Respirator Fit Testing for Fumigation Law Compliance

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I. Fumigation Law Update

Methyl Bromide Status

- In 1992 Methyl Bromide was added to the Montreal Protocol: An International treaty that regulates Ozone Depleting Substances.

- In the U.S. Methyl Bromide phase out began in 1998 based upon 1991 baseline use rates.

- Production of Methyl Bromide, except for exempt uses, has been prohibited since 2005.

- Currently, approved exempted use rates of Methyl Bromide are at 26% of the 1991 baseline.

- In 2009 EPA rendered a final decision on the Methyl Bromide “2006 Reregistration Eligibility Decision” (RED).

- Methyl Bromide 2006 RED required phased in label changes include: 1) Fumigation Management Plans; 2) Applicator Education; 3) Buffer Zones; and 4) Neighbor Notification.
2011 Fumigant Application Requirements

- Effective 12/01/2010, EPA requires that all fumigant applications include: 1) Fumigation Management Plans; 2) Applicator Education; 3) Buffer Zones; and 4) Neighbor Notification.

- Effective 12/01/2010, EPA requires that at least two individuals from each farm applying fumigants be respirator fit tested and medically cleared for respirator usage.

- EPA developed an on-line "Soil Fumigant Tool Box" to facilitate compliance at: http://www.epa.gov/opp00001/reregistration/soil_fumigants/index.htm

Welcome to the Soil Fumigant Toolbox which provides training, outreach, and other resource materials for applicators and handlers, communities, state and local agencies, and others interested in understanding and implementing the current requirements for safe use of soil fumigants. Learn what's new in the toolbox.

Soil Fumigant Management Plans

Soil fumigations are complex processes that require specialized equipment and practices to properly apply volatile and toxic pesticides. EPA's risk mitigation allows for site-specific decisions to address the conditions where the fumigant is applied. To address this complexity and flexibility, EPA is requiring that fumigant users prepare a written, site-specific fumigant management plan (FMP) before fumigations.
Written plans and procedures for safe and effective applications will help prevent accidents and misuse and will capture emergency response plans and steps to take in case an accident occurs.

Fact Sheets

- **2010 Site-Specific Fumigant Management Plans and Post-Application Summaries (PDF)** (5 pp, 260k)

- Chloropicrin and Iodomethane **FMP Template** (18 pp, 203k)
  This file includes templates that may be filled-in by hand for the 2010 Fumigant Management Plan, 2010 Post-Application Summary Report, and related forms (Air Monitoring, Breathing Zone Monitoring, Handler Information, Respirator Cartridge Replacement, Drip-Application Monitoring, and Occupied Structures).

Current Labeled Fumigant Buffer Zone Requirements

- **Buffer Zone determination for MIDAS 50:50 (50% Iodomethane & 50% Chloropicrin) label excerpt:**

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**Determining Buffer Zone Distance**

- Determine the size of the buffer zone using the following Buffer Zone Table.
- The number of field acres that are being treated with MIDAS 50:50.
- The pounds of MIDAS 50:50 that are being applied per treated acre.
- Buffer zone reduction credits.

**Buffer Zone Table**

<table>
<thead>
<tr>
<th>MIDAS 50:50 Application Rate (Lbs per Treated Acre)</th>
<th>SIZE OF FIELD IN ACRES (Buffer zone distance in feet)</th>
<th>Buffer Zone Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 5 Acres</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>6-10 Acres</td>
<td>20</td>
<td>45</td>
</tr>
<tr>
<td>11-15 Acres</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>16-20 Acres</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>21-25 Acres</td>
<td>13</td>
<td>70</td>
</tr>
<tr>
<td>26-30 Acres</td>
<td>11</td>
<td>80</td>
</tr>
<tr>
<td>31-35 Acres</td>
<td>9</td>
<td>90</td>
</tr>
<tr>
<td>36-40 Acres</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

1 For rates not listed on this table, use the buffer zone for the next highest rate, or use the following calculation to determine the exact buffer zone:

Buffer Zone for Application Rate Not Listed = Known Buffer Zone on Table X Application Rate Not Listed / Rate of Application for Known Buffer Zone

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**Midas 50:50**

FOR SALE AND USE IN STATES OTHER THAN FLORIDA

**Restricted Use Pesticide**

**2010 Site-Specific Fumigant Management Plans and Post-Application Summaries (PDF)**

1 For rates not listed on this table, use the buffer zone for the next highest rate, or use the following calculation to determine the exact buffer zone:
II. How to Conduct a Respirator Fit Test

1) Effective 12/01/2010, EPA requires that at least two individuals from each farm applying fumigants be respirator fit tested and medically cleared for respirator usage.

2) Have test subject bring their own respirator NIOSH approved for pesticide usage, fitted with an organic vapor cartridge.

3) OSHA requires a clean shaven face at the face piece sealing surface. A full face or helmet type respirator sealed below the neck may be required for bearded individuals to be respirator fit certified.

4) After passing the respirator fit test a respirator fit test certification card will provided with an annual expiration date of December 31st.

5) OSHA Medical clearance forms will be provided at the respirator fit testing. The OSHA medical form needs to be filled out by each respirator fitted individual and then reviewed by their physician for duty release.

Respirator Fit Testing Procedure

- Ask subject about any breathing difficulties prior to fit testing.
- Perform a sensitivity test.
- Fit respirator and perform a User Seal Check.
- Ask individual to close eyes while the irritant smoke is delivered to inhalation and seal points on the respirator.
- Ask the individual to breath normal and move head during the test.
- No irritation or detection indicates a successful respirator fit.
Respirator Fit Test Attachments:

A. OSHA Appendix C
   Appendix C to § 1910.134: OSHA Respirator Medical Evaluation Questionnaire (Mandatory)

B. Respirator Fit Test Record Form

C. Respirator FIT Test Wallet Card

Resource Links:

Northern Safety & Industrial
   http://www.nort hernsafety.com/

Zefon International Inc.
   http://www.zefon.com/
   http://www.zefon.com/store/respirator-fit-testing/

3M
   http://solutions.3m.com/wps/portal/3M/en_US/Health/Safety/Products/Two/

OSHA
   http://www.osha.gov/

R. D. Myers 2011