

FUMIGATION MANAGEMENT PLAN

Your guide to developing a comprehensive Fumigation Management Plan (FMP)

This document is intended to guide its user by asking specific questions in developing the final product. This document should be considered a guide in developing your site specific FMP and not the all-inclusive final version. Each fumigation should be accompanied by a new or updated plan prior to application and retain for a minimum of 2 years following the date of origination.

Date of Origination: ____ / ____ / ____ By: _____

COMPANY INFORMATION SECTION

EMERGENCY CONTACT SECTION

Company Name		Police	
Address		Fire	
City, State, Zip		Hospital (Nearest)	
Company Phone		Hazmat	
Company Fax		Poison Control	

PRIMARY CONTACT INFORMATION

Fumigator in Charge		License #	
Day Time Phone		Expiration Date	
Night Time Phone		Mobile Phone	
Pager		Home	
Site Manager		Office Phone	
Mobile Phone		Pager / Home	
Other Manager		Mobile Phone	
Security Personnel		Mobile Phone	

FUMIGANT INFORMATION

Fumigant Name		Manufacturer	
EPA Reg #		Lot #	
Dosage Rate		Initial Amt. Used	Total Amt. Used
Label/MSDS Attached?	Y	N	Label Reviewed?
			Y N

FUMIGATION ITINERARY

Begin Date				End Date								TIME		
M	T	W	T	F	S	S	M	T	W	T	F	S	S	
														Begin
														End

ENVIRONMENTAL CONDITIONS

Temperature In/Out	/	Relative Humidity	
Wind Direction		Wind Speed	

FUMIGATION CATEGORIZATION

Space / Structural	Pages 3, 7	Vertical / Flat Storage	Pages 4, 7
Railcar / Ship / Barge	Pages 5, 7	Tarp / Spot	Pages 5, 7
General Checklist	Page 2	Notice of Fumigation	Page 8
Sign IN / OUT Sheet	Page 9		

INITIAL PREPARATION AND PLANNING GENERAL • PAGE 1

A LIST OF GENERAL QUESTIONS AND RECOMMENDATIONS:

- WHAT IS THE PURPOSE OF THE FUMIGATION?
- WHAT TYPE OF FUMIGATION IS IT? SPACE, TARP, WAREHOUSE, FOOD PLANT, RAILCAR, COMMODITY, VESSEL (READ COAST GUARD REGULATION 46CFR 147A), ETC
- STRUCTURE AND COMMODITY FAMILIARITY.
 - GENERAL LAYOUT, CONSTRUCTION, HAZARDS, CONNECTING STRUCTURES (ABOVE AND BELOW GROUND),
 - ESTABLISH PERSONNEL ACCOUNTABILITY LOG (SIGN-IN / SIGN-OUT) RELATIVE TO AREA TO BE FUMIGATED.
 - PREVIOUS TREATMENT HISTORY (LIST IN DETAIL)
 - NEAREST EMERGENCY COMMUNICATIO DEVICE, DENOTE ON MAP.
- HAVE YOU REVIEWED THE LABEL AND APPLICATOR'S MANUAL?
- WHAT ARE YOUR FACTORS FOR DETERMINING EXPOSURE TIME?
 - PRODUCT USED (PELLETS, TABLETS, MAGNESIUM, CYLINDERIZED PH₃)
 - DOWN TIME
 - AERATION CONSTRAINTS
 - CLEAN-UP REQUIREMENTS
 - TEMPERATURE
 - LABEL RECOMMENDATIONS
 - HUMIDITY
 - HISTORICAL FUMIGATION DATA
- HAVE YOU NOTIFIED ALL PERSONNEL IN WRITING OF FUMIGATION?
- HAVE YOU SECURED STRUCTURE TO PREVENT UNWANTED ENTRY. SECONDARY LOCKS ON STRUCTURES WHERE UNAUTHORIZED PERSONNEL MAY HAVE ADDITIONAL KEYS?

- HAVE YOU COMMUNICATED THE EMERGENCY ACTION PLAN?
- HAVE YOU ESTABLISHED A MONITORING PLAN WHICH LIMITS EXPOSURE?
- DOCUMENT ALL READINGS EVEN IF NO LEVELS ARE FOUND.
- CONFIRM LOCAL AUTHORITIES (POLICE AND FIRE) HAVE BEEN NOTIFIED IN ACCORDANCE WITH LABEL AND OR LOCAL REGULATIONS.
- IS THE RECIEVER OF IN-TRANSIT FUMIGATED VEHICLE PROPERLY TRAINED IN ACCORDANCE WITH SECTION 12 OF THE APPLICATOR MANUAL?
- IS THERE A SEALING PLAN IN PLACE THAT WILL CONTAIN THE FUMIGANT IN SUFFICIENT ENOUGH QUANTITY TO SUCCESSFULLY IRRADICATE TARGETED PEST ?
- REVIEW PREVIOUS FMP FOR SEALING SPECIFICATIONS.
- IS EVERY POSSIBLE ENTRANCE PLACARDED WITH THE CORRECT PLACARDS?
- WHEN ENTERING A FUMIGATED STRUCTURE OR PREPARING FOR RELEASE OF FUMIGANT IN A TARGETED STRUCTURE ALWAYS WORK IN PAIRS OR TEAMS.
- IS IT POSSIBLE TO APPLY THE FUMIGANT FROM OUTSIDE? PREFERRED IF AT ALL POSSIBLE.
- IF STRUCTURE CANNOT BE SECURED, WILL YOU PROVIDE A WATCHMAN OR SECURITY?
- CONSIDER TEMPERATURE DIFFERENTIALS WHEN AERATING. DRAMATIC COOLING OR HEATING OF A STRUCTURE MAY HAVE ADVERSE CONDITIONS ON THE COMMODITY, STRUCTURE OR EQUIPMENT.
- DOCUMENT LEVELS IN ADJOINING STRUCTURES AND PERIPHREAL AREAS DURING AERATION.
- ONLY REMOVE PLACARDS WHEN STRUCTURE HAS BEEN PROPERLY DOCUMENTED CLEAR AND ALL BINS, TUNNELS, OFFICES, BATHROOMS, CLOSETS, CRAWL SPACES AND INTERNAL CONFINED SPACES HAVE ALSO BEEN DEEMED CLEAR BY PROPERLY CALIBRATED ELECTRONIC CLEARANCE DEVICES OR BY COLORMETRIC TUBES NOT OUT OF EXPIRATION.

DESCRIPTION

Describe the site			
Volume(s) of structure (s)			
List any structural concerns			
List PPE required			
List any other requirements			
Construction material		Tightly / Loosely Constructed?	
Free-standing / Connected		Connected building vacated?	

If connected building is not vacated, list safety precautions taken, document readings, describe action plan if TWA or STEL is achieved during fumigation.

Complete the following:

Y N Attach a site drawing, diagram or images (digital or other) that identify structures involved.

Y N Make a site specific action plan for safely and effectively sealing the structure, listing materials, equipment, personnel, etc involved in the process. Also include equipment that should be opened up, closed, or locked out for the fumigation process.

Y N Develop a safe application plan. List all fumigant used for retrieval purposes, personnel involved and ensure all inhabitants have been evacuated and accounted for (including vehicles left in parking lots) by using a sign-in/out sheet, bullhorn, public address system, etc.

Y N Describe security plan during allotted exposure time (security, police, site personnel, etc). Provide specific safety and emergency instructions to follow should any problems arise.

Y N Describe re-entry plan and aeration phase (personnel, date and time, bystander exposure prevention, etc)

Y N Develop checklist of areas to monitor prior to unrestricted re-entry of personnel. Document readings and times, paying special attention to confined spaces, isolated areas, bulk packaged materials, etc.

Y N Re-entry plan includes process of safely removing and disposing of spent fumigation materials (see applicator's manual for product specific disposal instructions). If cylinderized phosphine is used ensure caps area on tight, bonnets secure and cylinders are properly prepared for return shipment.

Accompanying Monitoring Data on Page 6

VERTICAL (BIN, SILO, ETC) / FLAT STORAGE FUMIGATION • PAGE 3

DESCRIPTION

Describe the site			
Volume(s) of structure (s)			
List any structural concerns			
List PPE required			
List any other requirements			
Construction material		Tightly / Loosely Constructed?	
Free-standing / Connected		Connected structure(s) vacated?	

Y N Attach a site drawing, diagram or images (digital or other) that identify structures involved. Include information like height, ladder or lift conditions, internal ladder, etc.

Y N Add to diagram a list of transfer equipment to be locked out prior to sealing conveyors, spouting, etc.

Y N Prepare a sealing plan. Include specific instructions like sealed or open eaves, flat or angled roof, appropriate fall protection, plastic for tarping commodity, mass coned up/down, other sealing concerns.

Y N Is entry into the structure required for fumigation?

Y N If entry is required, fill out site required paperwork and document readings prior to entry. Continue to monitor levels while inside structure.

Y N Documentation of commodity type, condition, moisture %, how long has it been in storage, has it been partially unloaded, etc. (bridged, wet or moldy grain is very hazardous).

Y N If facility is in operation during exposure period, describe monitoring plan to ensure workers and by-standers are not exposed.

Y N Describe re-entry plan if applicable. Record confined space readings prior to entry and throughout removal process of any internal sealing materials.

Accompanying Monitoring Data on Page 6

DESCRIPTION

Describe the vessel	
Volume(s) of structure (s)	
List any structural concerns	
List PPE required	
List any other requirements	

Attach all documentation associated with vessel (i.e. suitability inspection, captain's meeting, government documentation for USDA, Port Authority, etc for ships).

Y N Schedule and hold meeting with ship Captain and pertinent crew members to instruct safety procedures, exposure times and aeration instructions.

Y N Has a suitability test been performed by certified inspector? Supply document during pre-fumigation meeting.

Y N Attach a site drawing, diagram or images (digital or other) that identify vessels involved.

Y N Prepare a sealing plan. Identify areas that must be sealed. List materials required, processes and personnel etc.

Y N Documentation of commodity type, condition, moisture %, how long has it been in storage, has it been partially unloaded, etc. (bridged, wet or moldy grain is very hazardous).

Y N Supply monitoring equipment, instructions on use and action plan if elevated levels are detected during voyage for ship fumigations.

Y N Have you supplied an emergency action plan complete with all contact information.

Y N Have you supplied aeration instructions.

Accompanying Monitoring Data on Page 6

TARP / SPOT FUMIGATION • PAGE 5

DESCRIPTION

Describe the tarp / equipment to be fumigated	Two tarps of popcorn bulk bags and bagged seed.
Volume(s) of tarp(s) and or equipment	
List any structural concerns	Structure has damage from fire in other side of building. Limited power sources, but sufficient.
List PPE required	Safety Glasses
List any other requirements	Must sign in/out at scale office

Y N Attach a site drawing, diagram or images (digital or other) that identify structures involved.

Y N If facility is in operation during exposure period, describe monitoring plan to ensure workers and by-standers are not exposed.

Y N Add to diagram a list of transfer equipment to be locked out prior to sealing conveyors, spouting, etc.

Y N Describe security plan during allotted exposure time (security, police, site personnel, etc). Provide specific safety and emergency instructions to follow should any problems arise.

Y N If spot fumigation is performed in structure, ensure all personnel is accounted for and evacuated prior to introduction by using a sign-in/out sheet.

Y N Prepare a sealing plan. Identify areas that must be sealed. List materials required and processes, personnel etc.

Y N Supply emergency action plan and contact information.

Accompanying Monitoring Data on Page 6

MONITORING DATA, AERATION AND RE-ENTRY • PAGE 6

MONITORING READINGS IN PPM

LOCATION vs TIME (CONCENTRATION)															

Y N Document final clearance readings and corresponding locations. Pay special attention to

Offices, Breakrooms, Bathrooms, Basements, Closets, Confined Spaces (instruct site to add fumigant used to list of gases to monitor for in confined spaces), Crawl Spaces, Closets, Areas containing large amounts of static material, etc.

FINAL CLEARANCE READINGS vs LOCATION

LOCATION vs TIME (CONCENTRATION)																			

Y N Verify monitoring equipment is within expiration date or within parameters for calibration. Document type of detection equipment and calibration dates.

Type of detection equipment	
Calibration Date:	

Y N Document time and date structure is clear for re-entry or commodity is sufficiently aerated and ready for transfer or use.

Signature of Site Representative: _____ Date: _____

Signature of Fumigator in Charge: _____ Date: _____

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OFFICIAL NOTICE OF FUMIGATION

_____ HAS PLANNED A FUMIGATION AT THE

FOLLOWING ADDRESS: _____

TO BE PERFORMED ON: _____

FUMIGANT(S) BEING USED: _____

DATES OF APPLICATION: _____ THRU _____

NAME OF CERTIFIED APPLICATOR

NON-EMERGENCY CONTACT NUMBER

EMERGENCY CONTACT NUMBER (24-HOUR)

_____ PAGE _____ OF _____

SIGNATURE OF ATTENDENT / GUARD

DATE