Verticillium for strawberry fruit.
- Tarp Plan (if tarp is used):
  - Schedule for checking tarps for damage, tears, and leaks:
    - Minimum size of damage that will be repaired.
    - Factors used to determine when tarp repair will be conducted.
  - Equipment/methods used to perforate tarps.
  - Target dates for perforating tarps, and
  - Target dates for removing tarps.
- Site-Specific Fumigation Management Plan:
  - Description of soil texture and moisture in application block.
  - Method used to determine soil moisture, and
  - Soil temperature measurement if air temperatures were above 100 °F in any of the 3 days prior to the application.
- Buffer zones:
  - Application method.
  - Injection depth.
  - Application rate from lookup table on label.
  - Injection depth, and
  - Application rate from lookup table on label.
- General application information
  - Tarp plan:
    - Tarp brand name, lot number, thickness, manufacturer/batch number, and part number.
    - Potassium thiosulfate.
    - Organic matter content.
    - Clay content.
  - Buffer zone distance, and
  - Description of areas in the buffer zone that are not under the control of the owner of the application block.
- Record Emergency Response Plan as described in the Emergency Response Plan section.
- Posting of Fumigant Treated Area and Buffer Zone:
  - Person(s) who will post and remove (if different) Fumigant Treated Area and Buffer Zone signs, and
  - Location of Buffer Zone signs.
- Emergency Preparedness and Response Measures (if applicable):
  - Fumigant site monitoring (if applicable):
    - When and where it will be conducted.
  - Response information for neighbors (if applicable):
    - Names, addresses and businesses informed.
    - Date of notification (if state and/or tribal lead agency requires notification, provide a list of contacts that were notified).
  - Plan describing how communication will take place between the certified applicator supervising the application, the owner, and other contractors (e.g., tarp perforators/removers, irrigators) for complying with labeling requirements (e.g., buffer zone location, buffer zone start and end times, timing of tarp perforation and removal, etc.).
  - Name and phone number of persons contacted by the certified applicator, and
  - Date contacted.
- Handler (Including Certified Applicators) Information and PPE:
  - 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.
  - Date of PPE training for each handler.
- Applicable Handler PPE including:
  - Long-sleeved shirts/long pants, shoes, and gloves.
  - Chemical-resistant apron.
  - Chemical-resistant footwear (non-slippery).
  - Chemical-resistant gloves.
  - Air-purifying respirators.
  - Respirator make, model, type, style, size, cartridge type.
  - SCBAs.
  - Respirator make, model, type, style, size.
  - Other PPE.
- For handlers:
  - Certification of receipt of Fumigant Safe Handling Information.
- For certified applicator(s) supervising the application: Completion date and location of the certified applicator training program listed on the following EPA website www.epa.gov/fumiganttraining for the active ingredient(s) in this product.
- For handlers designated to wear respirators:
  - Date of medical qualification to wear a respirator.
  - Date of respirator training.
  - Date of test-fitting for the respirator.
- Unless exempted in the Protection of Handlers section, verify that:
  - at minimum 2 handlers have the appropriate respirators and cartridges during handler activities, and
  - the employer has confirmed that the appropriate respirator and cartridges/canisters are immediately available for each handler who will wear one.
Air monitoring plan
- For monitoring after tarp perforation is complete and before tarp removal begins, indicate:
  - Monitoring equipment to be used, and
  - Timing of monitoring.
- If sensory irritation is experienced, indicate whether operations will cease or operations will continue with use of an air-purifying respirator.

Good Agricultural Practices (GAPs)
- Identify (e.g., list, attach applicable label section) applicable mandatory GAPs.

Pesticide Product Labels and Material Safety Data Sheets (MSDS)
- Ensure that labels and MSDS are on-site and readily available for employees to review.

Record-Keeping Procedures
The owner of the application block as well as the certified applicator supervising the application 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 application blocks (e.g., applicator information, certified applicator, handlers, 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).

The certified applicator must make a copy of the FMP immediately available when requested by 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. The certified applicator supervising the application must ensure the FMP is at the application block during all handler activities.

Within 30 days after the application is complete, the certified applicator supervising the application must complete a Post-Application Summary.

Post-Application Summary
The owner of the application block as well as the certified applicator supervising the application, must keep a signed copy of the Post-Application Summary for 2 years from the date of application.

Spill and Leak Procedures
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 specified in the Personal Protective Equipment (PPE) section of this labeling for entry into affected area to correct problems. 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.

NOTICE: Contains methyl bromide, a substance which harms public health and the environment by destroying ozone in the upper atmosphere.