

Pesticide Update



Structural Pest Control and Pesticides Division, www.ncagr.com/pesticide/

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MITC Monitoring When Devices are Not Available; Guidance for Soil Fumigant Applicators (March 2011)

{The following information was obtained from the US EPA website; complete article can be viewed at the following webpage link: http://www.epa.gov/pesticides/reregistration/soil_fumigants/soil-fum-mitc.html}

EPA has developed the following guidance to assist applicators in understanding how to comply with current label requirements in the absence of required MITC gas detection tubes.

Availability of MITC gas detection tubes and how to order them

Current labels of soil fumigant products containing metam sodium/metam potassium and dazomet require applicators to use air monitoring devices if sensory irritation is experienced. EPA is aware, however, that MITC gas detection tubes that meet the requirements on current metam sodium/metam potassium and dazomet soil fumigant product labels are not currently available to applicators.

As of March 2011, EPA has been notified that Draeger and Sensidyne MITC detection tubes that meet the label requirement will be available for shipment to customers in June 2011.

Orders for Draeger MITC gas detection tubes, and associated pumps, can currently be placed through Norco in Pasco, WA. Office: 509-543-2033; Fax: 509-543-2023

Orders for Sensidyne MITC gas detection tubes, and associated pumps, can be placed starting June 1, 2011, through distributors. To reach Sensidyne customer support, dial 1-800-451-9444, and then access the customer support option in the recording or dial 782.

Customer support people can answer questions on price and delivery, and they will direct them to a local distributor to purchase.

What metam and dazomet applicators should do

Before the Application:

- Order air monitoring supplies before making an application.
- If supplies do not arrive before making the application, attach a copy of your dated order form and payment receipt to the FMP, including any information from the supplier about when the supplies should be delivered.

During the application:

- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) then either:
 1. An air-purifying respirator must be worn by all handlers who remain in the application block, and worn until the application is complete or the end of the day, whichever is first, or
 2. Operations must cease and handlers not wearing an air-purifying respirator must leave the application block. Re-entry into the application block without an air-purifying respirator is not permitted until the following day.
- If at any time a handler experiences any sensory irritation when wearing an air-purifying respirator then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
- Handlers may return to the application block and resume work activities with respiratory protection, provided that respiratory filter cartridges/canisters have been replaced and handlers do not experience sensory irritation.

INSIDE

- The Past, Present & Future of Fumigant Mitigation 2
- Working With WPS Requirements..... 3
- Landmark Lawsuit Against EPA 4
- Potential Impact of the Center for Biological Diversity vs. EPA Lawsuit on Pesticide Use in North Carolina 4

- What's the Status of an NPDES Pesticide General Permit for Pesticide Discharges to Waters of North Carolina? 5
- EPA Warns Online Shoppers about Illegal, Harmful Pesticide Sales 6
- The Loss of Temik Leaves Producers Wondering 6
- North Carolina Pesticide Board Actions 10

The Past, Present & Future of Fumigant Mitigation

By Pesticide Section Staff

The Past

EPA recently completed a reregistration process where the registration dossier for all pesticides was reviewed to identify deficiencies that were not in compliance with current guidelines. At the end of the review reregistration eligibility decisions (REDs) were issued that detailed data gaps and corrective action as well as label changes required for the continued use of that pesticide. In 2009, REDs were issued for the following soil fumigants: methyl bromide, chloropicrin, metam sodium/metam potassium, and dazomet. These REDs documented concerns regarding whether use practices and product labels were providing workers and bystanders with adequate protection to prevent inadvertent exposure to fumes dissipating from fields treated with soil fumigants. As a result of the final REDs, new fumigant product labels were required. The new labels describe changes in how fumigants are to be used in order to increase protections for agricultural workers and bystanders. Mitigation measures were scheduled to be implemented in two phases- Phase 1 and Phase 2.

The Present

Currently applicators are required to follow Phase 1 mitigation measures; Phase 1 measures first appeared on labels at the end of 2010 and are currently being implemented. Phase 1 measures include:

- RUP classification
- Handler respiratory protection
- Reentry restrictions
- Safety information for handlers
- Good Agricultural Practices (GAPs)
- Fumigant Management Plans (FMPs)

Metam sodium/potassium and dazomet are now restricted use pesticides (RUPs); the other fumigants addressed by the 2009 REDs were already RUPs. Also, now the certified applicator must be in line of site of the application throughout the injection process.

The new labels require handlers to stop work or use respirators if air concentrations exceed acceptable levels; for most activities, sensory detection triggers respiratory protection requirements. If the fumigant is detected, handlers must either use appropriate PPE or cease work and leave the

application block. New labels require at least 1-2 handlers (depending on product) to have air-purifying respirators available. In addition, at least 1 SCBA must be on-site and ready for an emergency. A SCBA is not required for an application of metam sodium/potassium or dazomet. Before using a respirator, the individual must undergo a respiratory physical, be fit tested, and be trained on the proper use and maintenance of a respirator. The medical evaluation and respirator fit testing must be in accordance with OSHA guidelines that are referenced on the pesticide label.

Once “sensory detection” has occurred monitoring the fumigant concentration in the air with monitoring devices will be required. There are two situations that require monitoring. If the applicator decides to stop fumigating and vacates the field (along with all other handlers), 2 consecutive air samples with acceptable levels, taken 15 minutes apart, must be obtained. For handlers to continue to work with respirators, the applicator must take air samples every 2 hours to verify that air concentrations fall within the acceptable range.

Current soil fumigant labels require treated areas to be posted, and handlers are required to wear specific personal protective equipment when they are in a treated area. The new labels (2010) also mandate a 5 day Entry Restricted Period after application has ended for bedded, untarped treatments. The entry restricted period may be extended for some tarped applications due to the delayed dissipation of fumigant from areas covered by the plastic.



Dr. Bob Bruss exhibits fumigant signs to applicators



Applicators attend soil-fumigant training in Wilson, NC

The new (2010) labels also mandate that handlers receive safety information within the 12 months preceding the application; information must be provided in a manner that the handler can understand. Training developed by the registrant is available at point of purchase or online; EPA developed handouts with the required safety information which is also available online at www.epa.gov/fumigantraining

Previous fumigant labels recommended many good agricultural practices (GAPs), however the 2010 labels mandate certain GAPs that help reduce off gassing and improve the safety and effectiveness of applications.

The last Phase 1 mandate requires users to prepare a written, site-specific fumigant management plan (FMP) before fumigation begins. FMPs will document:

Please see Fumigant , page 7

Working With WPS Requirements

By Jennifer Almond, Pesticide Specialist, & J. Patrick Jones, Dep. Director of Pesticide Programs NCDA&CS

With the oncoming growing season, it may be a good time to revisit the requirements listed under the Worker Protection Standard (WPS). The NC Pesticide Board adopted this Federal Standard by reference in July of 1993. WPS is designed to reduce the risks of illness, injury, and accidental exposure resulting from workers exposure to pesticides used in the production of agricultural plants on agricultural establishments. The Standard requires workplace practices designed to reduce or eliminate exposure to pesticides, and establishes procedures for responding to exposure-related emergencies.

One important protection under WPS is the prohibition of any applicator to apply a pesticide in any manner that will expose workers or other persons, either directly or through drift. Workers are prohibited from being in areas of the field which are actively being treated with pesticide, or those areas that have just been treated. The Standard allows workers to be in the same field in which an application is taking place if they are not located directly where the pesticide is being applied, or directly where the application has just been made. However, to avoid any perception that you are exposing your workers to pesticide or, most importantly, to protect the workers from the risk of pesticide exposure, it is best to keep the workers out of the field completely while it is being treated. We have recently investigated reported incidents in which workers were within 10 ft. of spray equipment while applications were being made. When workers are in close proximity to application equipment, any minor wind shift or gust could easily cause the pesticide to make contact with the workers. Farmers are therefore encouraged to maintain a large buffer between their application equipment and their workers who may be in the same area as the application.

Training of employees is another issue that has arisen in past WPS cases. Growers need to be aware that all employees who assist in the application of any pesticide (including growth regulators) must be trained as a handler before the application begins. The training is considered valid if

To avoid any perception that you are exposing your workers to pesticide or, most importantly, to protect the workers from the risk of pesticide exposure, it is best to keep the workers out of the field completely while it is being treated. Farmers are encouraged to maintain a large buffer between their application equipment and their workers who may be in the same area as the application.

it has been conducted within the past 5 years. Training must also be conducted for workers performing hand labor; if workers perform any early entry activities, they must be trained before the activity begins. If no early entry activity occurs, workers must receive training before the 6th day of entry into areas treated with a pesticide within the last 30 days. If you need any assistance with training materials, both the NCDA&CS and the NC Cooperative Extension Service have training available in varying formats.

Decontamination supplies must also be provided for handlers and workers on agricultural establishments. In general, soap, water, and single-use towels must be provided for handler employees applying pesticides and workers while performing hand labor tasks in crops that have been treated with pesticides. There must also be a change of clothes available to handler employees. In addition, after handling activities, the grower must provide soap, clean towels and a sufficient amount of water so that the employees may wash thoroughly; such provisions are to be located where handlers remove their personal protective equipment.

In many of our cases, there have been inconsistencies with the posting of safety information. For example, all growers should post an approved EPA Safety Poster in a central location accessible to all employees, as well as emergency contact information for the nearest emergency medical care facility. This information should be displayed when a pesticide has been applied on the agricultural establish-

ment within the last 30 days.

At the same location as where the above information is displayed, the growers should post recent pesticide application information including:

- (1) The location and description of the treated area.
- (2) The product name, EPA registration number, and active ingredient(s) of the pesticide.
- (3) The time and date the pesticide is to be applied.
- (4) The restricted-entry interval for the pesticide.

NC growers have other requirements that affect their recording of pesticide application information. Immediately following the application, the specific time of day when each pesticide application was completed must be recorded. Furthermore, each day of the application shall be recorded as a separate record. NC growers must maintain this information for a period of two years, after it has been displayed at the central information site for 30 days.

There are many other provisions to this Standard; a complete copy of the requirements may be found at <http://www.epa.gov/oppfead1/safety/workers/PART170.htm>. If growers have any questions about the Worker Protection Standard, they may contact this office at (919)733-3556. Growers may also request a compliance assistance inspection, during which inspectors will assess their compliance with the WPS requirements and offer any suggestions that they may have to assist the growers.

Landmark Lawsuit Against EPA

This information was obtained from a January 20, 2011 news release from the Center for Biological Diversity

On January 20, 2011, the Center for Biological Diversity and Pesticide Action Network North America filed the most comprehensive legal action brought under the Endangered Species Act to protect imperiled species from pesticides, suing the U.S. Environmental Protection Agency for its failure to consult with federal wildlife agencies regarding the impacts of hundreds of pesticides known to be harmful to more than 200 endangered and threatened species.

The lawsuit seeks protection for 214 endangered and threatened species throughout the United States, including the Florida panther, California condor, piping plover, black-footed ferret, arroyo toad, Indiana bat, bonytail chub and Alabama sturgeon. Documents from the U.S. Fish and Wildlife Service and EPA, as well as peer-reviewed scientific studies, indicate these species are harmed by the pesticides at issue. The EPA has registered more than 18,000 different pesticides for use.

The EPA is required by the Endangered Species Act to consult with the Fish and Wildlife Service and National Marine Fisheries Service regarding pesticides that may jeopardize listed species or harm their critical habitat. Formal consultations are intended to ensure that the EPA avoids pesticide uses that harm endangered species. After consultation, the federal wildlife agency issues a biological opinion that may specify reasonable and prudent restrictions and alternatives to avoid harm to species.

A series of lawsuits by the Center and other conservation groups have forced the EPA to consult on the impacts of scores of pesticides on some endangered species, primarily in California, and resulted in temporary restrictions on pesticide use in sensitive habitats. In 2006 the EPA agreed to restrictions on 66 pesticides throughout California and began analyzing their effects on the threatened California red-legged frog. A 2010 settlement agreement requires evaluation of the effects of 75 pesticides on 11 San Francisco Bay Area endangered species. This litigation is the first on this scale, as it seeks nationwide compliance for hundreds of pesticides on hundreds of species.

Potential Impact of the Center for Biological Diversity vs. EPA Lawsuit on Pesticide Use in North Carolina

By Dr. Henry Wade, Environmental Programs Manager, NCDA&CS

North Carolina has 18 endangered and threatened animal species, which are protected by the Endangered Species Act, that are included in the lawsuit filed on January 20, 2011, against EPA by the Center for Biological Diversity. Several counties have more than one endangered or threatened species that could be impacted by this lawsuit. This could eventually lead to additional use restrictions on specific pesticides in North Carolina, which could prohibit use within certain distances of streams or areas of a county. Changes of this magnitude could affect pesticide use not only for agriculture but for non-agricultural sites such as golf courses, rights-of-way, etc. The table below lists each species and the counties in which each is found.

Species	NC Counties that would be impacted
Appalachian elktoe	Graham, Haywood, Henderson, Jackson, Macon, Mitchell, Swain, Transylvania, Yancey
Bog turtle	Alexander, Alleghany, Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Forsyth, Gaston, Graham, Henderson, Iredell, Macon, McDowell, Mitchell, Surry, Transylvania, Watauga, Wilkes, Yancey
Cape Fear shiner	Chatham, Harnett, Lee, Moore, Randolph
Carolina heelsplitter	Mecklenburg, Richmond, Union,
Carolina northern flying squirrel	Avery, Buncombe, Caldwell, Graham, Haywood, Henderson, Jackson, McDowell, Mitchell, Swain, Transylvania, Watauga, Yancey
Dwarf wedgemussel	Franklin, Granville, Halifax, Johnston, Nash, Orange, Person, Vance, Wake, Warren, Wilson
Gray bat	Buncombe, Haywood, Madison, Swain
Indiana bat	Cherokee, Graham, Rutherford, Swain
Littlewing pearlymussel	Macon, Swain
Oyster mussel	statewide
Piping plover	Brunswick, Carteret, Currituck, Dare, Hyde, New Hanover, Onslow, Pender,
Red-cockaded woodpecker	Anson, Beaufort, Bertie, Bladen, Brunswick, Camden, Carteret, Chatham, Columbus, Craven, Cumberland, Currituck, Dare, Duplin, Edgecombe, Forsyth, Gates, Greene, Halifax, Harnett, Hertford, Hoke, Hyde, Johnston, Jones, Lee, Lenoir, Montgomery, Moore, Nash, New Hanover, Northampton, Onslow, Orange, Pamlico, Pender, Pitt, Richmond, Robeson, Sampson, Scotland, Tyrrell, Wake, Wayne, Wilson
Roseate tern	Carteret, Dare
Shortnose sturgeon	Anson, Bertie, Bladen, Brunswick, Camden, Carteret, Columbus, Currituck, Dare, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Richmond
Spruce-fir moss spider	Avery, Caldwell, Mitchell, Swain, Watauga, Yancey
Waccamaw silverside	Columbus
West Indian manatee	Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Pitt, Tyrrell, Washington
Wood stork	Brunswick, Columbus, New Hanover, Sampson

What's the Status of an NPDES Pesticide General Permit for Pesticide Discharges to Waters of North Carolina?

By Dr. Henry Wade, Environmental Programs Manager, NCDA&CS

North Carolina, other states, and EPA have been developing NPDES pesticide general permits in response to the 6th Circuit Court's 2009 decision, which found that discharges from pesticides into US waters were pollutants, and, therefore, will require a permit under the Clean Water Act.

On March 2, 2011, the US House of Representatives submitted a bill, HR 872, to amend the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Water Pollution Control Act (also known as the Clean Water Act) to clarify Congressional intent regarding the regulation of the use of pesticides in or near navigable waters. On March 31, 2011, HR 872 passed in the House. If the bill is approved by the Senate and signed by the President, it will create an exemption from a permit requirement to discharge from a point source (that is a discharge from a nozzle) a pesticide registered under FIFRA or the residue of such a pesticide resulting from its application to, over, or near navigable waters of the United States. Thus, North Carolina would not be required to issue a permit for pesticide applications to, over, or near NC waters.

On March 3, 2011, the EPA requested a time extension to allow more time for states to develop pesticide general permits for pesticide discharges into U.S. waters from April 9, 2011 to October 31, 2011. On March 28, 2011, the U.S. Court of Appeals for the Sixth Circuit granted EPA's request for an extension to allow sufficient time for EPA to engage in Endangered Species Act consultation, authorized states to finish developing their state permits, and permitting authorities to provide additional outreach to stakeholders on pesticide general permit requirements. The court's decision extends the deadline for when permits will be required to October 31, 2011. During this period, permits for pesticide applications will not be required under the Clean Water Act. Because of the uncertainty of the status of the permit, North Carolina has continued to work on finalizing its pesticide general permit in case the court decided to deny EPA's request for a time extension or FIFRA

and the Clean Water Act are not amended to exempt pesticide applications from a pesticide general permit requirement.

The North Carolina permit is being developed by the Division of Water Quality of the NC Department of Environment and Natural Resources, which held its only public hearing on March 21, 2011 in Greenville. If the permit goes into effect, it will automatically be approved for certain applications to or near surface water. However, if annual treatment thresholds are exceeded, additional requirements must be met to be in compliance with the permit.

The permit is required for pesticide applications to waters of the State when the pesticide application is to one of the following use patterns:

1. Mosquito and other public health/nuisance flying insect pest control
2. Aquatic weed and algae control (includes ditches and canals that contain water)
3. Aquatic nuisance animal control
4. Forest canopy pest control
5. Intrusive vegetation control

There will be annual treatment thresholds that will require additional actions by the entity if any are exceeded in order to be in compliance with the permit. The various thresholds that were in the public notice of the draft permit are as follows:

- Mosquitoes & other public health flying insect pest control – 15,000 acres treated with adulticides (multiple applications to the same area are added together)
- Aquatic weed and algae control – 1,000 acres in water & 200 linear miles at water's edge (count same treated area just once per year)
- Aquatic nuisance animal pest – 200 acres in water & 200 linear miles at water's edge (count same treated area just once per year)
- Forest canopy pest control – 10,000 acres (count same treated area just once per year)
- Intrusive vegetation control (rights-of-way) – 500 linear miles (count same treated area just once per year)

Any entity that makes a pesticide applica-

tion to the identified categories is automatically covered by the permit. Decision-makers who exceed treatment thresholds must:

1. submit a Notice of Intent
2. pay a \$100 annual fee
3. complete a pesticide discharge management plan
4. report adverse incidents
5. keep additional records

The following records must be kept by the entity that submits the Notice of Intent in order to be in compliance with the permit:

- Pesticide application – date, product name, total amount applied, etc.
- Pesticide discharge management plan
- A copy of adverse incident reports
- A copy of corrective action documentation
- A copy of the Notice of Intent
- A copy of the Certificate of Coverage

All applicators must do the following:

1. Minimize the discharge of pollutants resulting from the application of pesticides.
2. Apply pesticides at or below the highest rate allowed by the pesticide label.
3. Perform regular maintenance activities to reduce leaks, spills, or other unintended discharges of pesticides associated with the application of pesticides covered under this permit.
4. Maintain pesticide application equipment in proper operating condition by adhering to relevant manufacturer's conditions and industry practices, and by calibrating, cleaning, and repairing such equipment on a regular basis to ensure effective pesticide application and pest control.
5. Report by phone to NC Department of Environment and Natural Resources any adverse incident that may have resulted from your discharge within 24 hours of observing or being informed of the incident.
6. Submit a written report to NC Department of Environment and Natural Resources within 30 days of the adverse incident reported in #5.

Please see NPDES permit, page 6

EPA Warns Online Shoppers about Illegal, Harmful Pesticide Sales

EPA News Release dated 3/21/11

WASHINGTON – The U.S. Environmental Protection Agency (EPA) announced today that it has warned more than 2,800 customers across the United States about risks associated with a banned pesticide in an ant-control product they purchased online through fastpestcontrol.com. The product, Fast Ant Bait, contained mirex, a pesticide that was banned in 1978 because it can cause liver, skin, reproductive and nerve damage.

“Illegal pesticides are often much more toxic than approved pesticides,” said Steve Owens, assistant administrator for EPA’s Office of Chemical Safety and Pollution Prevention. “When EPA takes a pesticide off the market, it means that pesticide was not safe. Consumers should use only EPA-

registered pesticides and always follow the label directions to ensure their safety.”

EPA became aware of the product after the Washington State Department of Health reported that a woman became ill after using it in her home. In response, EPA identified and warned three online companies, 2Checkout.com Inc., CCNow, Inc. and eBay Inc. to cease processing orders for the product that was produced and mailed from China. The three companies cooperated, immediately ceased processing orders and consumers can no longer purchase products from fastpestcontrol.com, the original site that offered the product for sale. The companies also worked with EPA to provide sales information, which allowed the agency to contact customers directly about the dangers posed by the pesticide and proper dis-

posal methods.

The letter EPA sent to customers who bought the product provides detailed directions on how to safely clean up and dispose of the illegal product and what to do if they believe they were exposed or harmed. For more information on mirex or other pesticides, consumers can call the Agency for Toxic Substances and Disease Registry Information Center at 1-888-422-8737 or the National Pesticide Information Center (NPIC) at 1-800-858-7378.

To view a copy of the letter: http://www.epa.gov/region10/pdf/publications/notice_to_fastpestcontrol_customers_02_09_2011.pdf

Information on using pesticides safely: <http://www.epa.gov/pesticides/health/safely.htm>

The Loss of Temik Leaves Producers Wondering

Rhonda Garrison, Ag News Director, www.sfn.com

Bayer, the maker of Temik, announced recently they were going to discontinue production immediately in order to side-step a West Virginia lawsuit.

Kent Messick, Section Chief for Field Services for the North Carolina Department of Agriculture and Consumer Services-Agronomic Division says that growers are really surprised...and concerned:

“It did catch growers by surprise. They had seen the announcement some time ago that Bayer would be phasing out the production of Temik. But, then this recent decision by Bayer to stop production has sort of speeded up the process. There’s some spot shortages and such, particularly for cotton growers and others, it’s very difficult to find, and it’s significantly higher in cost per pound if you can find it.”

Messick says that this growing season could be an experiment in and of itself since no one was really prepared to find an alternative this soon:

“The alternative would be very different, primarily growers and companies are going to be looking at seed treatments as a substitute for Temik particularly for nematode control. While many of those show promise, there’s not as much extensive

research and field trials that growers feel extremely comfortable in that they know that these are going to take care of the



problem that Temik has given them very good control of for a very long time.”

If there is a crop that is really left standing on the curb with Temik no longer being available, it would have to be peanuts:

“We’ve had some calls from peanut growers concerned about what their alternatives were, and there’s probably been less work done on seed treatments for peanuts than there has been for soybeans and corn and some of the other commodity crops. So, they’re probably more concerned than say cotton growers and some of the other commodities are.”

Cotton growers, in particular, saw an added benefit to Temik use, and that was thrips control. Messick says they now will have to seek an alternative:

“One of the side benefits of use of Temik in cotton, in particular, was good thrip control for several weeks after plant emergence when cotton plants, in particular, are very susceptible to thrip damage. So, that’s been a benefit. So, the only substitute for that initially is most likely going to be some spray program.”

NPDES Permit from page 5

7. Take corrective action if there is a spill or leak of the pesticide or if too much pesticide is being applied.
8. If an adverse incident affecting a federally-listed threatened or endangered species or its designated critical habitat, that may have resulted from a discharge from your pesticide application, you must immediately notify by phone the National Marine Fisheries Service (NMFS) in the case of an anadromous or marine species, or the U.S. Fish and Wildlife Service (FWS) in the case of a terrestrial or freshwater species.

All applicators must keep the following records:

- a. A copy of any Adverse Incident Reports.
- b. Your rationale for any determination that reporting of an identified adverse incident is not required according to criteria stated in the permit.
- c. A copy of any corrective action documentation.

We want to hear from you! Send your suggestions for topics for future Pesticide Update articles. Send suggestions to Cam McDonald at e-mail address: cam.mcdonald@ncagr.gov

Fumigant from page 2

- Over 20 Good Agricultural Practices
- Site Specific Details
- Posting & Monitoring Procedures
- Personnel Data / Training Records
- Safety Procedures / PPE / Emergency Plans
- Post-Application Summary

FMPs can be completed by the grower, commercial applicator, crop consultant, or others, but the certified applicator in charge must verify for accuracy and sign. The essential information that is required to be in the FMP is listed on the product label. The plan must be available to handlers, enforcement personnel, and emergency response personnel. The supervising certified applicator and owner/

operator (if not the certified applicator) must keep the FMPs and Post-Application Summaries for 2 years. The applicator may use their own format for a FMP as long as it meets label requirements. As a convenience, EPA has developed FMP templates that are available at the following website: http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/ (Click on Fumigant Management Plans.)

The Future

Phase 2 fumigant mitigation is scheduled for 2012 implementation; revised labels are anticipated in late 2011*. Phase 2 measures will include:

- Buffers and Buffer Posting
- Buffer zone monitoring and/or pre-application notification of occupants in structures near buffer zone
- Restrictions near difficult to evacuate sites
- Registrant-provided training for applicators and community outreach programs.

*These requirements are already on products with active ingredients that were first registered in the past three years (iodomethane or dimethyl disulfide).

Buffer zones will be required for fumigant applications. Buffer zones are an area around the application block where bystanders must be excluded during the buffer zone period, except for people in transit (bicycles and motorized vehicles). The buffer zone period starts when a fumigant is first delivered to the soil and is in effect for 48 hours after the fumigant has stopped being delivered to the soil.

Buffer zones will be calculated using tables found on the fumigant label. EPA will give "credits" to encourage users to employ practices which reduce emissions (i.e. the use of virtually impermeable film tarps): credits will reduce buffer distances. Some credits will also be available for site conditions that reduce emissions (i.e. high organic or clay content).



DANGER PELIGRO



AREA UNDER FUMIGATION
FUMIGANT IN USE

START DATE/TIME: _____
END DATE/TIME: _____
DATE/TIME ENTRY PROHIBITION IS LIFTED: _____

PRODUCT: _____
CERTIFIED APPLICATOR CONTACT INFORMATION
NAME: _____
ADDRESS: _____
PHONE: (____) _____

DO NOT ENTER NO ENTRE

Fumigant Treated Area Sign



DO NOT ENTER/ NO ENTRE



FUMIGANT _____
PRODUCT _____
Fumigant BUFFER ZONE

Certified applicator
in charge of the fumigation: _____
Phone: _____

Fumigant Buffer Zone Sign

Posting the perimeter of the fumigant buffer zones will be required unless there is a physical barrier that prevents bystander access to the buffer zone. Buffer zone signs must be placed at all usual points of entry and along likely routes of approach from areas where people who are not under the land owner/operator's control may approach the buffer zone. The requirement to post the "treated area" will continue.

To ensure that the buffer zone is providing an adequate level of protective distance, the applicator will have the option of monitoring the perimeter of the buffer zone for detectable fumes or providing essential information to occupants of structures near buffer zones. Monitoring would be required 4 times a day (dawn, mid-day, dusk and at night) while the buffer zone is in effect. Sensory detection is acceptable for initial monitoring but detectable irritation would trigger the implementation of the emergency response plan. If the applicator does not want to monitor the buffer zone, information will be specified on the product label that must be provided 48 hours in advance of the application to individuals living or working within a certain distance that is linked to the size of the buffer zone. This information will help those individuals to discern potential exposure at an early phase and know the appropriate action that needs to be taken.

Phase 2 will place restrictions on applications that occur near "Difficult-to Evacuate Sites" (i.e. schools, hospitals, day cares, prisons etc). Fumigant applications will not be permitted within 1/8 mile of these sites if occupied during the 36-hour period following the application. The restricted area may be increased to 1/4 mile if the buffer zone is greater than 300 feet.

In conjunction with the release of Phase 2 risk mitigation measures, registrants will develop and disseminate training for certified applicators in charge of fumigations. Certified applicators will be required to receive registrant soil-fumigation training every three years.

Please see Fumigant , page 8

Fumigant from page 7

NOTE

The information in this article is not all inclusive. Applicators/handlers are always required to follow the product label to insure compliance; along with all applicable State and Federal Laws and resulting regulations.

Below are some frequently asked questions and answers that may assist applicators/handlers.

Q&A

1. What resources are available to applicators/handlers?

The Soil Fumigant Toolbox is an excellent resource that EPA has established at the following website: http://www.epa.gov/pesticides/registration/soil_fumigants/

The Soil Fumigant Toolbox contains fact sheets and presentations to help understand the new risk mitigation measures, safety information for handlers in English and Spanish, templates for fumigant management plans and additional sections on labels and Phase 2 measures that will be activated as information becomes available.

2. Where can someone get a respirator physical and fit test?

The North Carolina Agromedicine Institute is conducting a project entitled "Risk Mitigation Measures Cost Share Project. The project is designed to address the applicator's respiratory protection requirements when applying fumigant by providing medical exams, fit testing, training, and respirators at a reduced cost.

For more information contact Robin Tudor, Interim Director of the Agromedicine Institute @252-744-1045 or tutorr@ecu.edu

3. The Worker Protection Standard (WPS) has exemptions for posted treated areas; will the new fumigant labels have similar exemptions?

No. The new fumigant labels will require posting of all treated areas whether workers are present on the farm or not.

4. The FMP requires information regarding wind speed, inversion conditions, and air and air stagnation advisory; how is the best way to obtain this information?

A weather forecast from a reliable source such as the National Weather Service (<http://www.nws.noaa.gov>) for a location close to the fumigated field must be included in the Fumigant Management Plan. It is sufficient to attach a printed copy of a forecast (temperature & wind speed) for the day of application and the 48 hour interval following application. The actual weather that occurred during this period needs to be documented in the Post-Application Summary. According to State Climate Office of North Carolina, air stagnation advisories are not issued for our state.

5. Is the entry restricted period the same as restricted-entry interval (REI) found in the WPS?

No. The entry restricted period is not subject to the exemptions of the Worker Protection Standard.

6. In 2012, can someone using fumigants with 2010 labels avoid Phase 2 requirements i.e. buffer zones, posting, training?

The applicator must always follow the current label on the product being used. If the applicator has only product with 2010 labels, the Phase 2 requirements would not apply. The use of any new product with the Phase 2 requirements will trigger the need to implement Phase 2 measures.

7. How will growers find out about Phase 2 requirements?

The pesticide label is the ultimate source of information for pesticide users (see the answer to the previous question). In addition to EPA's Soil Fumigant Toolbox, information on soil fumigants can be found at the website of Structural Pest Control and Pesticides Division of NCDA&CS (<http://www.ncagr.gov/SPCAP/pesticides/enforcement-trends.htm#Fumigation>)

8. When Phase 2 is implemented, will separate training be required for each active ingredient or product?

Yes. Training is required for each product.

9. When is monitoring required?

In the event of sensory detection, the applicator has 2 options: 1) Operations must cease and all personnel must vacate the field until a monitoring device (2 samples taken 15 minutes apart) verifies that the fumigant levels have returned to acceptable levels for the resumption of work without a respirator. The handler collecting the samples would need to wear a respirator because the fumigant air concentration is not known initially. Or 2) All personnel remaining in the area can put on respirators and continue with the fumigation. However, respirators have limits in the degree of protection that is provided. A sample from a monitoring device is required to be collected every 2 hours to confirm that the fumigant air concentration has not exceeded the upper protection limits for the respirator that is being used.

10. What equipment is required for monitoring?

There are two types of devices that are very similar.

Dräger, a bellows type pump and Matheson-Kitagawa and Sensidyne, a syringe style pump. A special tube is required for each fumigant because the reactive materials are specific to the targeted chemical. Different tubes may be required to detect different concentration ranges of the same fumigant so the product label needs to be checked to obtain the range that covers the sensory irritation threshold and the upper respirator protection limits for that fumigant.

Please feel free to contact the Pesticide Section for additional information. (919)733-3556.

For additional information regarding medical evaluations and fit testing for respirator use click on the following link:

<http://www.hillas.com/safety/files/pdf/A012-013.pdf>

Use of company names, brand names or products appearing in this publication does not constitute endorsement or recommendation of the North Carolina Department of Agriculture and Consumer Services.

Pesticide Disposal Assistance Program

- Statewide hosting of collection events
- Special case onsite evaluation
- Household hazardous waste assistance



For a collection site near you go to:
www.ncagr.com/pdap
For pesticide disposal assistance call:

919-733-3556

North Carolina Department of Agriculture & Consumer Services Steve Troxler, Commissioner

North Carolina Pesticide Board Actions

At the August 2010 through March 2011 meetings of the North Carolina Pesticide Board, the following settlement agreements, including monetary penalties totaling \$35,600 were approved for alleged violations of the NC Pesticide Law of 1971. Consent to the terms of the settlement agreement does not constitute an admission of guilt to any alleged violation.

John A. Tennant, Supply, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. Tennant agreed to pay a monetary penalty of \$500.00.

George G. Wooten, III, Chadbourn, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling. Mr. Wooten agreed to pay a monetary penalty of \$500.00.

William K. Tankard, Belhaven, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and acting in the capacity of a pesticide dealer without the proper license. Mr. Tankard agreed to pay a monetary penalty of \$750.00.

Jeff M. Cumbie, Fayetteville, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. Cumbie agreed to pay a monetary penalty of \$750.00.

William J. Brinkley, Dover, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling, aerially applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect, and depositing a pesticide within 100 feet of any residence. Mr. Brinkley agreed to pay a monetary penalty of \$1,500.00.

Crawford Craig, Greenville, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling. Mr. Craig agreed to pay a monetary penalty of \$600.00.

Joseph S. Kosek, Raleigh, NC, for alleged violation(s) of engaging in the business of pesticide applicator without a license. Mr. Kosek agreed to pay a monetary penalty of \$700.00.

George C. Griffin, III, Williamston, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and of providing or making available a restricted use pesticide to a non-certified applicator. Mr. Griffin agreed to pay a monetary penalty of \$750.00.

Daniel A. Lancaster, Pikeville, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling, aerially applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect, depositing a pesticide within 25 feet of a road and within 100 feet of a residence. Mr. Lancaster agreed to pay a monetary penalty of \$900.00.

James W. Barnes, IV, Corolla, NC, for alleged violation(s) of engaging in the business of pesticide applicator without a license. Mr. Barnes agreed to pay a monetary penalty of \$750.00.

Randy T. Gardner, Jamesville, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and providing or making available a restricted use pesticide to a non-certified applicator. Mr. Gardner agreed to pay a monetary penalty of \$300.00.

Burges Urquhart, IV, Lewiston, NC, for alleged violation(s) of

using a pesticide in a manner inconsistent with its labeling and for alleged violation(s) of the Worker Protection Standard. Mr. Urquhart agreed to pay a monetary penalty of \$950.00.

Jeffrey A. Foss, Wilmington, NC, for alleged violation(s) of engaging in the business of pesticide applicator without a license. Mr. Foss agreed to pay a monetary penalty of \$600.00.

Chris G. Futral, Wallace, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and failure to keep and maintain required application records. Mr. Futral agreed to pay a monetary penalty of \$1,200.00.

Kendall Huffman, Wallace, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and applying a restricted use pesticide without the proper license or certification. Mr. Huffman agreed to pay a monetary penalty of \$1,200.00.

Randall N. Whaley, Pink Hill, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and providing or making available a restricted use pesticide to a non-certified applicator. Mr. Whaley agreed to pay a monetary penalty of \$1,500.00.

Jonathan M. Richardson, Hope Mills, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and failure to keep and maintain required application records. Mr. Richardson agreed to pay a monetary penalty of \$800.00.

Lynton B. Wilson, Hope Mills, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling, applying a restricted use pesticide without the proper license or certification, and failure to keep and maintain required application records. Mr. Wilson agreed to pay a monetary penalty of \$900.00.

Raul Renteria, Chocowinity, NC, for alleged violation(s) of engaging in the business of pesticide applicator without a license. Mr. Renteria agreed to pay a monetary penalty of \$800.00.

Michael S. Pigeon, Indian Trail, NC, for alleged violation(s) of engaging in the business of pesticide applicator without a license. Mr. Pigeon agreed to pay a monetary penalty of \$500.00.

Dennis Winzeler, Kelly, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and for alleged violation(s) of the Worker Protection Standard. Mr. Winzeler agreed to pay a monetary penalty of \$900.00.

Travis A. Leonard, Lenoir, NC, for alleged violation(s) of acting in the capacity of a pesticide dealer without the proper license. Mr. Leonard agreed to pay a monetary penalty of \$900.00.

Phillip A. McCarty, Farmville, NC, for alleged violation(s) of acting in the capacity of a pesticide dealer without the proper license. Mr. McCarty agreed to pay a monetary penalty of \$600.00.

Sheldon M. Rudisill, Vale, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. Rudisill agreed to pay a monetary penalty of \$200.00.

Kenny McKee, Meridian, MS, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. McKee agreed to pay a monetary penalty of \$1,000.00.

Please see Pesticide Board, page 10

Pesticide Board from page 9

Steven N. Ruark, Pantego, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling, aerially applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. Ruark agreed to pay a monetary penalty of \$900.00.

Raymond White, West Henrietta, NY, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling. Mr. White agreed to pay a monetary penalty of \$900.00.

Charles M. Rooks, Burgaw, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and providing or making available a restricted use pesticide to a non-certified applicator. Mr. Rooks agreed to pay a monetary penalty of \$800.00.

David J. Hinnant, Lucama, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect. Mr. Hinnant agreed to pay a monetary penalty of \$1,000.00.

Mark A. Garrett, Roxboro, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and for alleged violation(s) of the Worker Protection Standard. Mr. Garrett agreed to pay a monetary penalty of \$900.00.

Anthony Givens, Charlotte, NC, for alleged violation(s) of engaging in the business of pesticide applicator without a license. Mr. Givens agreed to pay a monetary penalty of \$500.00.

Thomas D. Smith, Mebane, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and for alleged violation(s) of the Worker Protection Standard. Mr. Smith agreed to pay a monetary penalty of \$900.00.

David Dawson, Kinston, NC, for alleged violation(s) of providing or making available a restricted use pesticide to a non-certified applicator. Mr. Dawson agreed to pay a monetary penalty of \$600.00.

Ron W. Richmond, Leasburg, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and for alleged violation(s) of the Worker Protection Standard. Mr. Richmond agreed to pay a monetary penalty of \$950.00.

Ray O. Betz, Charlotte, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling. Mr. Betz agreed to pay a monetary penalty of \$1,000.00.

Ronald T. Cook, Maumee, OH, for alleged violation(s) of distributing, selling or offering for sale a pesticide which is adulterated or misbranded. Mr. Cook agreed to pay a monetary penalty of \$600.00.

Ronald T. Cook, Maumee, OH, for alleged violation(s) of distributing, selling or offering for sale a pesticide which is adulterated or misbranded. Mr. Cook agreed to pay a monetary penalty of \$600.00. (second violation)

Flor B. Garcia, Rockingham, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and of engaging in the business of pesticide applicator without the proper license. Ms. Garcia agreed to pay a monetary penalty

of \$1,500.00.

David P. Hruspa, Roper, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling, aerially applying a pesticide(s) under such conditions that drift from pesticide(s) particles or vapors results in adverse effect and depositing a pesticide within 25 feet of a road. Mr. Hruspa agreed to pay a monetary penalty of \$1,400.00.

John W. Ingle, II, Conover, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and for alleged violation(s) of record keeping requirements. Mr. Ingle agreed to pay a monetary penalty of \$1,500.00.

Jeff Fitcher, Myrtle Beach, SC, for alleged violation(s) of acting in the capacity of a pesticide dealer without the proper license. Mr. Fitcher agreed to pay a monetary penalty of \$600.00.

Reeves M. Black, Crouse, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and applying a restricted use pesticide without the proper license or certification. Mr. Black agreed to pay a monetary penalty of \$400.00.

Alex C. Morrison, Jr., Lillington, NC, for alleged violation(s) of using a pesticide in a manner inconsistent with its labeling and for alleged violation(s) of the Worker Protection Standard. Mr. Morrison agreed to pay a monetary penalty of \$500.00.

For More Information

Pesticide schools and materials for certification and recertification:

CONTACT: Dr. Wayne Buhler
Dept. of Horticultural Science
Box 7609, NCSU, Raleigh, NC 27695
Phone (919) 515-3113

Certification, licensing, and recertification credits or testing:

CONTACT: Pesticide Section, NCDA&CS
1090 Mail Service Center, Raleigh, NC 27699-1090.
Phone (919) 733-3556

Private applicator recertification classes:

CONTACT: Pesticide Section Homepage www.ncagr.gov/SPCAP/pesticides/

Commercial applicator and dealer recertification classes:

CONTACT: Pesticide Section Homepage www.ncagr.gov/SPCAP/pesticides/

Pesticide container recycling:

CONTACT: Dr. Henry Wade, Pesticide Section, NCDA&CS, 1090 Mail Service Center, Raleigh, NC 27699-1090
Phone (919) 733-3556

Pesticide waste disposal:

CONTACT: Derrick Bell, Pesticide Section, NCDA&CS, 1090 Mail Service Center, Raleigh, NC 27699-1090
Phone (919) 733-3556.

Send your suggestions for topics for future Pesticide Update articles to Cam McDonald at e-mail address: cam.mcdonald@ncagr.gov

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Pesticide Update is a biannual report of the Pesticide Section.



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