Scheduled Changes for Fumigant Use 2012

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Key Points

- EPA required fumigants to come out with revised labels that would include measures to mitigate risks from fumigant pesticides
- The implementation schedule for the revised labels was a two year process
- Phase 1 changes were implemented in late 2010
- Phase 2 changes are scheduled to be implemented on Dec 1, 2012
The following fumigants were included in the EPA review:

- Methyl Bromide
- Chloropicrin
- Metam Sodium/Metam Potassium
- Dazomet

The review process is called the *Reregistration Eligibility Decision (RED)*
Goals of REDs

- Protect workers and bystanders but still maintain key benefits of use
- Ensure a level playing field when assessing fumigants and making decisions
- Establish requirements for use that are protective and reflect real-world situations
Goals of Mitigation Measures

Package of measures that work together to:

- **Reduce**
  - potential for direct exposure to toxic concentrations
  - likelihood of accidents and errors

- Foster planning and compliance

- Assure appropriate response to exposures
Mitigation Measures

- RUP classification for all soil fumigation products
- Required Good Agricultural Practices (GAPs)
- Rate Reductions
- Use site limitations
- Handler respiratory protection
- Tarp perforation and removal restrictions
- Reentry restrictions
- Training information for workers
- Fumigant Management Plans (FMPs)
- Outreach to first responders
- Applicator training
- Buffer zones
- Restrictions near difficult to evacuate sites
- Emergency preparedness and response measures
- Registrant-provided training, information and community outreach programs
## Implementation Schedule

<table>
<thead>
<tr>
<th>Risk Mitigation Measure</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good agricultural practices (GAPs)</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Restricted use (new measure for metam sodium/potassium &amp; dazomet only)</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>New handler protections including changes to respiratory protection, tarp cutting/removal and worker reentry restrictions</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Fumigant management plans and post application summaries</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Buffer zone distances, credits, and posting</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Emergency preparedness measures</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Difficult to evacuate sites</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Notice to state lead agencies</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Safe handling information</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>First responder, community outreach and certified applicator training</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Rate reductions and use site limitations</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
Fumigation Management Plans

- Initial implementation in 2010
- Phase 2 implementation on Dec 1, 2012

- A written, site-specific plan prepared *before* fumigation begins
- Plan all aspects of a safe and effective fumigation to help:
  - Prevent accidents
  - Ensure, demonstrate & verify compliance
  - Define procedures in case of accidents or unforeseen events
FMPs - First Phase

- General information
  - Site, applicator, applications
- Steps taken to verify compliance
  - GAPs and worker protection
- Procedures
  - Air monitoring; hazard communication; posting treated areas and record-keeping
  - In case of accidents or unforeseen events
- Safe handling information provided
- Post application summary report
FMPs – Second Phase

- Buffer zones
  - How they were calculated, including credits
- Site map or sketch
- Procedures
  - Posting buffer zones
  - Emergency preparedness and response (if triggered)
- Records
  - Applicator training
  - Notice given to States of applications (if required)
Post Application Summary

- Deviations from FMP
  - Ex: date of application, procedures, personnel, etc.
- Summary of weather, site conditions
- Description of problems or complaints
- Actual dates of tarp activities, sign removal, etc.
- Must complete within 30 days of application
Record Keeping

- Keep FMPs and Post Application Summaries for 2 years
  - supervising certified applicator
  - owner/operator (if not the certified applicator)

- Keep with other records required for application of RUPs
Fumigant Management Plans
- Are required to prepare for safe and effective applications
- Must be filled out by grower, commercial applicator, crop advisor, or other
- Will be implemented in 2 phases
- May be farm-wide, with sections on application-specific information
- Must be
  - Signed and verified by certified applicator in charge
  - Kept for 2 years
  - Available to handlers, inspectors and emergency personnel

Post Application Reports
- Show any deviations from the FMP
- Document measurements taken
- Must be
  - Completed within 30 days of application
  - Kept with the FMP
Buffer Zones
Distances, Credits & Posting

What is a Buffer Zone?

- Area around application block
  - Bystanders and pedestrians must be kept out during buffer zone period

- Buffer zone period
  begins when application begins
  ends 48 hrs after application ends
What is an application block?

- The perimeter of the application block is the border that connects the outermost edges of total area treated with the fumigant product within any 24-hour period.
- The size of the application block is the area within the perimeter of the field where the fumigant is applied.
Residential Areas within Buffer Zones

- Buffer zones may include residential areas if occupants provide written agreement to voluntarily vacate.

- For methyl bromide products with <20% chloropicrin, air monitoring inside residences is required after buffer zone period ends.
Roads and Rights-of-Ways within Buffer Zones

Buffers may include roads or rights-of-way only IF
- Area is *unoccupied* during buffer zone period
- Entry by non-handlers is *prohibited*
- Applicators *comply with all* local laws & regulations
Publicly Owned/Operated Areas within Buffer Zones

Buffers may include public areas only **IF**
- Area is *unoccupied* during buffer zone period
- Non-handlers prohibited from entering
- Applicators comply with all local laws and regulations **AND**
- Have written permission from state/local authorities responsible for management & operation of area
Transit Through Buffer Zones

- **Allowed:**
  - Vehicular and bicycle traffic on public and private roadways

- **Prohibited:**
  - Pedestrians
  - Bus stops or places where people wait for public transit
Other Agricultural Areas within Buffer Zones

May include agricultural areas owned/operated by another person IF

- buffer zones will not overlap, and
- owner/operator provides written agreement that nobody will enter
Overlapping Buffer Zones

- Buffer zones of multiple application blocks may overlap IF
  - at least 12 hours have passed between end of 1st and beginning of 2nd application*, and
  - emergency preparedness/response measures implemented if homes, businesses, property are within 300 feet of each buffer zone
Distances for Buffer Zones

- Product labels will display distances in tables based on:
  - application rate
  - application block size
  - application equipment & methods

- Buffer zone “credits”
  - Earned for certain site conditions or application practices that reduce emissions (e.g., certain tarps)
Posting Buffer Zones

- At usual points of entry
  - roads, sidewalks, walking paths, and bike trails

- Along likely routes of approach
  - area between a buffer and road or residential area

- Unless a physical barrier such as a fence prevents access
Buffer zone sign must include:

- “Do Not Walk” symbol
- "DO NOT ENTER/NO ENTRE,"
- "[Name of fumigant, name of product] Fumigant BUFFER ZONE"
- certified applicator contact information
Signs for Posting Buffer Zones

Must be:
- facing in the direction people approach the area
- legible
- posted before application and remain until end of buffer zone period
- removed within 3 days after end of buffer zone period
- Signs will be available at points of sale
Buffer Zone Summary

- **Buffer zone**
  - is the area around application block
  - ends 48 hours after application ends
  - is based on application rate, equipment & method, and size of block
- **Can**
  - earn credits to decrease buffer zone size
  - include residential & public property, roads, rights-of-way
  - allow transit, but pedestrians & areas such as bus stops are prohibited
- **May overlap with another buffer zone if conditions are met**
- **Area must be posted before application; signs are removed 3 days after end of buffer zone period**
- **Posting treated areas is not a new requirement!**
Emergency Preparedness and Response/ Hard to Evacuate Sites

If occupied structures are in close proximity to a buffer zone, the certified applicator must choose either:

- “Fumigant Site Monitoring”

Or

- “Response Information for Neighbors”
If the buffer zone is ______________:

<table>
<thead>
<tr>
<th>Distance Range</th>
<th>Distance to Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 25 feet and ≤ to 100 feet</td>
<td>50 feet</td>
</tr>
<tr>
<td>&gt; 100 feet and ≤ 200 feet</td>
<td>100 feet</td>
</tr>
<tr>
<td>&gt; 200 feet and ≤ 300 feet</td>
<td>200 feet</td>
</tr>
<tr>
<td>&gt; 300 feet</td>
<td>300 feet</td>
</tr>
</tbody>
</table>

AND occupied structures are within _____ from the edge of the buffer zone,

Distances that trigger requirements:

Applicators must:

1. monitor the site, OR
2. provide information to neighbors
Option 1: Fumigant Site Monitoring

- **Monitor:**
  - *outside* the buffer zone, between the buffer and occupied structures
  - at dawn, dusk, once each during the day and night
  - for sensory irritation

- Use devices for MeBr formulations with <20% chloropicrin

- Put emergency response into action if experiencing sensory irritation or the action level is exceeded
Option 2: Response Information for Neighbors

- Applicators provide information directly to neighbors at least 48 hours before the application:
  - Location of application block
  - Name of the fumigant and product, EPA Reg. No.
  - Contact information
  - Expected time period for fumigation and buffer zone
  - Early signs and symptoms of exposure
- May use door hangers, mail, phone, etc.
- Describe method in FMP; may attach copies
- If buffer zone is 125 feet, requirements apply to residences within 100 feet of buffer zone
- Applicator has option to monitor the air in the area between the plain house and the buffer zone, or give residents of the plain house information
- Cross-hatched house is outside of buffer zone, no action required

**Treated Area:**
Shank Application
80 lbs ai/A; 100 A
What are “Difficult To Evacuate Sites”?

- Include:
  - Schools (Pre-K – 12)
  - State licensed daycare centers
  - Nursing homes
  - Assisted living facilities
  - Hospitals
  - In-patient clinics
  - Prisons
**Proximity to Difficult to Evacuate Sites (DES)**

*If occupied during the application or within 36 hours after the application*

<table>
<thead>
<tr>
<th>If the buffer zone is:</th>
<th>Then applications are prohibited within this distance from a “DES”:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 300 ft</td>
<td>1/4 mile (1320 ft.)</td>
</tr>
<tr>
<td>≤ 300 ft</td>
<td>1/8 mile (660 ft.)</td>
</tr>
</tbody>
</table>
Example of Application & Proximity to Difficult To Evacuate Sites (DES)

DES cannot be occupied during, and for 36-hours after, the application.

Begin Application at 6 AM

Complete Application by 6 PM

- 6 AM: DES unoccupied
- 6 PM: DES unoccupied
- 6 PM: DES unoccupied 24 hrs from end of application
- 6 AM: DES unoccupied 36 hrs from end of application
Emergency Response Summary

- Applications in close proximity to neighbors may require either (1) monitoring, OR (2) providing emergency preparedness and response information to the neighbors.
- Proximity is scaled to the size of the buffer zone.
- Applications are prohibited within 1/8 mile of Difficult to Evacuate Sites if the buffer is less than 300 ft.
- Applications are prohibited within 1/4 mile of Difficult to Evacuate Sites if the buffer is 300 ft. or larger.
- Some states may require notification; check the website on the label to find out if this is required for your application.