Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac arrhythmia, congestive heart failure, and hypotension. Blood pressure may drop by 50 mm Hg and heart rate may increase by 100 beats per minute. Blood bromide levels provide some indication of the degree of exposure, but they are not diagnostic. Treatment is symptomatic. Early symptoms of overexposure to methyl bromide are dizziness, headache, nausea and vomiting. Weakness and collapse occur in late stages of exposure. If on skin, immediately wash with plenty of water for 15-20 minutes. 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. 

**First Aid**

1. **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.

2. **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.

3. **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.

4. **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.

**Warranty**

Seller warrants that this product conforms to the chemical description on its label and is reasonably fit for the purposes stated thereon 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.

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**DANGER**

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**POISON**

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

**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.
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 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 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 provide short-term contact or splash protection against liquid in this product. Additional 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.

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., shovellers) 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, and
- 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 section, 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 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, 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.

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

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, and, if it is applied indirectly, 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 greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. 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. PPE For Entry During the Entry-Restricted Period: PPE required for entry that is permitted by this labeling is listed in the Personal Protective Equipment (PPE) section of this labeling.

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 protect handlers and bystanders; (3) how to determine air and water property concentrations; (4) how to complete an FMP and the post-application summary; (5) how to determine when weather and other site-specific factors are not favorable for fumigation; (6) how to comply with required GAPs and how to document compliance with GAPs in the FMP; and (7) how to develop and implement emergency response plans.

Fumigant Safe Handling Information: Information that must be provided annually to handlers must include the following: (1) what fumigants are and how they work, (2) safe application and handling of soil fumigants, (3) air monitoring and respiratory protection requirements for handlers, (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.

Restricted ben 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., pounds of product per acre). The broadcast equivalent application rate must be calculated to determine the buffer zone distance required by this labeling.

Application Period and Notification: 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 protect handlers and bystanders; (3) how to determine air and water property concentrations; (4) how to complete an FMP and the post-application summary; (5) how to determine when weather and other site-specific factors are not favorable for fumigation; (6) how to comply with required GAPs and how to document compliance with GAPs in the FMP; and (7) how to develop and implement emergency response plans.

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Application Rate: The ratio of fumigant mass applied compared to the soil surface area (e.g., pounds 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.” The “treated area application rate” is the rate of fumigant applied to the portion of the field that is fumigated (e.g., rate within the bed or strip). The “broadcast equivalent application rate” relates to the rate of fumigant applied within the entire perimeter of the application block. For bedded area or strip applications, the “broadcast equivalent application rate” must be 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 in the application block.

Application is Complete: The time at which the fumigant has stopped being delivered/dispensed into the soil and the soil has been sealed; drip lines have been purged (if applicable).

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 tarps are perforated and removed. Entry into the application block during this period is only allowed for appropriately PPE-equipped handlers performing handling tasks. See the Entry Restricted Period and Notification section 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.

Owner: Any person who has a present possessory interest (fee, leasehold, rental, or other) in an agricultural establishment. A person who has both leased such agricultural establishment to another person and granted that same person the right and full authority to manage and govern the use of such agricultural establishment is not an owner. See definition of “owner” in WPS (40 CFR §170.3).

Roadway: Portion of a street or highway improved, designed or ordinarily used for vehicular travel, exclusive of the sidewalk or shoulder even if such sidewalk or shoulder is used by persons riding bicycles. In the event a highway includes two or more separated roadways, the term roadway shall refer to any such roadway separately.

Representative Handling Tasks: For air monitoring, the locations and handler activities sampled must represent each handler’s exposure occurring within the application block. For example, for an application consisting of a seven-handler crew (1 tractor driver, 1 tractor co-pilot, 4 shoveler, and 1 certified operator supervising) two breathing zone samples could be collected: one sample for the tractor co-pilot and one sample for a downwind shoveler. Results of previous sampling may indicate which tasks and locations are worst case and therefore representative of all handlers.

Application Restrictions
• The use of this product is restricted to the methods described on this label.
• This product may only be used for the following:
  o Crops/uses at locations that at the time of the application qualify for exemptions under the Montreal Protocol as identified in Table 1 [Maximum Application Rates for Crops with Critical Use Exemptions (CUEs)] of this labeling, or
  o Crops/uses identified in Table 2 [Maximum Application Rates for Quarantine Uses] of this labeling, or
  o Crops/uses identified in Table 3 [Maximum Application Rates for Crops without Critical Use Exemptions (CUEs)] of this labeling.
• Tarps must be used for all applications, except for deep shank orchard replant [California only] applications.

• The maximum application block sizes allowed are:
  o 100 acres for tarped fields and broadcast applications
  o 40 acres for untarped deep applications (i.e., California orchard replant)

Product Information
Soil-borne pests controlled include wireworms and nematodes, weed and grass seeds, Granville Wilt, Black Shank, and other diseases caused by certain species of *Rhizoctonia*, *Pythium*, *Fusarium*, and *Phytophthora*.

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 leaching to crops, avoid use of 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 acidic 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](http://www.epa.gov/fumiganttraining) in the state where the fumigant is to be applied. 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.

Handlers
The following activities are prohibited from being performed by anyone other than persons who have been appropriately trained and equipped as handlers in accordance with the requirements in WPS (40 CFR Part 170):
• Monitoring fumigant air concentrations;
• Cleaning up fumigant spills (this does not include emergency personnel not associated with the application);
• Handling or disposing of fumigant containers;
• Cleaning, handling, adjusting, or repairing the parts of application equipment that may contain fumigant residues; and
• Performing any handling tasks as defined by the WPS (40 CFR 170).

The following activities are prohibited from being performed 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 by anyone other than persons who have been appropriately trained and equipped as handlers in accordance with the requirements in WPS (40 CFR Part 170). (NOTE: persons performing monitoring tasks are considered handlers for the duration listed below). Prohibited activities (except for trained and equipped handlers) include:
• Participating in the application as supervisors, loaders, drivers, tractor co-pilots, shoveler, cross ditchers, or as other direct application participants;
• Installing, repairing, operating, or removing irrigation equipment;
• Performing scouting, crop advising, or monitoring tasks;
• Installing, perforating (cutting, punching, slicing, poking), or removing tarp and repairing or monitoring tarp until 14 days after application is complete if tarp are not perforated and removed during those 14 days. NOTE: see Tarp Perforation and/or Removal section on this labeling for requirements about when tarp are allowed to be perforated.

Protection for Handlers
Supervision of Handlers:
For all applications, from the start of the application until the application is complete, a certified applicator must be at the application block in the line of sight of the application and must directly supervise all persons performing handling activities.

For handling activities that take place after the application is complete until the entry restricted period expires, the certified applicator is not required to be on-site, but must have communicated in a manner that can be understood by the site owner 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).

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

The certified applicator must provide Fumigant Safe Handling Information to each handler or confirm that within the past 12 months, each handler has received Fumigant Safe Handling Information in a manner that he/she can understand. Fumigant Safe Handling Information will be provided where this product is purchased or at [www.epa.gov/fumiganttraining](http://www.epa.gov/fumiganttraining).

For all handling tasks at least two handlers must be present.

Exclusion of Non-Handlers from the Application Block and Buffer Zone:
The certified applicator supervising the application and the owner of the establishment where the application 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, and
• excluded from the buffer zone during the buffer zone period (see buffer zone exemption for transit on roadways in Buffer Zone Requirements section).

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.

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:
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 made available for handlers performing fungicidal 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,
- Trained, and
- Examined by a qualified medical practitioner to ensure physical health and 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 history, fitness for duty (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/condition changes.
- 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 is required or if operations must cease for any person performing a handling task (except for fungicidal site monitoring outside of the 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 show that levels of methyl bromide 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.
- When using monitoring devices to monitor air concentration levels, a direct read detection device, such as an electronic device or a colorimetric device (e.g., Matheson-Kitagawa, Draeger, or Sensidyne) must be used. The device must have sensitivity of at least 1 ppm for methyl bromide and 0.15 ppm for chloropicrin. Persons using direct read detection devices must follow the manufacturer’s directions.
- When breathing zone samples are required, they 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:
  - two consecutive breathing zone samples for methyl bromide taken at the handling site at least 15 minutes apart 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 must be less than 1.5 ppm.
  - handlers do not experience sensory irritation while wearing the full-facepiece air-purifying respirator and fit test, and
  - filter cartridges/canisters have been changed.
- When the air samples are full-facepiece air-purifying respirator must be worn by the handler taking the air samples.
- Samples must be collected 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 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 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).
  - 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 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.
    - More than 1 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.
  - If tarps are perforated or removed within 14 days after the application is complete, planting or transplanting may take place while the tarps are being perforated.
  - Tarp panel used for broadcast application must be perforated.
  - Tarps 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 a T&M.
    - 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.
  - Tarps perforation for broadcast applications must be completed before noon.
  - For broadcast applications, tarps must not be perforated if rainfall is expected within 12 hours.
  - Early Tarp Removal for Broadcast Applications Only:
    - Tarps may be removed before the required 5 days (120 hours) if adverse weather conditions have compromised the integrity of the tarp, provided that the compromised tarp poses a safety hazard. Adverse weather includes high wind, hail, or storms that blow tarp(s) off the field and create a hazard, e.g. tars blowing into power lines and onto roads.
    - Early Tarp Perforation during Flood Prevention Activities for Bedded Applications Only:
      - Tarp perforation is allowed before the 5 days (120 hours) have elapsed.
      - Tars must be immediately retucked and packed after soil removal.
      - 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 collected 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.
          - More than 1 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 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.
Soil Temperature
- The maximum soil temperature at the depth of injection must not exceed 90°F at the beginning of the application.
- If air temperatures have been above 100°F in any of the three days prior to the start of the application, then soil temperature must be measured and recorded in the FMP. Record temperature measurements at the application depth or 12 inches, whichever is shallower.

Soil Moisture
- The soil must be moist 9 inches below the surface. The amount of moisture needed in this condition varies according to soil type. Surface soil generally dries rapidly and must not be considered in this determination.
- Soil moisture must be determined using one of the following methods:
  - the USDA Feel and Appearance Method for testing (see below), or
  - an instrument, such as a tensiometer.
- Available water capacity must be equal to or greater than 50% for shank applications. If there is less than 50% available water capacity 9 inches below the surface, the soil moisture must be adjusted. If irrigation is not available and there is adequate soil moisture below 9 inches, soil moisture can be adjusted by discing or plowing before the start of the application. To conserve existing soil moisture, pretreatment irrigation or pretreatment tillage should be done as minimal to the start of the application as possible.
- Measure soil moisture at a depth of 9 inches at either end of the field, no more than 48 hours prior to the start of the application.

The USDA Feel and Appearance Method for estimating soil moisture as appropriate for the soil texture:
- For coarse textured soils (fine sand and loamy fine sand), the soil is moist enough (50 to 75% available water capacity) to form a weak ball with loose and clustered sand grains on fingers, darkened color, moderate water staining on fingers, will not ribbon.
- For moderately coarse textured soils (sandy loam and fine sandy loam), the soil is moist enough (50 to 75% available water capacity) to form a ball with defined finger marks, very light soil/water staining on fingers, darkened color will not stick.
- For fine textured soils (clay, clay loam, and silt loam), the soil is moist enough (50 to 75% available water capacity) to form a ball, very light staining on fingers, darkened color, pliable, and forms a weak ribbon between the thumb and forefinger.
- For fine textured soils (clay, clay loam, and silty clay loam), the soil is moist enough (50 to 75% available water capacity) to form a smooth ball with defined finger marks, light soil/water staining on fingers, ribbons between thumb and forefinger.

For fields with more than one soil texture, soil moisture content in the lightest textured (most sandy) areas must comply with this soil moisture requirement. Whenever possible, the field should be divided into areas of similar soil texture, and the soil moisture of each area should be adjusted as needed. Coarser textured soils can be fumigated under conditions of higher soil moisture than finer textured soils; however, if the soil moisture is too high, fumigant movement will be retarded and effectiveness of the treatment will be reduced. Previous fumigation experience and/or local soil to be treated or the crop to be planted can often serve as a guide to conditions that will be acceptable. If there is uncertainty in determining the soil moisture content of the area to be treated, a local extension service agent, soil conservationist, or pest control advisor (agriculture consultant) should be consulted for assistance.

Soil Preparation
- Soil must be properly prepared and at the surface generally be free of large clods. The area to be fumigated must be tilled to a depth of 5 to 8 inches.
- Field trash must be properly managed. Residue from a previous crop must be worked into the soil to allow for decomposition prior to the start of the application. 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 the start of the application 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 start of the application as possible to limit the length of time that the soil would be exposed to potentially erosive weather conditions.

Soil Sealing
- 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 traces. Fumigant vapor movement is greatest at the soil surface, the soil surface must be compacted with a cultipacker, ring roller, and roller in combination with tillage equipment.
- For Bedded Applications: Preformed beds must be sealed by disruption of the chisel trace using press sealers, bed shapers, cultipackers, or by re-shaping (e.g., relisting, lifting, replacing) the beds immediately following injection. Beds formed at the time of application must be sealed by disrupting the chisel trace using press sealers, or bed shapers.
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 field must be covered with tarp, or soil, depending on the application method before making the turn for the next pass.

**Application Depth and Spacing**

- For Tarped-Broadcast and Tarped-Bedded Applications: The injection point must be a minimum of 8 inches from the nearest final soil/air interface. For tarped bedded applications, the injection depth must not be deeper than the lowest point of the tarp (i.e., the lowest point of the tuck).

- For Untarped-Broadcast Applications (CA orchard replant only): The injection point must be a minimum of 18 inches from the nearest final soil/air interface.

- Apply TRI-CON 33/67 with chisel equipment. 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 TRI-CON 33/67 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 for Application Rigs**

- Brass, carbon steel, or stainless steel fittings must be used throughout. Polyethylene tubing, polypropylene® 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 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 proper 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.

- A pressure relief valve must be installed between the regulator and the check valve to ensure a regulator failure does not overpressurize the fumigant cylinder.

- 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 test 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 a centrifugal pump 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 labeling for further requirements.

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### Maximum Application Rates

<table>
<thead>
<tr>
<th>Crop / Use</th>
<th>Maximum Application Rate¹ (Lb. Product / Treated Acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Nursery Seedlings</td>
<td>522 sandy soils</td>
</tr>
<tr>
<td>Orchard Nursery Seedlings (raspberry, deciduous trees, roses)</td>
<td>522 clay loam soils with less than 30% clay</td>
</tr>
<tr>
<td>Strawberry Nurseries</td>
<td>522 California¹</td>
</tr>
<tr>
<td>Ornamentals</td>
<td>522 Eastern US</td>
</tr>
<tr>
<td>Tomato (grown for fresh market)</td>
<td>522</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 endophytic nematodes such as root-knot (Meloidogyne spp.), dagger (Xiphinema spp.), ring (Criconemoides spp.), lesion (Pratylenchus spp.), and pin (Paratylenchus spp.) nematodes is 400 lbs methyl bromide/acre (cannot exceed 522 lbs Tri-Con 33/67 per acre). Documentation of the pest(s) must be included in the site-specific fumigation management plan.

³The maximum rate to control infestation of Fusarium, Macrophomina, and/or Verticillium is 522 lbs Tri-Con 33/67 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

This product may be used as part of a quarantine program as described below.

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

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 522 lbs of TRI-CON 33/67 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.

Table 3. Maximum Rates for Crops / Uses without Critical Use Exemptions (CUEs)

<table>
<thead>
<tr>
<th>Crop / Use</th>
<th>Maximum Application Rate¹ (Lbs Product / Treated Acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caneberrries (Raspberries, Blackberries, Boysenberries)</td>
<td>522</td>
</tr>
</tbody>
</table>

¹Do not exceed specified maximum application rates in Table 3. 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.

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:

\[
\text{broadcast equivalent rate} = \frac{\text{pounds (or gallons) product/acre}}{\text{center-to-center row spacing (inches)}} \times \frac{\text{strip or bed bottom width (inches)}}{\text{pounds (or gallons) of product / treated acre applied in the strip or bed}}
\]

- 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 \((\text{total area of strips or beds + row spacing})/\text{(application block size)}\). A sample calculation is provided below.

Figure 1. Bedded/Strip Application

(1 acre application block)

Space Between Beds/Strips Is not treated

Figure 2. Center Row Spacing

center-to-center row space

Raised Bed

center-to-center row space

Strip

Strip
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.
- Area of beds + row spacing is 9.75 acres.

\[
\text{Broadcast Equivalent Application Rate (lb product/acre)} = \frac{\text{area of strips or beds} \times \text{pounds product/treated acre}}{\text{center-to-center row spacing} \times \text{application block size}}
\]

\[
= \frac{\text{30-inch width beds} \times \text{9.75 acres} \times \text{200 pounds product/treated acre}}{\text{60-inch row spacing} \times \text{10 acres}}
\]

\[
= 97.5 \text{ pounds product/acre}
\]
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 for the application block that is specified in the Restricted Materials Permit issued by the County Agricultural Commissioner, provided that the buffer zone distance is equal to or greater than 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/countytrain/methbrom/materials.pdf) in accordance with Title 3, Division 6, Subchapter 4 of the California Code of Regulations in effect on January 1, 2011.

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

Applications outside California:
- 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).
- If applying all applicable buffer zone credits the buffer zone is greater than 1 mile (2,640 ft).
- For all other applications, Tables 4, 5, or 6, 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 5. 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>35</th>
<th>40</th>
</tr>
</thead>
</table>

### Table 6. Deep Untarped 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>35</th>
<th>40</th>
</tr>
</thead>
</table>
Buffer Zone Requirements
A buffer zone must be established for every fumigant application. The following describes the buffer zone requirements:

- The buffer zone must extend outward from the edge of the application block perimeter equally in all directions.
- 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).
- 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.
- For broadcast shank applications using any tarps 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 extends 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 extends 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.
- 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
- Before the start of application, the certified applicator must determine whether their buffer zone will overlap any methyl bromide buffer zone(s).
- 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 Zone Requirements
- Buffer zones must not include buildings used for storage, (e.g., sheds, barns, garages) UNLESS:
  1. The storage buildings are not occupied during the buffer zone period, and
  2. The storage buildings do not share a common wall with an occupied structure.
- Buffer zones must not include agricultural areas (e.g., employee housing, private property), buildings (e.g., commercial, industrial), outdoor residential areas (e.g., lawns, gardens, play areas) and other areas that people may occupy, UNLESS:
  1. The occupants provide written agreement, prior to the start of the application, that they will voluntarily vacate the buffer zone during the entire buffer zone period, and
  2. Reentry by occupants and other non-handlers must not occur until,
     1) The buffer zone period has ended, and
     2) Sensory irritation is not experienced upon re-entry.
- Buffer zones must not include agricultural areas owned and/or operated by persons other than the owner of the application block, UNLESS:
  1. The owner of the application block can ensure that the buffer zone will not overlap with a methyl bromide buffer zone from any other property owners, except as provided in the Buffer Zone Proximity section, and
  2. The owner of the other property provides written agreement to the applicator that they, their employees, and other persons will stay out of the buffer zone during the entire buffer zone period.
- Buffer zones must not include roadways and rights of way UNLESS:
  1. The area is not occupied during the buffer zone period, and
  2. Entry by non-handlers is prohibited during the buffer zone period.
  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 Credits

Buffer Zone distances for TRI-CON 33/67 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.

- See www.tarpcredits.epa.gov for a list of tarps that have been tested and determined to qualify for buffer reduction credits. Only tarps listed on this website qualify for buffer reduction credits.
- 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 > 1% - 2%; a 20% reduction in buffer zone distance, IF the organic content of the soil in the application block is > 2% - 3%; and a 30% reduction in the buffer zone distance, IF the organic content of the soil in the application block is > 3%.
- 10% reduction in the buffer zone distance, IF the clay content of the soil in the application block is greater than 27%. Examples of Buffer Zone Calculations with Credits Applied

If the buffer zone is 50 feet, and the application qualifies for a buffer zone credit since the soil organic content is 1.5%, then the buffer zone can be reduced by 10%, i.e., reduced by 5 feet based on the following calculation: 50 feet – (50 feet x 10%) = 45 feet.

If the buffer zone is 50 feet, and the application qualifies for two buffer zone credits since the soil organic content is 1.5% and the clay content is greater than 27%, 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 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 Zone 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, bike trails, and access points to dwellings.
- 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 must meet the following criteria:
  1. The printed side of the sign must face away from the application block toward areas from which people could approach.
  2. Signs must remain legible during the entire posting period and must meet the general standards outlined in the WPS for size, text, colors, etc.
  3. Sensory irritation is not experienced upon posting of a Buffer Zone sign, and
  4. Signs must be posted no sooner than 24 hours prior to the start of the application and remain posted until the buffer zone period has expired.
  5. Signs must be removed within 3 days after the end of the buffer zone period.
  6. 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/reregistration/soil_fumigants/index.htm

The Buffer Zone signs must contain the following information:
- The ‘Do Not Walk’ symbol
- DO NOT ENTER/NO ENTRE
- Methyl Bromide Fumigant [TRI-CON 33/67] 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 day care 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 (1200 feet) of difficult to evacuate sites unless the site is not occupied by children from state-licensed day care 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 day care centers, students (pre-K to grade 12), patients, or prisoners during the application and the 36-hour period following the end of the application.

Emergency Preparedness and Response Measures:
If the buffer zone is 25 feet, then the Emergency Preparedness and Response Measures are not applicable.

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.

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 and businesses that trigger this requirement.
- Monitoring for sensory irritation must begin in the evening on the day of application and continue until the buffer zone period expires. Monitor a minimum of 8 times during the buffer zone period, including these periods:
  - 1 hour before sunset,
  - during the night,
  - 1 hour after sunset, and
  - during daylight hours.

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

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 response information 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 and/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/fumigantstatemonitor 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., adding water to the field, repairing 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 seal 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(s) reflects current site conditions before the start of application. Each site specific FMP must contain the following elements:

- Certified Applicator Supervising the Application
  - Name,
  - Phone number,
  - Permit/applicator license and/or certificate number,
  - Specify if commercial or private applicator,
  - Employer name,
  - Employer address, and
  - Date and location of completing EPA approved soil fumigant training program.
- 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 application block owner
  - Map, aerial photo, or detailed sketch showing:
    - application block location
    - application block dimensions
  - buffer zone dimensions
  - property lines
  - roadways
  - 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.
- Identify if application:
  - Qualifies for a critical use exemption (CUE) at time of application and is listed in Table 1,
  - Qualifies for a quarantine exemption and is listed in Table 2, or
  - Does not qualify for a CUE and is listed in Table 3.
- 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 (Crenonemoides 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 other problems,
  - 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.
- Soil conditions
  - 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.
NOTICE: Contains methyl bromide, a substance which harms public health and the environment by destroying ozone in the upper atmosphere.