1974 To present
Fumigant Reregistration/Stewardship/Regulations

1974 LABEL

2011 LABEL
Label Interpretation

- PPE Requirements
- GAP’s ...Good Agricultural Practices
- Tarp Removal Guidelines
- Fumigant Management Plans (FMP’s)
PPE Guidelines

SCBA

FULL FACE RESPIRATOR
MEDICALLY QUALIFIES TO WEAR BREATHING APPARATUS PROPERLY FIT TESTED AND TRAINED TO USE

Respirator/SCBA Guidelines
# PPE REQUIREMENTS

## PPE GUIDELINES

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>CLOTHING &amp; FACE/EYE PROTECTION</th>
<th>RESPIRATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Bromide</td>
<td>Loose-fitting or well ventilated long-sleeved shirt and long pants or equivalent (e.g., coveralls); shoes and socks; full-face shield or safety glasses with brow and temple shields. DO NOT wear jewelry, goggles, or gloves.</td>
<td>None required when air concentrations of MeBr is less than 1 ppm. SCBA is required (Must be on site at all times).</td>
</tr>
<tr>
<td>Chloropicrin</td>
<td>Same as for MeBr</td>
<td>None required when air concentration of Pic is less than 3 ppm. Full face respirator (OV) cartridges is required. When above 3 ppm, Respirator protection must be on site at all times.</td>
</tr>
<tr>
<td>37% Formaldehyde Solution</td>
<td>Loose-fitting or well ventilated long-sleeved shirt and long pants or equivalent (e.g., coveralls); shoes and socks. Do NOT wear jewelry when handling. Full-face shield, goggles or safety glasses with brow and side shields must be worn if full-face respiratory protection not required. Butyl, Nitrile, or Viton Gloves must be worn.</td>
<td>A full-face respirator with formaldehyde cartridges must be worn. If exposure concentrations up to 7.5 ppm. For unknown or above 7.5 ppm, pressure SCBA must be worn.</td>
</tr>
</tbody>
</table>

## CLOTHING & FACE/EYE PROTECTION

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>Direct-Contact Task</th>
<th>Enclosed Cabs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metam Sodium</td>
<td>Coveralls over long-sleeved shirt and long pants; waterproof gloves; chemical-resistant footwear plus socks; chemical-resistant apron (when cleaning equipment, or when transferring without dry-disconnect fittings); face-sealing goggles unless full-face respirator is worn.</td>
<td>Coveralls; shoes and socks. Plus, if pungent, rotten-egg odor can be detected, must wear: Face-sealing goggles, unless full-face respirator is worn. *PPE for DC tasks must be available in cab and worn if leaving cab to conduct any DC task.</td>
</tr>
</tbody>
</table>

## LIQUID CONTACT POTENTIAL (LCP)

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>CLOTHING &amp; FACE/EYE PROTECTION</th>
<th>Half-life under experimental conditions (10 to 100 ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Dichloropropene (Telone II, Curfew)</td>
<td><strong>No LCP</strong> - Broadcast Application (in-bed) Loose-fitting or well ventilated long-sleeved shirt and long pants or equivalent (e.g., coveralls); shoes and socks; full-face shield or safety glasses.</td>
<td>Half-life under experimental conditions (10 to 100 ppm)</td>
</tr>
<tr>
<td></td>
<td><strong>No LCP - Pre-bed, Row Product Application (Yetter rig)</strong> Loose-fitting or well ventilated long-sleeved shirt and long pants or equivalent (e.g., coveralls); shoes and socks; full-face shield or safety glasses.</td>
<td>Half-life under experimental conditions (10 to 100 ppm)</td>
</tr>
</tbody>
</table>
Handler Descriptions/Duties

- Tractor Driver/ Co-Pilot
- Connecting Fumigant Lines/ Tanks
- Spill Response
- Tarp Removal prior to 120 hours
- Shovelers
- Monitoring of Field Treatment Sites
## JOB DESCRIPTIONS

**HANDLER INFO / RECORDSKEEPING**

### Handler Information

<table>
<thead>
<tr>
<th>Handler Name, Address, and Phone Number</th>
<th>Employee Name, Address, and Phone Number</th>
<th>Tasks Handler is Trained and Authorized to Perform (check numbers) (see below)</th>
<th>PPE (check all that apply)</th>
<th>Respirator Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chris Furman 218 Mallard Dr, Frankfort, KY 40601</td>
<td>TriEst Ag Group, Inc., P.O. Box 965, Tifton, GA 31793 229-382-7727</td>
<td>☑ 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.</td>
<td>☑ Long-sleeved shirt/long-pants, shoes, socks  ☑ Chemical-resistant apron  ☑ Chemical-resistant footwear and socks  ☑ Protective eyewear (NOT goggles)  ☑ Chemical-resistant gloves  ☑ Half-mask air-purifying respirator  ☑ Full-face air-purifying respirator  ☑ Self-contained breathing apparatus  ☑ Other:  ☑ No respirator</td>
<td>PPE training date: 12/05/2007</td>
</tr>
</tbody>
</table>

- Make: Drager  
- Model: 6560  
- Type: APR  
- Style: Full-Face  
- Size: One Size  
- Cartridge type: Drager Xplore Organic

Vapor Cartridge  
- Fit test date: 02/24/2011  
- Training date: 02/24/2011  
- Medical date: 01/04  

- Make: Drager  
- Model: 3500  
- Type: APR  
- Style: Half Face  
- Size: Large  
- Cartridge type: Drager Xplore Organic

Vapor Cartridge  
- Fit test date: 02/24/2011  
- Training date: 02/24/2011  
- Medical date: 01/04  

- Make: SCBA  
- Model: MSA, ISI, 3M  
- Type: POSITIVE PRESSURE  
- Style: NA  
- Size: NA  
- Cartridge type:  
- Fit test date: 02/24/2011  
- Training date: 02/24/2011  
- Medical date: 01/04

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

1. Loaders, drivers, tractor operators, shovelers, cross-diggers, or other direct application participants  
2. Tasks with liquid contact potential  
3. Tasks with liquid contact potential  
4. Installing, removing, repairing, or monitoring taps until  
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:**
GOOD AGRICULTURAL PRACTICES........GAP’s
SOIL TEMPERATURE
Soil Moisture
Organic Matter Issues
Soil Preparation
Depth of Application
Working Safely With Fumigants
Tarp Removal Guidelines

- 120 Hour Rule / 14 day Rule
- Instructions on Perforating and Removal
- Compromised Tarps
- Notations in Post Fumigant Summary
Grower Sign Offs Training

Miscellaneous Safety Tips

- When connecting fumigant or pressure lines do not overtighten connecting fittings as they may crack and leak.
- Never leave lines charged with product when being stored for long periods of time (overnight, work breaks). Purge lines and close valves if equipment is to be left unattended.
- Always replace safety caps and bonnets on cylinder valves to protect against accidental release.
- Never store fumigants in unventilated area (i.e., equipment barn).
- Once tarp ends are buried do not disturb as product may be inadvertently released.
- To avoid inadvertent line breakage, keep lines secured away from tractor wheels, wheel wells, and any other moving equipment.
- Always post the application site with legible signs that can be read from a safe distance.

GROWERS SIGN OFF:

____________________

____________________

DATE: ________________

How to Safely Work With Soil Fumigants
Calibration of Machinery
SOIL FUMIGATION REGULATIONS 2013

PHASE 2 REQUIREMENTS FOR SOIL FUMIGANT PESTICIDES

Safety measures for soil fumigant pesticides have been in place by the Environmental Protection Agency (EPA) to protect agricultural workers and bystanders when fields are treated. The safety measures are taking place in two phases. The label changes in both pertain only to soil fumigant products that contain any of the following active ingredients: chloropicrin, dazomet, methyl bromide, metam sodium and metam potassium.

TRANSITION OF PHASE 1 AND PHASE 2:

Phase 1 went into effect in 2011 with labels carrying some of the new requirements, including in the channels of trade. Examples of Phase 1 requirements included restricted distribution, Fumigant Management Plans (FMP’s), mandatory good agricultural practices, and worker protection measures.

Phase 2 will occur in 2013, almost exclusively in California, to address the remaining issues of concern.
Other Supportive Literature

TriEst Ag Group, Inc.
Custom Fumigation Services and Direct Sales

EPA's New Fumigant Regulations: How-to-Comply
Registrant Stewardship

- Labels / Labeling Pamphlets
- MSDS Sheets
- PPE Guidelines
- FMP Guidance
- Fumigant Calibration & Guidance
Challenges Moving Forward
2012 and Beyond

- Buffer Zone Issues on Labels after 11/2012
- Re- registrations of all fumigants again forthcoming 2014-15
- All states leaning towards a Separate Category for Soil Fumigation Standards
- Individuals will have to Complete a “Soil Fumigation Training Program that is Sponsored by Federal EPA
SUMMARY

- ????? QUESTIONS FROM AUDIENCE ????