

WSDA INTERPRETIVE DOCUMENT

PHASE II SOIL FUMIGANT LABELS – SPRING 2013

Release Date: April 20, 2013

On December 2, 2012, the Phase II risk mitigation measures as initially described in the 2008 soil fumigant Reregistration Eligibility Decision (RED) took effect. Upon examining the mitigation measures, questions have arisen as to the intent of specific label instructions. This update, as with previous WSDA Interpretative Documents, will clarify the uncertainty being expressed with unclear risk mitigation measures.

This document neither alters provisions nor replaces provisions on the Section 3 label, but merely provides supplemental information. Any subsequent revision or interpretation to the pesticide label may or may not reflect the content of this document. This document may be revised or withdrawn at any time.

Pesticide Licensing

All soil fumigant products are designated as federal Restricted Use Pesticides (RUPs). As such, a WSDA applicator license is required to purchase and use these products. Consequently, at the time of purchase, dealers are required to verify the applicator's license certification and pesticide license annual renewed status.

The Certified Applicator

Soil fumigant labels make reference to "the certified applicator." When used, it is understood that reference is being made to the applicator-in-charge, that is, the individual who signed and is responsible for the content of the Fumigation Management Plan (FMP) and of the Post-Application Summary (PAS). This person is ultimately responsible for the soil fumigant application.

However, a soil fumigant application may involve several certified applicators. Thus, it is WSDA's position that "the certified applicator" – as referenced on the soil fumigation label – means "the applicator-in-charge."

Particular duties are performed by the "applicator-in-charge," which include, in part, the following. A comprehensive list appears on the pesticide label.

The "applicator-in-charge" may delegate responsibilities to other individuals, providing that the delegation is recorded in the FMP and the person to whom the responsibility is delegated adheres to label requirements that include, in part, licensing and training.

- Provide "Fumigant Safe Handling Information" to WPS trained handlers who will be involved with the application.
- Ensure that posting for the application block and the buffer zone occurs and is accurate, and that the posting is removed within the specified time period.
- Confirm that their name and contact information is listed on the application block and buffer zone postings.
- Communicate in a manner that can be understood by the site owner and handlers responsible for performing task-related activities the information necessary to comply with the label and procedures described in the FMP.
- Ensure all persons who are not trained and PPE-equipped and who are not performing one of the handling tasks listed on the label are excluded from the application block and the buffer zone.
- Determine if unfavorable weather conditions exist or are predicted to occur and decide whether an application should proceed.
- Determine whether the application block or its resulting buffer will overlap with a buffer zone that is already in effect.
- Ensure compliance with all local laws and regulations.
- Site-specific Fumigation Management Plan (FMP)
 - ▶ Prior to starting an application, verify that the FMP has been completed for each application block.
 - ▶ Confirm that content is current, complete, and accurate.
 - ▶ Sign and retain a copy for two years.
 - ▶ Ensure that the FMP is at the application block during all handler activities.



General policy statements and interpretive documents represent the Washington State Department of Agriculture's (WSDA) official interpretation of statute, rule, pesticide label instructions, and agency policy, opinions derived in exercising its discretionary authority.

Additional information about this document may be obtained by calling the WSDA Pesticide Management Division's toll-free telephone number, (877) 301-4555, or by dialing direct, (360) 902-2040.

Do you need this publication in an alternative format? Call the WSDA Receptionist at (360) 902-1976 or TTY Relay (800) 833-6388.

- ▶ Make a copy immediately available for viewing by handlers involved with the application.
- ▶ Provide a copy to any local, state, federal, or tribal enforcement personnel who request the FMP.
- ▶ Verify that a written response plan with required information is included.
- ▶ Ensure adherence to the “Emergency Preparedness and Response Measures.”
- Emergency Preparedness and Response Measures
 - ▶ Ensure monitoring for sensory irritation is being performed along buffer zone outer perimeter **OR**
 - ▶ Provide response information within the label-specified timeframe to residences and businesses that trigger the notification requirement.
- Complete PAS describing any deviations from the FMP, measurements taken to comply with good agricultural practices (GAPs), and any complaints or fumigant-related incidents that have been reported.

Certified Applicator Requirement to Apply Soil Fumigants

To be certified to apply or to supervise the application of a soil fumigant, “a certified applicator” must comply with and maintain at least one of the following

The discontinued WSDA Soil Fumigation category remains valid only for the Telone II and Telone EC products. The former Soil Fumigant category was discontinued on November 1, 2012.

qualifications.

Option 1: Maintain a current WSDA Private Applicator license or WSDA certified applicator license (e.g., Commercial Applicator, Commercial Operator, or Public Operator) with the discontinued Soil Fumigation endorsement. These licenses have a five-year recertification cycle.

Plus

Every three years, successfully complete the relevant modules in the registrant-sponsored, on-line Certified Applicator Training, known as the Acheiva training: <<http://www.fumiganttraining.com/>>.

Plus

Each year, prior to the start of the application season, review the *Fumigant Safe Handling Information* or other EPA-authorized handler training applicable to the soil fumigant(s) that will be applied.

Option 2: Maintain a current WSDA Private Applicator license or WSDA certified applicator license (e.g., Commercial Applicator, Commercial Operator, or Public Operator).

Plus

Take and pass the “new” WSDA Soil Fumigation RMM exam. The category (endorsement) will be added to your pesticide license. The endorsement – and pesticide license – will remain valid for as long as the recertification credit requirement is completed during the five-year recertification cycle.

Plus

Each year, prior to the start of the application season, review the *Fumigant Safe Handling Information* or other EPA-authorized handler training appropriate for the soil fumigant(s) that will be applied.

Handler Training Required to Participate in a Soil Fumigant Application

If not “a certified applicator,” to assist with ANY pesticide application, the employee must be trained under the Worker Protection Standard (WPS) as a handler. Furthermore, the Phase II soil fumigant labels require that only a fumigant handler can participate in a soil fumigant application. A

fumigant handler is an employee who has been, prior to the start of the application, appropriately trained and equipped as a handler in accordance with the requirements in the WPS **AND** has been provided the relevant fumigant safe handling information for the active ingredient being applied. The fumigant safe handling information must be provided to handlers and to certified applicators. A pesticide license with appropriate endorsement(s) satisfies the training requirements for a WPS handler. In fact, a certified applicator is qualified to provide WPS worker and handler training.

Soil fumigant safety information for handlers developed either by EPA or by a pesticide registrant and subsequently approved by EPA can be downloaded from the EPA soil fumigant toolbox website:

http://www.epa.gov/opp00001/reregistration/soil_fumigants/soil-fum-handlers.html#handlers.

Anyone who enters either an application block during the application or the Entry Restricted Period or who performs any activity within the buffer zone **AND** is not a certified applicator must comply with the fumigant handler training requirements. These individuals may include:

- Application block owner or operator (if not the certified applicator).
- Chemical dealer employee who supplies the equipment, chemical, technical service, etc.
- Personnel who repair, service, or maintain the support equipment, irrigation system, pumps, etc.

NOTE: A Commercial Consultant is not authorized as a certified applicator and, therefore, is deemed to be a handler only. Consequently, to apply ANY pesticide, the Commercial Consultant must be directly supervised by a Commercial Applicator or a Commercial Operator.

Worker Protection Standard Training Requirement for Handlers

Employers of handlers must make sure that handlers are trained about the correct ways to handle pesticides in accordance with the WPS. Handlers must be trained at least once every five years, beginning from the end of the month in which the pesticide safety training has been conducted. The handler must have been trained during this timeframe even if there has been a change in employers. During the five year period, the employer does not have to retrain the handler UNLESS the employer

- decides to retrain,
- has reason to believe that the card is invalid, or
- knows that the card has expired.

Handlers must be trained BEFORE they perform any pesticide handling task on an agricultural establishment, forest, nursery, or greenhouse. Handler tasks are listed on the label

Anyone who conducts handler training must:

- be qualified to conduct the WPS training;
- use written and/or audiovisual materials;
- use only EPA-developed WPS handler training materials or EPA-approved reference materials;
- present information in a manner the employee can understand, using a translator, if necessary; and
- respond to employee questions.

WPS handler training must occur at least every five years.

The person who conducts **handler** training must:

- currently be a certified applicator of restricted-use pesticides (in any category of certification), **OR**
- currently be designated as a trainer of certified pesticide applicators or pesticide handlers by a state, federal, or tribal agency having jurisdiction, **OR**
- have completed a pesticide safety train-the-trainer program approved by a state, federal, or tribal agency having jurisdiction.

Resource information for handler training is available as printed materials or as on-line modules. Although not an exhaustive listing of vendors, WPS training information is available from the following websites. Before ordering or using training materials, it is advisable to determine if the WPS training materials are EPA-accepted. The following handler training materials were developed by EPA or are EPA-approved.

Gempler's

<http://www.gemplers.com/search/worker+protection+standard>

Iowa State University

<http://www.extension.iastate.edu/PME/WorkerProtect.html>

North Dakota State University

<http://www.ag.ndsu.nodak.edu/aginfo/pesticid/wps.htm>

University of Idaho

<http://www.cals.uidaho.edu/edcomm/detail.asp?IDnum=1593>

EPA

<http://www.epa.gov/agriculture/htc.html> (Worker Protection Standard website)

<http://www.epa.gov/agriculture/awor.html> (Worker Protection Standard publications)

<http://www.epa.gov/agriculture/apes.html> (General reference publications on pesticides)

Soil fumigant safety information for handlers developed either by EPA or by pesticide registrants and then approved by EPA can be downloaded from EPA's Soil Fumigant Toolbox website at

http://www.epa.gov/opp00001/reregistration/soil_fumigants/soil-fum-handlers.html#handlers.

NOTE: The Phase II soil fumigant labels require that only a fumigant handler can participate in a soil fumigant application. A fumigant handler must be trained prior to conducting a handler task.

Handler Training Verification Cards

While the employer must ensure that the handler receives training, no documentation of training is required by the WPS. Nonetheless, employers are encouraged to implement a voluntary training verification program. To assist the employer with verification of training, the trainer can issue a training verification card for handlers upon completion of

the training. It is recommended that the trainer or employer maintain the following information about each handler issued a training verification card.

- Handler name
- Identification number (if appropriate)
- WPS card number
- Date of training
- Location of training
- Name of the trainer
- Name of association, company, or organization with which the trainer is affiliated
- Type(s) of training material used (e.g., publication[s], video, website, etc.)

Requests for the WPS Training - Handler Verification Card should be sent to Margaret Tucker, WSDA Certification and Training Unit Manager, by email at MTucker@agr.wa.gov or by calling (360) 902-2015.

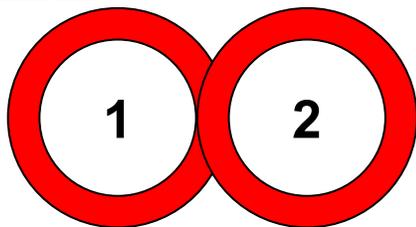
Overlapping Buffer Zones and 12-Hour Elapse Time

Two provisions in the “Buffer Zone Proximity” section of the label require clarification: 12-hour waiting period (elapse time) between applications and the default 300-foot buffer zone. To minimize the potential for atmospheric loading (concentration) of volatilized material resulting from off-site movement of soil fumigant off-gassing (also referred to as soil flux) incurred with concurrent applications on adjoining fields, label instructions require at least a 12-hour interval between completion of the initial application and the start of a subsequent application in the event that buffer zones overlap during the application. The 12-hour waiting period applies to all methods of application, except for the “Low Release Height-Solid Stream” (e.g., SmartDrop or drizzle boom) system, where buffer zones may intersect during concurrent applications.

To clarify, Example 1 illustrates the time elapse exemption with two adjoining application blocks. The application, if performed concurrently, will result in intersecting buffer zones (in red). Adjoining fields can be owned or operated (i.e., leased or rented) by the same person or by different people. Example 1 applies to water run (except low release height-solid stream) and to shank applications.

Remember: If the application blocks are either owned or operated by different entities, occupants must provide a written agreement prior to the start of the application affirming that they and other non-handles will voluntarily vacate the buffer zone during the entire buffer zone period.

Example 1.



The application on Pivot 1 will begin on Monday at 8:00 AM and is scheduled to be completed on Wednesday at 7:00 PM. The buffer zone will remain in effect for the required 48-hour period starting on Wednesday at 7:00 PM (the anticipated completion time) and continuing until Friday at 7:00 PM.

Applying the 12-hour elapse exemption, application to Pivot 2 can begin at 7:00 AM on Thursday. Application to Pivot 2 can begin although the buffer zone on Pivot 1 will remain in effect for another 36 hours. Therefore, buffer zones can overlap.

With the “Low Release Height-Solid Stream Center Pivot Applications,” as with the other application methods, before the application begins, the certified applicator must determine whether the buffer zone will overlap with a buffer zone that is already in effect. However, the 12-hour elapse time does not apply, as portrayed in Example 2.

Please Note: Under this exception, buffer zones may only overlap with application blocks that are not within the same field. In other words, a field cannot be divided into multiple application blocks with the intent of undertaking successive applications to minimize buffer zone size. The application blocks must be in separate fields with the irrigation system in each equipped with a low-release height, solid stream system. Therefore, if a field is divided into multiple application blocks, 12 hours must elapse from the completion of the first application block until the start of the sequential application.

Example 2.

In this example, the two adjoining pivots (that is, application blocks) are retrofitted with the “Low Release Height-Solid Stream” (e.g., SmartDrop or drizzle boom) system. As illustrated in Example 1, the concurrent applications will result in intersecting buffer zones (in red).

Provided that both irrigation systems are retrofitted with the low-release height, solid stream system, the 12-hour waiting period between applications does not apply. Consequently, both applications can occur simultaneously.



The Buffer Zone Proximity section also references a mandatory 300-foot monitoring/notification zone, the area between the buffer zone outer perimeter and neighboring residences or businesses. If the 12-hour exemption is exercised, the monitoring/notification zone distance for both application blocks, regardless of the buffer zone size, defaults to 300 feet. Consequently, regardless of the application system (e.g., shank, drop tube, or low release height-solid stream), the application block size, or the application rate, if residences or businesses are located within 300-feet from the buffer zone outer perimeter of either application block, the buffer zone perimeter must be monitored for sensory irritation or response information must be provided.

The 300-foot default notification/monitoring zone will be in effect for the duration of the buffer zone timeframe remaining on the initial application block at the time that the subsequent application begins.

The 300-foot monitoring/notification zone applies to every method of application, even low release height-solid stream center pivot applications, when the 12-hour exception is exercised.

Under the “Low Release Height-Solid Stream Center Pivot Applications” provision of the *Buffer Zone Proximity* section, the paragraph beginning with “Emergency preparedness and response measures” reads verbatim to a similar provision in the *Fumigation Site Monitoring or Response Information for Neighbors* paragraph for other application methods, with exception of the phrase “or property.” The paragraph is reprinted below.

Emergency preparedness and response measures specified in the label have been implemented if there are any homes, businesses, or property not within the control of the fumigator within 300 feet of each buffer zone.

In seeking clarification from EPA, the phrase “or property” is an artifact from earlier draft labels and should have been removed. Consequently, the words “or property” are irrelevant.

Post Application Summary Complaints Received or Incidents Reported

Within 30 days of completing the fumigation application, “the certified applicator” supervising the application must complete a Post-fumigation Application Summary (PAS). The PAS describes any deviations from the Fumigation Management Plan that have occurred and measurements taken to comply with Good Agricultural Practices along with a description of incidents, equipment failure, other emergency and

emergency procedures followed, changes in emergency response actions, and any complaints and/or incidents that have been reported to the certified applicator.

In the event that any complaint or incident occurs, the “Complaint details” section of the PAS requires that the following elements be reported.

- Person filing complaint (e.g., on-site handler, off-site person).
- If off-site person, the name, address, and phone number of the person who is filing the complaint.
- Description of control measures or emergency procedures that were initiated after being notified of the complaint.

If a complainant contacts the applicator directly, the reporting requirement to the “Complaint details” section of the PAS is unclear as to the information that must be reported. Moreover, completion of this section is complicated should the complaint choose to remain anonymous or if contact is made by an intervening individual, particularly if the interceding party was not directly affected by or associated with the incident.

Directly Contacted by Complainant: If the certified applicator or a fumigant handler is contacted directly by the complainant, the following elements must be reported in the PAS. (Refer to Examples 3 and 4.)

- Complainant
 - ▶ On-site: name of fumigant handler or certified applicator.
 - ▶ Off-site: name, address, and phone number of the person filing the complaint.
- Description of incident that might include equipment failure along with mitigation measures or emergency response procedures initiated in response to the complaint.

Example 3: When the complaint was received by the farm manager (Bob Jones) at 6:05 AM, he drove to the pivot (No. R-2) and shut down the chemigation injection system. He then reversed the pivot to apply a water-only seal to the treated area. He assigned David Lopez to monitor off-gas emissions along the outside of the buffer zone perimeter. Mr. Lopez was equipped with appropriate PPE and also had a gas monitoring system with him. Mr. Lopez monitored off-gas concentration levels at the site of the reported exposure. Experiencing no eye irritation while monitoring, the application was restarted at 6:45 AM.

Example 4: On October 12, 2012, at about 8:30 PM, Scott Smith, 222 South Road, Smithville, WA 99202, smelled a strong odor while inside his home. Mr. Smith called the farm manager (Bob Jones) and complained about the odor. Mr. Jones stated that a center pivot was applying metam sodium near to their location. Mr. Jones informed Mr. Smith that the application had been discontinued at 8:00 PM. Mr. Jones instructed Scott Smith to check his family into the local motel. When Mr. Jones called the Smith family the next morning at the motel, Mr. Smith stated that he took one of his children to the clinic the previous night for observation and that he called WSDA and filed a complaint. The WSDA complaint number is TWS-0012. On the morning of 10-11-12, Matt Cutter, with the WA State Department of Health, contacted Mr. Jones about the odor complaint and the emergency medical care sought by Mr. Smith for his child.

Incident Reported as an Anonymous Complaint: If the reporting of an event is filed anonymously, the information reported in the PAS need only to include details of the purported incident by the complainant as can be verified by at least one other witness. In this circumstance, the corroborating party's name, physical address, and phone number must be recorded in the PAS. (Refer to Example 5.)

If circumstances involving an alleged human exposure event or an injurious incident are conveyed by a secondary source (i.e., governmental agency) or relayed by an unaffiliated party to the event as an unconfirmed account or unsubstantiated portrayal, only the following information needs to be documented.

- Name of agency, entity, or individual.
- Name, physical address, and phone number of the agent or spokesperson who initiated contact.
- Summary of the reported incident including a description of equipment failure, if relevant, and mitigation measures or emergency response procedures undertaken in response to the complaint.

Example 5: On September 25 at 6:30 PM, Kyle Roslak (commercial applicator) received an anonymous call. The caller complained about severe eye irritation and breathing difficulty resulting from an application being made to a field located near the intersection of Road M and Road 5. The location was near to the southwest corner of a field currently being treated with metam. Mr. Roslak phoned Cliff Nelson, a fumigant handler, who was monitoring the southeastern side of the field, to determine if he was experiencing sensory irritation. Mr. Nelson stated that he had not. While traveling to the southwest side of the field, Mr. Nelson did report strong eye irritation. Mr. Roslak put on his respirator, drove to the injection site and shut down the injection system, and reversed the pivot while continuing to apply water. Time was 7:00 AM. Mr. Roslak drove to the southwest side of the application block and began to monitor off-gassing concentration. After two hours the concentration was less than 0.1 ppb. Mr. Roslak did not experience eye irritation after removing his respirator. During the two hour period, wind speed increased to 6 mph and temperature increased 10 degrees. Mr. Nelson drove to the pump and restarted the application. The time was 9:00 AM.

Shank Injection: Broadcast Application with a Water Seal

Buffer zone distances are based on the application rate, the size of the application block, and the application method – adjusted for applicable credits. Buffer zone distances are determined from look-up tables published in the soil fumigant label, with 25 feet as the minimum distance regardless of the site-specific parameters.

The advantage in achieving a 25-foot buffer zone is that *Emergency Preparedness and Response Measures* are not applicable. Therefore, *Fumigant Site Monitoring* or, as an alternative practice, *Response Information for Neighbors* are not required. While site-specific parameters, as referenced above, can be adapted in an effort to achieve a 25-foot buffer, this feat is essentially impossible with field sizes and application rates customary in the Columbia Basin. However, another option is available to broadcast shank applications: “Apply at least 0.25 inches of water immediately after application.”

However, there is uncertainty as to what is meant by “immediately after (an) application.” It is the opinion of WSDA that the label provision means as soon as feasibly and technically possible in practicing best professional judgment. While posing a challenge for a pivot irrigation system, a plausible scenario could involve treating half of the center pivot, immediately starting a water lap on the treated area, and then completing the shank application on the second half of the center pivot.

Some practices that would be considered as circumventing the intent of the “water seal” provision include:

- If a shank application, waiting until application to the pivot is complete before beginning the water seal.
- Delaying the start of the water seal to the treated portion of the application block for a length of time other than what would be necessary to charge the irrigation system.
- Intentionally interrupting the water seal application, once started.

If events – such as mechanic breakdown, operational impasses, or weather – delay completion of the application block on which the water seal is to be initially applied, the treated area should be designated as a separate application block and, therefore, subject to the 12-hour waiting period (elapse time) between applications as discussed in the preceding section “Overlapping Buffer Zones and 12-Hour Elapse Time.”