

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

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

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

FMP Summary

- 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

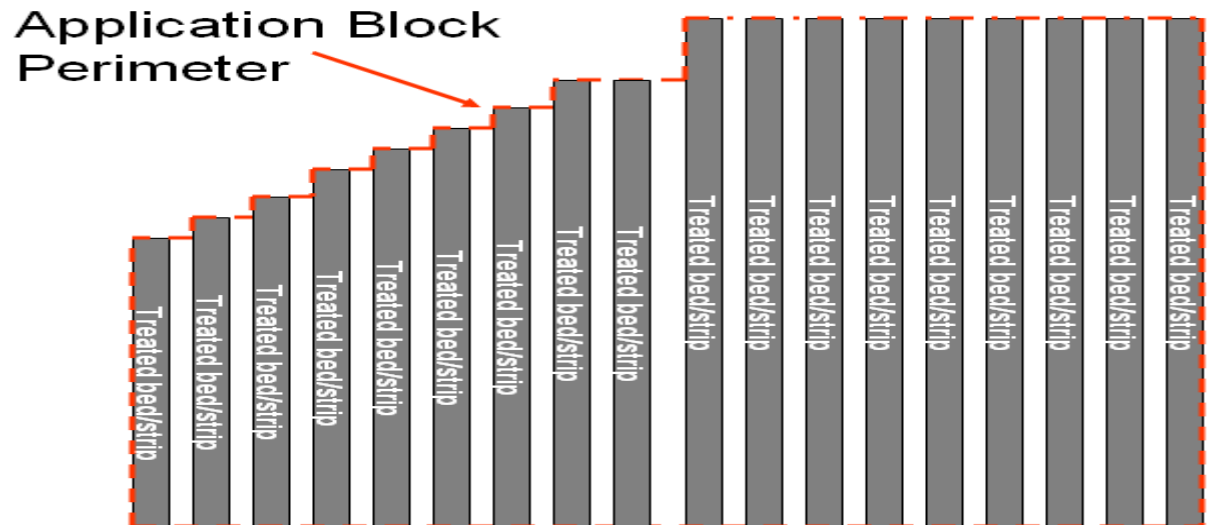
Distances, Credits & Posting

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

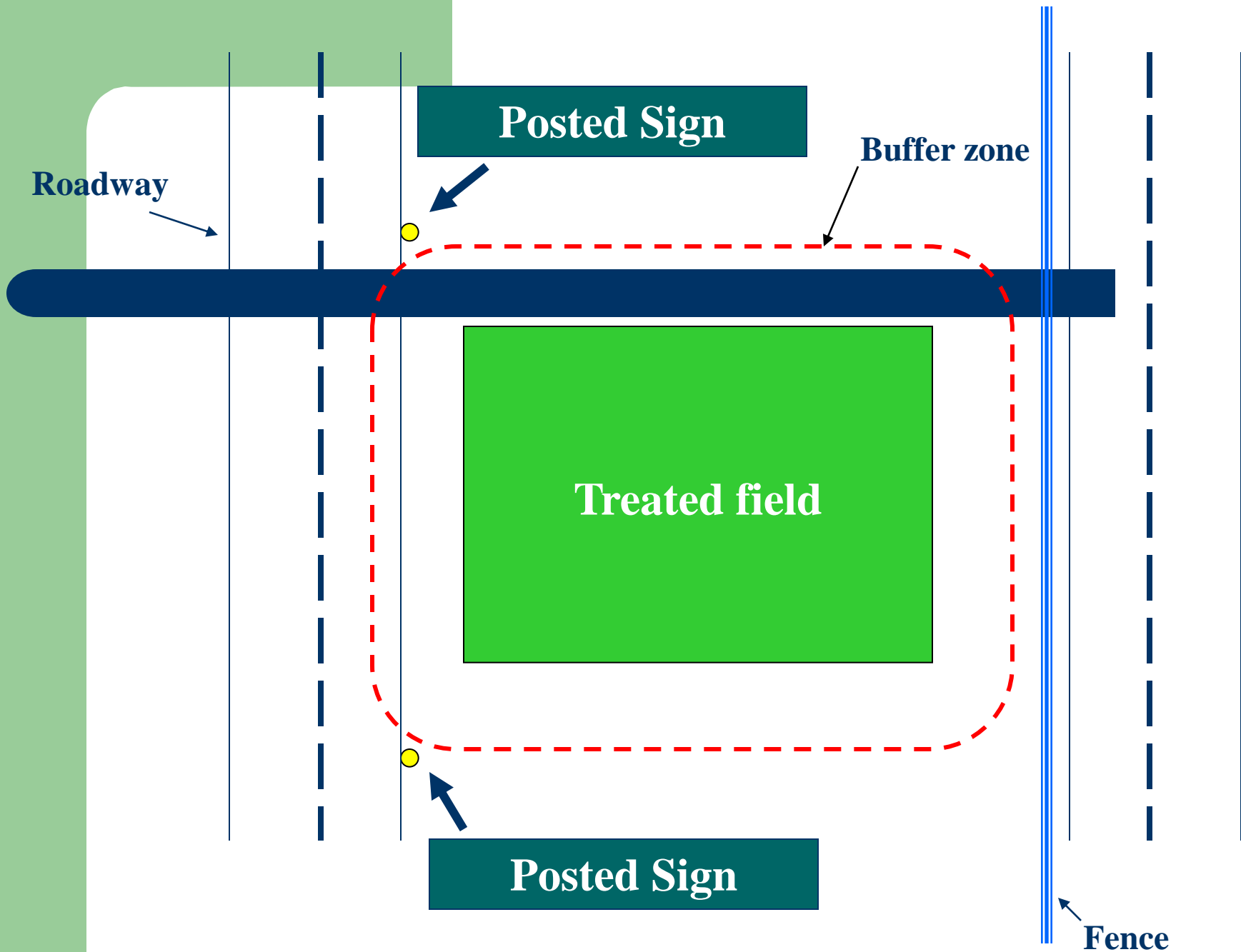
- Buffer zones of multiple application blocks may overlap IF
 - at least 12 hours have passed between end of 1st and beginning of 2nd application*, and
 - emergency preparedness/response measures implemented if homes, businesses, property are within 300 feet of each buffer zone

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”

Distances that trigger requirements

If the buffer zone is _____:	AND occupied structures are within _____ from the edge of the buffer zone,
> 25 feet and \leq to 100 feet	50 feet
> 100 feet and \leq 200 feet	100 feet
> 200 feet and \leq 300 feet	200 feet
> 300 feet	300 feet

Applicators must:

- (1) monitor the site, OR
- (2) provide information to neighbors

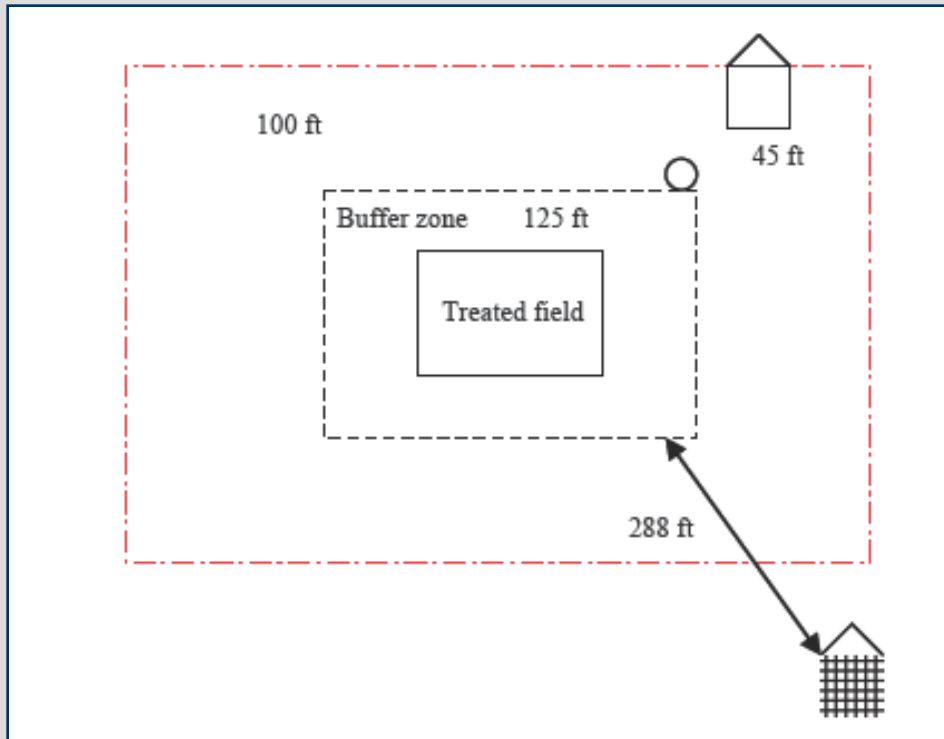
Option 1: Fumigant Site Monitoring

- 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

Example Site Map - Emergency Preparedness and Response Measures



- 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*

<i>If the buffer zone is:</i>	<i>Then applications are prohibited within this distance from a “DES”:</i>
<i>> 300 ft</i>	<i>1/4 mile (1320 ft.)</i>
<i>≤ 300 ft</i>	<i>1/8 mile (660 ft.)</i>

Example of Application & Proximity to Difficult To Evacuate Sites (DES)



Morning



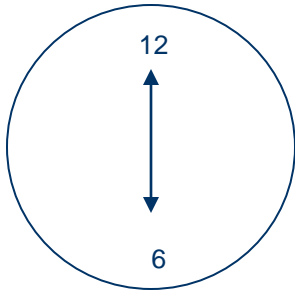
Evening



Evening

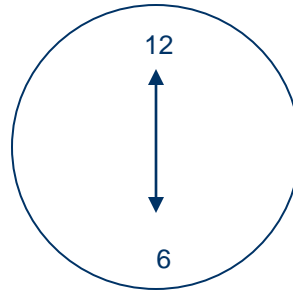


Monday Morning



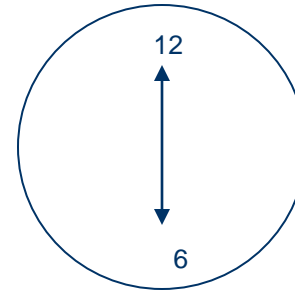
Begin Application
at 6 AM

6AM: DES
unoccupied

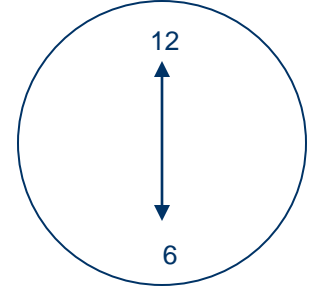


Complete Application
by 6 PM

6PM: DES
unoccupied



6 PM: DES
unoccupied 24 hrs
from end of
application



6 AM: DES
unoccupied 36 hrs
from end of
application

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