

**PHASE 2 SOIL FUMIGATION MANAGEMENT PLAN  
(METHYL BROMIDE/CHLOROPICRIN PRODUCTS)**

**FMP Elements:**

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- [II. General Site Information](#)
- [III. Application Block Owner Information](#)
- [IV. Recordkeeping](#)
- [V. General Application Information](#)
- [VI. Buffer Zones](#)
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- [VIII. Communication Between Applicator, Owner and Other On-site Handlers](#)
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- [X. Tarp Plan](#)
- [XI. Soil Conditions](#)
- [XII. Posting Signs – Fumigant Treated Area and Buffer Zone](#)
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- [XIV. State and/or Tribal Lead Agency Advance Notification](#)
- [XV. Air Monitoring Plan](#)
- [XVI. Good Agricultural Practices \(GAPs\)](#)

**Attachments:**

Check the boxes if the information below is attached as a separate document to the FMP.

- Site Map, aerial photo or detailed sketch
- Description of evacuation routes (this can be included in the site map)
- Written agreement, if the buffer zone extends onto land not under the control of the owner of the application block
- Handler Information (Use EPA's Microsoft Word or PDF template)
- GAPs
- Other:

**SOIL FUMIGATION MANAGEMENT PLAN (METHYL BROMIDE/CHLOROPICRIN PRODUCTS)**

The below text fields will expand as the text is entered. After completing each field, use *Tab key* to go to next text field or check box.

<b>I. Certified Applicator Supervising the Application</b>			
Name:	Phone number:	License and/or certificate number:	<input type="checkbox"/> Commercial applicator <input type="checkbox"/> Private applicator
Employer name:	Employer address:		
Date and location of completing EPA approved certified applicator training program:			
<b>II. General Site Information</b>			
Application block location (e.g., county, township-range-section quadrant), address including zip code, or global positioning system (GPS) coordinates:			
<input type="checkbox"/> Site map, aerial photo or detailed sketch provided below that shows (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 within ¼ mile of the application block if the buffer zone is greater than 300 feet, or 1/8 mile if the buffer zone is 300 feet or less).			
Comments:			

<b>III. Application Block Owner Information</b>			
Name:	Address:	Phone number:	
<b>IV. Recordkeeping</b>			
<input type="checkbox"/> The owner of the application block has been informed that he/she, as well as the certified applicator, must keep a signed copy of the site-specific FMP and the post-application summary for 2 years from the date of application.			
<b>V. General Application Information</b>			
Target application date/window:	EPA registration number:	Fumigant product name:	
Identify if application: <ul style="list-style-type: none"> <li><input type="checkbox"/> Qualifies for a critical use exemption (CUE) at time of application and is listed in Table 1,</li> <li><input type="checkbox"/> Qualifies for a quarantine exemption and is listed in Table 2, or</li> <li><input type="checkbox"/> Does not qualify for a CUE and is listed in Table 3.</li> </ul> <p>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</p> <p>Requirement for the treatment (e.g., the State or Federal law)</p> <p>Documentation of pest(s) for control of (if applicable):</p> <p>Oak Root Fungus (<i>Armillaria mellea</i>) and/or endoparasitic nematodes such as root-knot (<i>Meloidogyne</i> spp.), dagger (<i>Xiphinema</i> spp.), ring (<i>Criconeoides</i> spp.), lesion (<i>Pratylenchus</i> spp.), and pin (<i>Paratylenchus</i> spp.) nematodes for orchard replant</p> <p>Fusarium, Macrophomina, and/or Verticillium for strawberry fruit</p>			
<b>VI. Buffer Zones</b>			
Application method: <ul style="list-style-type: none"> <li><input type="checkbox"/> Tarp bedded</li> <li><input type="checkbox"/> Tarp broadcast</li> <li><input type="checkbox"/> Deep untarp broadcast (CA only)</li> <li><input type="checkbox"/> Hot gas – outdoor</li> <li><input type="checkbox"/> Hot gas – greenhouse</li> <li><input type="checkbox"/> Hand held probes (tree hole)</li> </ul>	Application rate from the buffer zone table on the label, (if the rate used is not in the buffer zone table, round up to the next value):	Injection depth (inches):	Application block size from the buffer zone table on the label, (if the block size is not in the buffer zone table, round up to the next value):

Credits applied and measurements taken (if applicable):

Tarp: \_\_\_\_\_ % **credit**

- Brand name and tarp manufacturer:
- Lot Number:
- Batch Number:
- Part Number
- Thickness:
- Color:

Potassium thiosulfate: \_\_\_\_\_ % **credit**

Organic matter content: \_\_\_\_\_ (measurement), \_\_\_\_\_ % **credit**

Clay content: \_\_\_\_\_ (measurement), \_\_\_\_\_ % **credit**

Soil temperature: \_\_\_\_\_ (measurement), \_\_\_\_\_ % **credit**

Total credits: \_\_\_\_\_%

Buffer zone distance:

(Note: For applications in California, the buffer zone distance is based on CDPR Methyl Bromide Field Fumigation Guidance Manual)

Is the application broadcast shank or hot gas using a tarp that qualifies for a 60% or greater reduction in buffer zone distance?

Yes  No

If yes, indicate which option will be used

- The buffer zone period will begin at the start of the application and end after the tarps have been removed from the application block.
- Two buffer zone periods will be established where the first buffer zone period will be begin at the start of the application and last for a minimum of 48-hours after the application is complete. The second buffer zone period will begin when the tarps are perforated and end after the tarps have been removed from the application block.

Are there areas in the buffer zone that are not under the control of the owner of the application block?  Yes  No

If yes, describe the areas and attach the written agreement to the FMP.

## VII. Emergency Response Plan

Description of evacuation routes (a diagram or drawing may be attached to the FMP):

Check here if diagram or drawing is attached or if evacuation routes are included in the site map

Locations of telephones:

Contact information for first responders:

Local/state/federal contacts:

Emergency procedures/responsibilities in case of an incident, sensory irritation is experienced outside of the buffer zone and/or there are other emergencies:

**VIII. Communication Between Applicator, Owner, and Other On-site Handlers**

Pesticide product labels and material safety data sheets are at the application block and available for employees to review.

Will the certified applicator be at the application site during all handler activities that take place after the application is complete until the entry restricted period expires?  Yes  No

If no, describe how the certified applicator will share the label requirements with owner and/or handlers who will be present at the application block after the application is complete until the entry restricted period expires. Include the name and phone number of persons contacted as well as the date they were contacted.

**IX. Handler Information (use EPA's Microsoft Word or PDF version of the handler information template)**

- Information for all handlers is attached to the FMP
- At minimum 2 handlers have the proper respirators and cartridges/canisters
- Appropriate respirators and cartridges/canisters are available for each handler that will wear one

Comments/notes:

**X. Tarp Plan (check here if section is not applicable )**

Schedule for checking tarps for damage, tears, and other problems:

Maximum time following notification of damage that the person(s) responsible for tarp repair will respond:

Minimum size of damage that will be repaired:

Factors used to determine when tarp repair will be conducted:

Equipment/methods used to perforate tarps:  mechanical: \_\_\_\_\_  hand: \_\_\_\_\_

Target dates for perforating tarps:

Target dates for removing tarps:

**XI. Soil Conditions**

Soil Texture:

Soil Temperature: Has the air temperature been above 100<sup>o</sup>F in any of the 3 days prior to application?  Yes or  No

If yes, record the soil temperature measurement:

Soil Moisture: (check the box of the method used to determine the soil moisture)

**USDA Feel and Appearance Method**

Description of soil:

**Instrument**

Instrument used:

**Other**

Describe method:

Percent water capacity estimate:

Percent water capacity:

Percent water capacity:

**XII. Posting Signs – Fumigant Treated Area and Buffer Zone**

Name(s) of person(s) posting and removing Fumigant Treated Area and Buffer Zone signs:

Location of Buffer Zone signs:

**XIII. Emergency Preparedness and Response Measures** (check here if section is not applicable )

If Emergency Preparedness and Response Measures are triggered, check the option below that will be used:

Fumigant site monitoring or  Response information for neighbors

<p>Fumigant site monitoring (if applicable)</p> <p>List when and where it will be conducted:</p>	<p>Response information for neighbors (if applicable)</p> <p>List residences and businesses informed:</p>
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	<p>Name and phone number of person providing the information:</p> <p>List the method of providing the information:</p>
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**XIV. State and/or Tribal Lead Agency Advance Notification** (check here if section is not applicable )

Date notified:

Person notified:

**XV. Air Monitoring Plan**

If monitoring indicates air concentrations greater than or equal to 1.5 ppm for chloropicrin or greater than or equal to 5 ppm for methyl bromide, handlers must stop work and leave the application block.

Will the product applied contain at least 20% chloropicrin?  Yes or  No

If Yes, if sensory irritation is experienced check which of the following be procedures will be followed:  
 Intend to cease operations or  Intend to continue operations with respiratory protection

Handler Tasks to be Monitored	Monitoring Equipment	Timing

**For monitoring after tarp perforation is complete:**

Monitoring Equipment	Timing

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**For monitoring residential structures within the buffer zone prior to re-entry (check here if section is not applicable ):**

Monitoring Equipment	Timing	Monitoring Location

**XVI. Good Agricultural Practices (GAPs)**

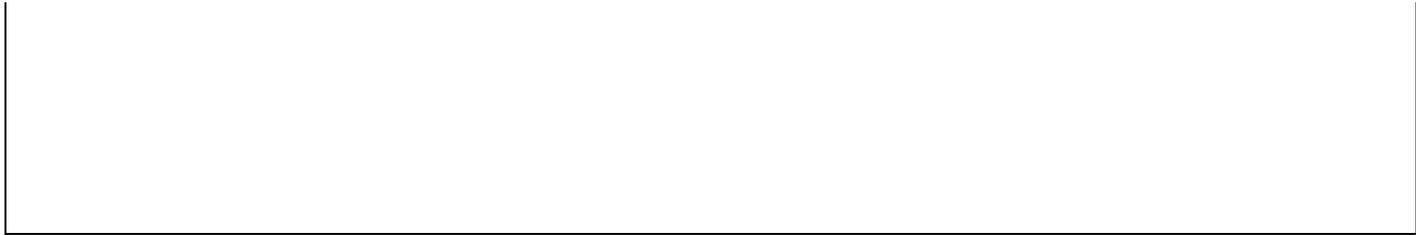
Check here if applicable mandatory GAPs are attached to the FMP (this could be a copy of the label highlighting the applicable GAPs). If this box is not checked, the checklist below must be completed.

- |   |   |
|---|---|
| <p><b>General</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Tarps</li> <li><input type="checkbox"/> Weather conditions</li> <li><input type="checkbox"/> Soil temperature</li> <li><input type="checkbox"/> Soil moisture</li> <li><input type="checkbox"/> Soil preparation</li> </ul> | <p><b><u>Bedded and Broadcast Shank Applications</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Tarps</li> <li><input type="checkbox"/> Soil preparation</li> <li><input type="checkbox"/> Application depth and spacing</li> <li><input type="checkbox"/> Prevention of end row spillage</li> <li><input type="checkbox"/> Calibration, set-up, repair, and maintenance for application rigs</li> </ul> |
|---|---|

**Tree Replant Application Using Handheld Equipment**

- Soil preparation
- Application depth
- System flush
- Soil sealing
  
- Hot gas applications to soil, potting mixes, and tobacco seedling trays
- Pre-plant soil fumigation in greenhouses
- Control of *Armillaria mellea* (oak root fungus) for orchard replant applications
- Non-tarp nematode control (only for deep shank orchard replant and hand held tree-hole application in CA)

Description of other product specific GAPs from label that will be followed:



Before beginning the fumigation, I have verified that this site-specific FMP reflects current site conditions and product label directions.

\_\_\_\_\_  
**Signature of certified applicator supervising the application**

\_\_\_\_\_  
**Date**

### Handler (including certified applicator) Information and PPE

Handler Name, Address, and Phone Number	Employer Name, Address, and Phone Number	Tasks Handlers are Trained and Authorized to Perform* (check number(s) from below)	PPE (check all that apply)	Respirator Information (leave blank if "no respirator" is checked under PPE)		
		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11	<input type="checkbox"/> Long-sleeved shirt/long-pants, shoes, socks <input type="checkbox"/> Chemical-resistant apron <input type="checkbox"/> Chemical-resistant footwear and socks <input type="checkbox"/> Protective eyewear (NOT goggles) <input type="checkbox"/> Chemical-resistant gloves <input type="checkbox"/> Half-mask air-purifying respirator <input type="checkbox"/> Full-face air-purifying respirator <input type="checkbox"/> Self contained breathing apparatus <input type="checkbox"/> Other: <input type="checkbox"/> No respirator  PPE training date:	Make: Model: Type: Style: Size: Cartridge type: Fit test date: Training date: Medical qualification date:		
<input type="checkbox"/> The above handler has received Fumigant Safe Handling Information within the past 12 months.						
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;">                             *1. Loaders, drivers, tractor co-pilots, shovelers, cross-ditchers, or other direct application participants                              2. Cleaning up fumigant spills (does not include emergency personnel not associated with the application)                              3. Tasks with liquid contact potential                              4. Installing, perforating or removing tarps                              5. Repairing, or monitoring tarps until 14 days after the application is complete if tarps are not perforated and removed during those 14 days.                         </td> <td style="width: 50%; border: none; vertical-align: top;">                             6. Monitoring fumigant air concentrations                              7. Handling or disposing of fumigant containers                              8. Cleaning, handling, adjusting, or repairing equipment that may contain fumigant residues                              9. Installing, repairing, operating, or removing irrigation equipment in the application block or buffer zone                              10. Performing scouting, crop advising, or monitoring tasks in the application block or buffer zone                              11. Performing other WPS handling tasks                         </td> </tr> </table>					*1. Loaders, drivers, tractor co-pilots, shovelers, cross-ditchers, or other direct application participants 2. Cleaning up fumigant spills (does not include emergency personnel not associated with the application) 3. Tasks with liquid contact potential 4. Installing, perforating or removing tarps 5. Repairing, or monitoring tarps until 14 days after the application is complete if tarps are not perforated and removed during those 14 days.	6. Monitoring fumigant air concentrations 7. Handling or disposing of fumigant containers 8. Cleaning, handling, adjusting, or repairing equipment that may contain fumigant residues 9. Installing, repairing, operating, or removing irrigation equipment in the application block or buffer zone 10. Performing scouting, crop advising, or monitoring tasks in the application block or buffer zone 11. Performing other WPS handling tasks
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<b>Comments/notes:</b>						

<b>Handler Name, Address, and Phone Number</b>	<b>Employer Name, Address, and Phone Number</b>	<b>Tasks Handlers are Trained and Authorized to Perform*</b> (check number(s) from below)	<b>PPE (check all that apply)</b>	<b>Respirator Information</b> (leave blank if "no respirator" is checked under PPE)