

Fumigation Management Plan

Version 5, Phosphine and ProFume®

Master Fumigation Management Plan (FMP)

A Fumigation Management Plan (FMP) is an organized, written description of the required steps involved to help ensure a safe, legal, and effective fumigation. It will also assist you and others in complying with pesticide product label requirements. Before any fumigation begins, carefully read and review the label and the Applicator's Manual. This information must also be given to the appropriate company officials (supervisors, foreman, safety officer) in charge of the site. Preparation is the key to any successful fumigation. The success of the fumigation is not only dependent on your ability to do your job but also upon carefully following all rules, regulations, and procedures required by governmental agencies. **THE USE OF METAL PHOSPHIDE FUMIGANTS IS STRICTLY PROHIBITED ON SINGLE AND MULTI-FAMILY RESIDENTIAL PROPERTIES, NURSING HOMES, SCHOOLS (EXCEPT ATHLETIC FIELDS), DAYCARE FACILITIES AND HOSPITALS.**

Preliminary Planning & Preparation

A Fumigation Management Plan is required **TO BE COMPLETED PRIOR TO, AND** for each type of fumigation application. If you perform multiple or daily fumigations of the same type, copies of pages 6 & 7 can be used for efficacy and worker/public safety monitoring, and filed with the "Master" FMP (Pages 1-5). Monitoring must be performed periodically, with a minimum of at least once per day. Some situations may require more frequent monitoring (or even continuous monitoring) depending upon the potential for exposure. **Efficacy monitoring is mandatory, and must be documented (Metal Phosphides only).** If you have any questions re: FMP's, please contact Cardinal Professional Products at 1-800-548-2223.

What is the purpose of the fumigation?

- Elimination of insect infestation
- Elimination of vertebrate pests
- Plant pest quarantine
- Other: (explain)

For ProFume, specific target pest(s):

High Dose	Low Dose	User Defined
-----------	----------	--------------

What type of fumigation is it?

- Space: tarp, mill, warehouse, food plant or other
- Vehicle: railcar, truck trailer, van, container
- Commodity: raw agricultural or processed foods or non-food
- Type of Storage: vertical silo, farm storage, flat storage, etc.
- Vessel: ship or barge; Read U.S. Coast Guard Regulation 46CFR 147A
- Rodent Burrow
- Other, Describe:

Commodity to be fumigated:

Area to be fumigated:

Has area been previously fumigated? Is there an existing FMP from a previous fumigation?

- No, has never been fumigated before, or when last treated, a FMP was not required
- Yes, was previously fumigated, and the FMP has been reviewed

Describe fumigation enclosure construction materials:

Construction material:
 Design of structure:
 Approximate age of structure:
 Fire or combustibility issues
 Connected structures
 Additional information:

Previous treatment history:

Fumigation Management Plan

Version 5, Phosphine and ProFume®

Diagram of Fumigation Enclosure

Fully describe the fumigation structure, and draw a diagram, including adjacent buildings and critical areas nearby. Denote features, hazards, structural characteristics about the structure to be fumigated. **Check, mark and prepare the points of fumigation application locations if the job requires entry into the structure for fumigation. Apply ProFume® from outside of the structure.**

Diagram



Accessibility of utility service connections	Show on Diagram	Location of Command Center (ProFume®)	Show on Diagram
Emergency shut-off stations for electricity, water and gas	Show on Diagram	Location of ProFume® cylinders	Show on Diagram
Nearest telephone or other means of communication	Show on Diagram	Location of introduction/monitoring lines (ProFume®)	Show on Diagram
Application points if the structure/enclosure is entered for application	Show on Diagram		
Off-site meeting area in case of emergency	Show on Diagram, or note here for description of location:		

Fumigation Management Plan

Version 5, Phosphine and ProFume®

Persons who routinely enter area to be fumigated
(employees, visitors, customers, etc.)

List of people:	Pesticide Notification
	CCR Title 3, Division 6, Sect. 6618
	Date Notified: _____
	Oral Notification <u> </u> yes <u> </u> no
	Written Notification <u> </u> yes <u> </u> no

Name and phone numbers of company officials:

Names	Phone #'s (day & night)

Emergency phone numbers of local health, fire, police, hospital, etc.:

	Agencies Notified: (Local Requirements)				
	Police:	Date:	Time:	Other:	
	Fire:	Date:	Time:	Date:	Time:

Emergency Response Plan:

Reviewed Emergency Response Plan with employees

Procedures developed for local authorities to notify nearby residents in case of emergency

Procedures developed to notify nearby residents in case of an emergency
Description of procedures:

Length of time for **entire fumigation period**, including exposure, aeration, and clean up time

_____ Hours of Fumigant Exposure Period (minimum)
 _____ Hours of Aeration
 _____ Hours of Clean Up Time
 _____ Total Hours

Special aeration requirements

Cleanup requirements, including dry or wet-deactivation methods, equipment, and personnel needs, if necessary

If Fumigating a Truck Trailer (piggyback), rail car or other:
(For In-Transit Fumigation, excluding ProFume®)

Verify that training has been offered to receiving company
 Verify that written notice has been given to receiver along with the Applicators Manual

Review FMP, any prior FMP, Applicator's Manual and MSDS with company officials and appropriate employees
 Check which Applicator's Manual reviewed with employees:

<input type="checkbox"/> Phostoxin pellets & tablets	EPA Reg. No. 72959-4 Tablets, 72959-5 Pellets
<input type="checkbox"/> Phostoxin Pre-pacs	EPA Reg. No. 72959-8 Prepac Rope, 72959-9 Prepac Tablets
<input type="checkbox"/> Fumi-Cels/Fumi-Strips	EPA Reg. No. 72959-6
<input type="checkbox"/> Magtoxin Pre-pac Spot Fumigant	EPA Reg. No. 72959-7
<input type="checkbox"/> Detia Fumex	EPA Reg. No. 72959-10
<input type="checkbox"/> ECO2FUME®	EPA Reg. No. 68387-7
<input type="checkbox"/> VAPORPH3OS®	EPA Reg. No. 68387-8
<input type="checkbox"/> ProFume®	EPA Reg. No. 62719-376

Fumigation Management Plan

Version 5, Phosphine and ProFume®

Application:

Product Used:

<input type="checkbox"/> Phostoxin pellets & tablets	EPA Reg. No. 72959-4 Tablets, 72959-5 Pellets
<input type="checkbox"/> Phostoxin Pre-pacs	EPA Reg. No. 72959-8 Prepac Rope, 72959-9 Prepac Tablets
<input type="checkbox"/> Fumi-Cels/Fumi-Strips	EPA Reg. No. 72959-6
<input type="checkbox"/> Magtoxin Pre-pac Spot Fumigant	EPA Reg. No. 72959-7
<input type="checkbox"/> Detia Fumex	EPA Reg. No. 72959-10
<input type="checkbox"/> ECO2FUME®	EPA Reg. No. 68387-7
<input type="checkbox"/> VAPORPH3OS®	EPA Reg. No. 68387-8
<input type="checkbox"/> ProFume®	EPA Reg. No. 62719-376

Rate of Application

Introduction line specifications (ProFume®)

Commodity Temperature or Ambient Temperature

Humidity or Commodity Moisture

Wind Speed

Volume of the Structure (cubic footage)

Rate:	
Specs:	Fan Specs: (for ProFume®)
Temperature:	
Humidity or Moisture:	ProFume® cylinder temp or pressure:
Wind Speed:	
Volume:	

Sealing Procedure:

NOTE: If flooring upon where commodity rests is of porous material (wood, or other porous material) it must be repositioned onto poly prior to covering for fumigation (metal phosphides only)

List sealing procedures and methods: (If building or structure has been treated before, review previous FMP)
--

Fumiguide Software Program utilized

<input type="checkbox"/> Title of file: _____

Check for obvious or hidden leakage points that may allow for passage of fumigant from the fumigation enclosure to the exterior or to occupied structures (e.g., conduit, ducts, vents, etc.)

Check with Facility Manager; Mark on Diagram, Pg. 2

Name of Facility Manager: _____

Turn off all electrical lights and non-essential motors in the fumigation enclosure

<input type="checkbox"/> Notes: _____

Warning Signs posted at all entries and at least each side of the fumigation enclosure

Minimum Exposure Period:

Warning signs with EPA Reg. No., protected from weather
Warning signs posted at each entry
Minimum Exposure Period:

Other Tasks:

<input type="checkbox"/> Label and MSDS available
<input type="checkbox"/> Emergency Response Plan reviewed
<input type="checkbox"/> Documented training of all applicators and handlers
<input type="checkbox"/> Minimum of two applicators (if entering structure)
<input type="checkbox"/> Confined Space Entry Compliance
<input type="checkbox"/> All Safety Equipment Available: List the equipment:

Personnel:

<input type="checkbox"/> Confirm in writing that all personnel in and around the structure and/or area to be fumigated have been notified prior to application of the fumigant. Use a checklist showing that each employee has received notification and attach to FMP.
--

Fumigation Management Plan

Version 5, Phosphine and ProFume®

Personnel Continued:

*If containers are opened inside the structure to be fumigated, air monitoring must be conducted to ensure worker's exposure to phosphine gas does not exceed the TWA of 0.3 ppm, or the fifteen minute STEL of 15 ppm

Instruct all fumigation personnel to read the Applicator's Manual concerning the hazards that may be encountered, the selection of personal protective equipment (PPE), including detection equipment

Confirm that all personnel are aware of and know how to proceed in case of an emergency response reporting

Instruct all personnel on how to report any accident and/or incidents related to fumigant exposure. Provide a telephone number for emergency response reporting

Name of Responsible Person: _____ Phone Number: _____

Instruct all personnel to report to proper authorities any theft of fumigant and/or equipment related to fumigation

Establish a meeting area (off-site) for all personnel in case of an emergency, and mark on Diagram or list the location here:

Only persons directly involved in the fumigation may enter the area under fumigation, unless it has been determined that phosphine concentrations are at or below 0.3 ppm, or ProFume® at or below 1.0 ppm. It is recommended that you use real-time monitoring devices, such as the Draeger Pac III, microPac, or similar phosphine monitors. For ProFume®, use the Interscan or Spectros IR detector.

Description of Monitoring Equipment:
(Describe equipment used and any limitations)

Special Notes:

RESPIRATORY PROTECTION MUST BE AVAILABLE FOR ALL APPLICATIONS, INCLUDING APPLICATIONS FROM OUTSIDE THE AREA TO BE FUMIGATED. IF APPLICATION IS TO BE CONDUCTED FROM WITHIN THE STRUCTURE, MONITORING FOR PERMISSIBLE LEVELS MUST CONDUCTED AND RECORDED. (Metal Phosphides)

Fumigation Management Plan Prepared By:
Licensed Applicator: (For application)
Company:
Date:
Phone Number:

License #:

For monitoring fumigations, use pages 6 and 7 for individual or daily applications and attach or keep in a file with the Master FMP (Pages 1-5)

Fumigation Management Plan

Version 5, Phosphine and ProFume®

Fumigation Monitoring: Efficacy and Worker/Public Safety

For multiple fumigation applications, Make copies of Pages 6 & 7 and attach to the Master FMP (Pages 1-5). Worker exposure and aeration monitoring must be performed for every application, or at least on a daily basis and documented. Each fumigation may have different monitoring requirements. Efficacy monitoring is required for metal phosphide fumigants.

Post Application: Application & Efficacy Monitoring

Monitoring Log: (During Application and Exposure Period)

Monitoring: Monitoring is necessary for efficacy

Monitor periodically during the exposure period to assure gas concentrations are maintained for efficacious control

Note: Efficacy monitoring is mandatory, readings must be documented (metal phosphides only)

Description of Monitoring Plan and Monitoring Equipment Used:

Application Date:	Monitor Concentrations During Application:			
Application Time:	Time:	Reading:	Time:	Reading:

Efficacy Monitoring	Readings (ppm)
Monitoring Date:	
Monitoring Time:	
Location in structure:	

Description of Monitoring Plan and Monitoring Equipment Used:

Efficacy Monitoring	Readings (ppm)
Monitoring Date:	
Monitoring Time:	
Location in structure:	

Description of Monitoring Plan and Monitoring Equipment Used:

Efficacy Monitoring	Readings (ppm)
Monitoring Date:	
Monitoring Time:	
Location in structure:	

Description of Monitoring Plan and Monitoring Equipment Used:

Efficacy Monitoring	Readings (ppm)
Monitoring Date:	
Monitoring Time:	
Location in structure:	

Description of Monitoring Plan and Monitoring Equipment Used:

Efficacy Monitoring	Readings (ppm)
Monitoring Date:	
Monitoring Time:	
Location in structure:	

Description of Monitoring Plan and Monitoring Equipment Used:

If re-entry is necessary before aeration commences, respiratory protection must be worn, or remote monitoring must be used before entry to the fumigation enclosure. Phosphine readings must be at or below 0.3 ppm (the TLV/PEL for phosphine), or below 1.0 ppm for ProFume®

Post Application: Worker & Public Safety

Watchmen provided when structure cannot be secured; Watchmen have received training

Monitoring Log: Monitoring of phosphine or ProFume concentrations must be conducted in areas to prevent excessive exposure and to determine where exposure may occur. Document where monitoring will occur. Show on Diagram on Page 2.

Document even if zero readings

Detection Equipment Used:

Worker & Public Safety Monitoring Log:

Worker & Public Safety Monitoring	Readings (ppm)
Date:	
Time:	
Location:	

Detection Equipment Used:

Worker & Public Safety Monitoring	Readings (ppm)
Date:	
Time:	
Location:	

If levels above 0.3 ppm (phosphine) or 1.0 ppm ProFume®, corrective actions must be taken:

List corrective actions:

Note: Worker exposure monitoring is mandatory

Note: Only workers related to fumigation can re-enter fumigation area during the exposure period unless it has been determined that gas concentrations are at or below 0.3 ppm (phosphine), 1.0 ppm (ProFume®)

Worker & Public Safety Monitoring	Readings (ppm)
Date:	
Time:	
Location:	

