

US EPA ARCHIVE DOCUMENT

**2010 SOIL FUMIGANT MANAGEMENT PLAN
(METHYL BROMIDE/CHLOROPICRIN PRODUCTS)**

FMP Elements:

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[II. General Site Information](#)

[III. Owner/Operator of Application Block](#)

[IV. Recordkeeping](#)

[V. General Application Information](#)

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2010 SOIL FUMIGANT MANAGEMENT PLAN (METHYL BROMIDE/CHLOROPICRIN PRODUCTS)

I. Certified Applicator Supervising the Fumigation			
Name:	Phone number:	License and/or certificate number:	<input type="checkbox"/> Commercial applicator <input type="checkbox"/> Private applicator
Employer name:	Employer address:		
II. General Site Information			
Application block/field location (e.g., county, township-range-section quadrant), address including zip code, or global positioning system (GPS) coordinates:			
III. Owner/operator of Application Block			
Name:	Address:	Phone number:	
IV. Recordkeeping			
<input type="checkbox"/> The owner/operator 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.			
V. General Application Information			
Target application date/window:	EPA Registration Number:	Fumigant Product Name:	
Application method: <input type="checkbox"/> Tarp bedded <input type="checkbox"/> Tarp broadcast <input type="checkbox"/> Deep untarp broadcast (CA only) <input type="checkbox"/> Hot gas – outdoor <input type="checkbox"/> Hot gas – greenhouse <input type="checkbox"/> Hand held probes (tree hole)	Application Rate (lbs or gallons of product/treated acre):	Injection Depth (inches):	Application Block Size (acres):

VI. 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

Locations of telephones:

Contact information for first responders:	Local/state/federal contacts:	Other contact information for emergencies:
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Emergency procedures/responsibilities in case of an incident, equipment/tarp/seal failure, complaints or elevated air concentration levels suggesting potential problems, or other emergencies:

VII. Communication Between Applicator, Owner/Operator, and Other On-site Handlers

Pesticide product labels and material safety data sheets are at the application site 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/operator and/or handlers who will be present at the application site after the application is complete until the entry restricted period expires.

VIII. Handler Information

Information for all handlers is attached to the FMP
 Comments/notes:

IX. Tarps (check here if section is not applicable)

Brand name and tarp manufacturer:	Lot Number: Part Number:	Batch Number:	Thickness:
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Schedule for checking tarps for damage, tears, and other problems:

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

Minimum time following damage that tarp will be repaired:	Minimum size of damage that will be repaired:
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Other factors used to determine when tarp repair will be conducted:

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

Schedule and target dates for perforating tarps:

Equipment, schedule and target dates for removing tarps:

X. Soil Conditions

Soil texture/clay content:

Organic Content: < 1% ≥1%-2% ≥2%-3% >3%

Soil Temperature: Has the air temperature been above 100 °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)
 Date and time soil moisture determined:

<p>USDA Feel and Appearance Method <input type="checkbox"/></p> Description of soil: Percent soil moisture estimate	<p>Instrument <input type="checkbox"/></p> Instrument used: Percent soil moisture:	<p>Other <input type="checkbox"/></p> Describe method: Percent soil moisture:
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XI. Weather Conditions

Summary of the weather **on the day of the application** (a printed copy may be attached to the FMP):

Check here if printed copy is attached to the FMP or complete the following:

Wind Speed:

Inversion conditions:

Air-Stagnation Advisories:

Other:

Summary of the weather forecast **during the 48-hour period following the fumigant application** (a printed copy may be attached to the FMP):

Check here if printed copy is attached to the FMP or complete following:

Wind Speed:

Inversion conditions:

Air-Stagnation Advisories:

Other:

XII. Posting Signs – Fumigant Treated Area

Name(s) of person(s) posting Fumigant Treated Area signs:

Treated Area Signs posting date:

Treated Area Signs removal date:

XIII. 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

Full Face Respirator Response Plan

If either: (1) a handler experiences any sensory irritation when wearing an full face 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 the following ease the emergency plan detailed will be implemented:

XIV. 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.

General

- Tarps
- Weather Conditions
- Soil Temperature
- Soil Moisture
- Soil Preparation

Bedded and Broadcast Shank Applications

- Tarps
- Soil Preparation
- Application Depth and Spacing
- Prevention of End Row Spillage
- Calibration, Set-up, Repair, and Maintenance for Application Rigs

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 fumigation

Date

List of Attachments:

Handler Information

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"/> 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 date:

The above handler has received Fumigant Safe Handling information within the past 12 months.

- | | |
|---|--|
| <ul style="list-style-type: none"> *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, removing, repairing, or monitoring tarps until: <ul style="list-style-type: none"> -14 days after the application is complete if tarps are not perforated and removed during those 14 days, -Tarp removal is complete if tarps are both perforated and removed less than 14 days after the application, or -48 hours after tarp perforation is complete if tarps will not be removed within 14 days after application. | <ul style="list-style-type: none"> 5. Taking air samples (breathing zone) 6. Handling or disposing of fumigant containers 7. Cleaning, handling, adjusting, or repairing equipment that may contain fumigant residues 8. Installing, repairing, operating, or removing irrigation equipment in the application block 9. Performing scouting, crop advising, or monitoring tasks in the application block 10. Performing other WPS handling tasks |
|---|--|

Comments/notes:

**2010 SOIL FUMIGANT POST APPLICATION SUMMARY
(METHYL BROMIDE/CHLOROPICRIN PRODUCTS)**

Post Application Summary Elements:

[General Application Information](#)

[Tarp Damage and Repair](#)

[Tarp Perforation/Removal](#)

[Weather Conditions](#)

[Complaints](#)

[Description of Incidents](#)

[Communication Between Applicator, Owner/Operator, and Other On-site Handlers](#)

[Posting Signs – Fumigant Treated Area](#)

[Other Deviations from the FMP](#)

Attached Tables:

Check boxes if tables are applicable (i.e., there are changes from the FMP, or monitoring information has been recorded. Tables that are not applicable do not need to be included in the final post-application summary).

- [Handler Information \(for changes since the FMP\)](#)
- [Respirator Cartridge Replacement](#)
- [Air Monitoring Results When Sensory Irritation Is Experienced](#)
- [Breathing Zone Air Monitoring with Direct Read Instruments](#)

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**2010 SOIL FUMIGANT POST APPLICATION SUMMARY
FOR (INSERT GENERAL SITE INFORMATION FROM THE FMP):**

(METHYL BROMIDE/CHLOROPICRIN PRODUCTS)

(Only fill-in information if it is different from the FMP or where the label requires that measurements/information are recorded in post-application summary)

General Application Information			
Application date and time:	EPA Registration Number:	Fumigant Product Name:	
Application method: <input type="checkbox"/> Tarp bedded <input type="checkbox"/> Tarp broadcast <input type="checkbox"/> Deep untarp broadcast (CA only) <input type="checkbox"/> Hot gas – outdoor <input type="checkbox"/> Hot gas – greenhouse <input type="checkbox"/> Hand held probes (tree hole)	Application Rate (lbs or gallons of product/treated acre):	Injection Depth (inches):	Application Block Size (acres):
Tarp Damage and Repair (check here if section is not applicable <input type="checkbox"/>)			
Location and size of tarp damage:			
Description of tarp/tarp seal/tarp equipment failure:			
Date and time of tarp repair:			
Additional comments or other deviations from FMP (if applicable):			
Tarp Perforation/Removal (check here if section is not applicable <input type="checkbox"/>)			
Description of tarp removal procedures (if different than in the FMP):			
Date tarps were perforated:		Date tarps were removed:	

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Weather Conditions

Summary of the weather **on the day of the application** (a printed copy may be attached to the post-application summary):

Check here if printed copy is attached to the post-application summary or complete the following:

Wind Speed:

Inversion conditions:

Air-Stagnation Advisories:

Other:

Summary of the weather **during the 48-hour period following the fumigant application** (a printed copy may be attached to the post-application summary):

Check here if printed copy is attached to the post-application summary or complete following:

Wind Speed:

Inversion conditions:

Air-Stagnation Advisories:

Other:

Complaints (check here if section is not applicable)

Person filing complaint:
 On-site handler Person off-site

If off-site person, name, address, and phone number of person filing complaints:

Description of control measures or emergency procedures followed after complaint:

Additional comments:

Description of Incidents (check here if section is not applicable)

Description of incident, equipment failure, or other emergency:

Date and time:

Description of emergency procedures followed:

Was the incident reported to the state agency? Yes No

Additional comments (include contact information for person(s) affected):

Communication Between Applicator, Owner/Operator, and Other On-site Handlers (check if no changes from the FMP)

Was the certified applicator at the application site during all handler activities that took place after the application was completed until the entry restricted period expired? Yes No

Date contacted:

If no, list the names and phone numbers of persons contacted:

Comments/notes (any deviation from FMP regarding how the information was shared):

Posting Signs – Fumigant Treated Area

Date(s) of Fumigant Treated Area sign removal:

Description of deviations from FMP (if applicable):

Handler Information for Changes Since the FMP

Have there been any changes to the handler information since the FMP was completed (including handlers that were on-site that were not listed in FMP)? Yes No If yes, the updated handler information must be attached to the post application summary.

Other Deviations from the FMP

Additional comments/notes:

I have verified that this post application summary reflects the actual site conditions that occurred during the fumigation and is an accurate description of deviations from the FMP (if applicable).

Signature of certified applicator that supervised the fumigation

Date

List of Attachments:

Air Monitoring Results When Sensory Irritation Is Experienced

Date and Time	Handler Name	Handler Task/Activity	Handler Location Where Irritation Was Observed	Resulting Action	Comments
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	
				<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection	

Additional Comments:

Respirator Cartridge Replacement

Handler Name	Why Cartridge Replaced	Time of Cartridge Replacement	Comments
	<input type="checkbox"/> After 8 hours of use <input type="checkbox"/> Target air concentration was exceeded <input type="checkbox"/> Sensory irritation felt while wearing a full-face air-purifying respirator <input type="checkbox"/> Other		
	<input type="checkbox"/> After 8 hours of use <input type="checkbox"/> Target air concentration was exceeded <input type="checkbox"/> Sensory irritation felt while wearing a full-face air-purifying respirator <input type="checkbox"/> Other		
	<input type="checkbox"/> After 8 hours of use <input type="checkbox"/> Target air concentration was exceeded <input type="checkbox"/> Sensory irritation felt while wearing a full-face air-purifying respirator <input type="checkbox"/> Other		
	<input type="checkbox"/> After 8 hours of use <input type="checkbox"/> Target air concentration was exceeded <input type="checkbox"/> Sensory irritation felt while wearing a full-face air-purifying respirator <input type="checkbox"/> Other		
	<input type="checkbox"/> After 8 hours of use <input type="checkbox"/> Target air concentration was exceeded <input type="checkbox"/> Sensory irritation felt while wearing a full-face air-purifying respirator <input type="checkbox"/> Other		
Additional Comments:			