

Soil Fumigant Mitigation Factsheet:

2010 Site-Specific Fumigant Management Plans and Post-Application Summaries

Fumigant Management Plans

EPA is requiring important new safety measures for soil fumigant pesticides to increase protections for agricultural workers and bystanders – people who live, work, or otherwise spend time near fields that are fumigated. These measures are for the soil fumigants chloropicrin, dazomet, metam sodium/potassium, and methyl bromide.

This fact sheet summarizes new requirements to protect fumigant handlers and other workers from fumigant exposures. When new fumigant labels appear in the market place in 2010, fumigant users will need to comply with these new requirements.

Elements of FMPs

To address the risk to bystanders, handlers and workers the Agency is requiring site-specific fumigant management plans (FMPs) and post-application summaries. Each site-specific FMP must contain the following elements:

- ❖ Applicator information (name, phone number, license and/or certificate number, employer name, employer address)
- ❖ General site information
 - Application block location (e.g., address or global positioning system (GPS) coordinates)
 - Name, address, and, phone number of owner/operator of the application block
- ❖ General application information (target application date/window, brand name of fumigant, EPA registration number, application method, application rate, injection depth, application block size)
- ❖ Tarp information and procedures for repair, perforation and removal (if tarp is used)
 - Brand name, lot number, thickness
 - Name and phone number of person responsible for repairing tarps
 - Schedule for checking tarps for damage, tears, and other problems
 - Maximum time following notification of damage that the person(s) responsible for tarp repair will respond
 - Minimum time following application that tarp will be repaired
 - Minimum size of damage that will be repaired
 - Other factors used to determine when tarp repair will be conducted

Fumigant Management Plans (continued)

- Name and phone number of person responsible for perforating and/or removing tarps (if other than certified applicator)
- Equipment/methods used to perforate tarps
- Schedule and target dates for perforating tarps
- Schedule and target dates for removing tarps
- ❖ Soil conditions (description of soil texture in application block, method used to determine soil moisture)
- ❖ Weather conditions (summary of forecasted conditions for the day of the application and the 48-hour period following the fumigant application)
 - Wind speed
 - Inversion conditions (e.g., shallow, compressed (low-level) temperature inversion)
 - Air stagnation advisory
- ❖ Air purifying respirators, SCBAs, and other personal protective equipment (PPE) for handlers (handler task, protective clothing, respirator make, model, type, style, and size, respirator cartridge type, respirator cartridge replacement schedule; eye protection, gloves)
- ❖ Emergency procedures (evacuation routes, locations of telephones, contact information for first responders, local/state/federal/tribal contacts, key personnel and emergency procedures/responsibilities in case of an incident, equipment/tarp/seal failure, complaints, or other emergencies)
- ❖ Posting procedures (person(s) who will post signs, dates for posting and for sign removal)
- ❖ Plan describing how communication will take place between applicator, land owner/operator, and other on-site handlers (e.g., tarp cutters/removers, irrigators) for complying with label requirements (e.g., timing of tarp cutting and removal, PPE)
 - Name and phone number of persons contacted
 - Date contacted
- ❖ Authorized on-site personnel
 - Names, addresses and phone numbers of all handlers
 - Employer name, addresses, and phone numbers for all handlers
 - Tasks that each handler is authorized and trained to perform
 - For handlers designated to wear respirators (air purifying respirator or SCBA)
 - Date of medical qualification for respirator(s) that each handler is designated to wear
 - Date of training for respirator(s) that each handler is designated to wear
 - Date of fit testing for respirator(s) that each handler is designated to wear
- ❖ Air monitoring plan
 - For handlers without respiratory protection:
 - If sensory irritation is experienced, indicate whether operations will be ceased or operations will continue with respiratory protection
 - If intend to cease operations when sensory irritation is experienced, provide the name, address, and phone number of the handler that will perform monitoring activities prior to operations resuming

Fumigant Management Plans (continued)

- For handlers with respiratory protection:
 - Representative handler tasks to be monitored
 - Monitoring equipment to be used and timing of monitoring
- For monitoring the breathing zone when using **methyl bromide formulations with < 20% chloropicrin**:
 - Representative handler tasks to be monitored
 - Monitoring equipment to be used and timing of the monitoring
- ❖ Good Agricultural Practices (GAPs)
 - Description of applicable mandatory GAPs
 - Measurements and documentation to ensure GAPs are achieved (e.g., measurement of soil and other site conditions)
- ❖ Description of hazard communication (The application block has been posted in accordance with the label. Pesticide product labels and material safety data sheets are on-site and readily available for employees to review.)
- ❖ Record-keeping procedures (the owner/operator of the application block, as well as the certified applicator, must keep a signed copy of the site-specific FMP for 2 years from the date of application)

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

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

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

Post-Application Summaries

New Requirements for Post-Application Summaries

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

Specifically the Post-Application Summary must contain the following elements:

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

**Post-Application
Summaries (continued)**

- Handler task/activity (if applicable)
- Handler location
- Air concentration
- Sampling method
- ❖ Date of sign removal
- ❖ Any deviations from the FMP

In addition to recordkeeping requirements from 7 CFR part 110 “Recordkeeping Requirements for Certified Applicators of Federally Restricted Use Pesticides,” this decision requires that both the certified applicator and owner/operator of the application block keep a signed copy of the post-application summary record for 2 years from the date of application.

Applicators and other stakeholders have the flexibility to use EPA’s template, prepare their own FMP templates, or use other commercially available software with certain elements listed above in check-list and/or fill in the blank format.

A second phase of risk mitigation measures, including buffer zones, will appear on fumigant labels in late 2011. The Fumigant Management Plan and Post-Application Summary will be updated to include these new measures.

For additional information, please see EPA’s Web page on risk mitigation measures for the soil fumigants, http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/.