

Fume Exam Study Material

Chapter 5E-14 Fumigation Rules

Definitions

- “Application of fumigant(s)” – Release of fumigant(s) into structure or enclosed space.
- “Fumigation operation” – All details prior to application of fumigant(s), the application of fumigant(s), fumigation period and post fumigation
- “Fumigation period” – Period of time from application of fumigant(s) until the ventilation of structure is completed, and the structure is declared safe for occupancy.
- “General fumigation” – Application of fumigant(s) to one (1) or more rooms or their contents in a structure or to entire structure; or to commodities under gas-tight sheets or tarpaulins
- “Spot fumigation” – Application of fumigant to localized harborage or infestation within, on or under a structure or enclosed space, or to a lawn under tarpaulins.
- “Multi-Unit structure” – A structure, consisting of one or more stories, composed of functionally distinct units, such as stores, offices, apartments, townhouses, and condominiums, in which units share a common wall of wood or metal studs or single masonry walls, including fire walls.
- “Multi-unit dwelling” is defined as a multi-unit structure whose primary function is to serve as living quarters for people, such as apartment buildings, condominiums, duplexes, and townhomes
- “Breathing Zone” is defined as the area of space in each room of a fumigated structure located anywhere between the floor and ceiling.
- “Secondary Locking Device” is defined as any device, method or barricade, in addition to existing locking mechanisms, that is demonstratively effective in preventing an exterior door or entrance from being opened or entered by normal means by anyone other than the certified operator in charge or his special fumigation identification cardholder.
- “Barricade and Barring” is defined as the use of any material(s) that would physically prevent a person’s access to the structure by way of any entrance or opening by normal means.
- “Access device” is defined as a lockbox or other on-site device that stores the key to the fumigated structure.
- “Connected Structure” is defined as any structure physically connected with the structure to be fumigated by construction elements that contain voids (e.g. pipes, conduits, drains, ducts, etc.) which may allow transfer of fumigant between the structures.

Fumigation Requirements

- Fumes personally supervised by a CO or SPID
- CO or SPID available and on call all times during the fumigation
- When 2 persons trained in the use of the fumigant is required by the fumigant label, at least one must be either the CO or SPID, and the second trained person can be a CO, SPID or ID Cardholder
- 2 trained persons must be present at each fumigation site for the introduction of the fumigant, entry during fumigation and from the start of aeration (first opening of the seal) until the active aeration period with all operable doors and windows open, if required by the fumigant label, is completed and the structure is secured for the remaining aeration period.
- The Department will issue an immediate stop-use or stop-work order for fumigation performed in a manner that presents an immediate serious danger to the health, safety or welfare of the public.
- Fumigators must have in their possession any keys or an access device necessary to gain the immediate access to a structure,
 - Including secondary locking devices, during the entire time that the structure is under fumigation (fumigant release, exposure period, aeration and until properly determined clear of all fumigant)

- Unless a waiver is issued for specialized structures by the Department of Agriculture and Consumer Services.
- 2 properly functioning SCBA must be available at the fumigation site at all times when the structure is under fumigation (fumigant release, exposure period, aeration and at other times when state law or the fumigant label requires the use or presence of a SCBA)
- 2 SCBA do not need to be present at the fumigation site for activities that do not involve worker exposure to fumigant concentrations above thresholds permitted by the fumigant label.
 - Such as, remote monitoring, using a Fumiscope, TIF leak detection, job site cleanup, DACS inspections, and Quality Assurance Reviews.
- Each business licensee location must have at least two clearance devices so that at least one is properly functioning at all times

Fumigation Requirements – Notices

- Notify in writing the department inspector having jurisdiction over the location where the fumigation operation is to be performed.
- Notification made on DACS Form 13667
- Notices received by the department at least 24 hours in advance of the fume
- Notice must state:
 - Company name and business location address.
 - Accepted common or trade name and active ingredients of fumigant to be used.
 - Name of CO or SPID with his day and night telephone numbers.
 - Location (address) and type of structure (residential, commercial, multi-unit, single family/business or other) to be fumigated.
 - Date of fumigation.
- Exceptions: Verifiable emergencies when twenty-four (24) hours advance notification is not possible, advance telephone or fax notice given immediately followed by written

Fumigation Requirements – Application; Restrictions and Precautions

- “structure” = any building including its foundation, walls and roof but excluding any surfacing portions such as driveways or walkways
- Structures or enclosed spaces which are physically connected with the structure to be fumigated cannot be occupied by persons during the fumigation period.
- 1 or more units in a multi-unit structure to be fumigated, the entire multi-unit structure must be vacated prior to fumigation and individually tested for clearance following fumigation.
- CO or SPID must personally make a careful examination of all parts of the structure to be fumigated, such as locked rooms, compartments, and closets, and any connected structures, to verify that no persons have remained
- Must have sufficient distance along the entire length of the passageway between the structure(s) to be fumigated and all adjacent occupied structure(s) to permit crewmen to work; for the CO or SPID to check for escaping gas. If these requirements cannot be met, the fumigation cannot be done unless the adjacent structure(s) is vacated.
- When fumigating structures with methyl bromide or sulfuryl fluoride chloropicrin used as a warning agent immediately prior to release
 - Rate of not less than 1 ounce per 15,000 cubic feet of space to be fumigated
 - Exceptions: Does not apply to the fumigation of common carriers (trucks, box cars, refrigerator cars), the fumigation of tobacco warehouses and factories, the fumigation in tanks, vaults or chambers, or the fumigation of commodities in industrial areas when it has been determined by prior inspection by the CO that no danger to human life or health exists unless required by the fumigant label.

- The structure or enclosed space must be made as gas-tight as is practicable. Structures or enclosed spaces which cannot be made reasonably gas-tight by sealing or tenting cannot be fumigated.

Fumigation Requirements – Pre-fumigation Inspections, Evacuation, Warning Notices (Signs), Special Safety Precautions and Responsibilities.

- Before the fumigant is applied, the CO or SPID must make a final, personal inspection of the structure to ensure that:
 - All preparations for fumigation have been completed.
 - No unauthorized person is present in the structure or enclosed space to be fumigated or in any adjacent structures or spaces
 - No open fires, flames, pilot lights or oil lamps are burning.
- The final inspection must be conducted immediately before the fumigant is to be applied
 - Unless the structure is a multi-unit dwelling, in which case, the following special provision shall apply:
 - On multi-unit dwellings, the CO or SPID conducts a thorough, systematic inspection of each room in every unit. Then, exterior doors and/or entrances of each inspected unit is secured against unauthorized re-entry while preparations and inspection of other units or areas of the structure are completed.
 - This may require the temporary use of secondary locks on entrances that are to be left unattended between the time of inspection and the introduction of the fumigant.
 - If an individual unit or units cannot be safely secured while preparations of other areas are taking place, then those units must be re-inspected immediately before the fumigant is to be applied.
- Warning signs of stiff, weather-proof material must be securely affixed and conspicuously posted as follows:
 - In tape-and-seal fumigation operations: on all doors and entrances to the structure or enclosed space, and at least 1 warning sign on all sides of the structure or enclosed space not having a door or entrance;
 - In tent fumigation also including commodity fumigations: at least 1 warning sign posted on all doors and entrances to the structure or enclosed space and at least 1 warning sign on all sides of the outside of the tent
 - At all doors and entrances to common carriers or enclosed space fumigated;
 - At all gangplanks, ladders, etc. from the dock, pier or land to vessel.
 - On multi-unit dwellings, warning signs must be posted on all exterior doors or entrances of the structure which might require signs on all exterior doors or entrances of each individual unit or apartment.
- Warning signs must conform in design and information as follows:

(Skull and
Crossbones
Symbol)

DANGER
FUMIGATING WITH
(Accepted common name
of Fumigant)

(Skull and
Crossbones
Symbol)

DEADLY POISON
ALL PERSONS ARE WARNED TO
KEEP AWAY

Date and time fumigant was introduced ___ Company Name ___ Company Business Address ___ Certified Operator in Charge ___ Fumigant Introduced by ___ Day Telephone _____ Night Telephone _____

- Signs must be printed, painted or made in indelible red ink or paint on white background.

- The words "DANGER" and "DEADLY POISON" must be in block lettering at least two (2) inches high
- The name of the fumigant must be at least 5/8 inch high
- The skull and crossbones symbol must be at least 1 inch high
- All other lettering on the sign must be not less than 1/2 inch high.
- Name, day and night telephone number of the CO in charge, or Fume CO, or, or SPID who introduced the fumigant at the fumigation site must be displayed on the warning sign.
- Additional numbers and other contact information may be placed on the sign.
 - All emergency phone numbers must be a phone number, mobile/cell phone number or beeper number in the possession of a person familiar with the job and trained to respond to fumigation emergencies and equipped with SCBA and gas detection equipment.
 - Answering machines, beepers or voice mail systems that do not provide a mechanism for immediate notification to an individual are prohibited
 - A 24 hour manned answering service that can immediately contact a CO or SPID who can respond to the emergency is acceptable.
- Warning signs posted on the outside of tents cannot be removed prior to ventilation: and
- Warning signs posted on or at entrances to the structure, enclosed space or commodities being fumigated cannot be removed until the end of the fumigation period, when ventilation has been completed and the premises declared safe for reoccupancy
- All exterior doors and entrances to the fumigated structure are:
 - posted with a warning sign on or at each door or entrance prior to the release of the fumigant
 - locked, and secured with a secondary locking device or barred or otherwise secured against entry until the end of the exposure period, then opened for ventilation and relocked, barred or otherwise secured against reentry, including the reinstallation of the secondary locking device(s), until declared to be safe for re-occupancy by the person exercising direct and personal supervision of the fumigation
 - A door or entrance that locks from the interior with a lock that is not accessible from the exterior does not require a secondary locking device or barricade.
- Entrances that do not have existing locking mechanisms or are inoperable must be secured with a secondary locking device.
- Multi-unit buildings with internal stairwells accessing each floor can be secondarily locked or secured, barred or barricaded at all ground level entrances, then no other secondary locking devices are necessary
- Multi-unit dwellings with exterior stairwells or fire escapes must be secured or otherwise barricaded or barred to prevent entry from both ground and first floor levels and from any entrance to the structure accessed from the stairwell or fire escape. If neither of these conditions can be met, then all entrances to individual units and all exterior entrances must be locked or secured, barricaded or barred with secondary locking devices.

Fumigation Requirements - Final Post-fumigation Clearance Inspection

- The CO or SPID must personally determine by using label-approved gas-detecting devices, verified and/or calibrated as required by either the device manufacturer or the fumigant label directions, whichever is more restrictive, that the entire structure or enclosed space fumigated, and also including beds and bedding therein, has been safely ventilated as required by fumigant label directions, to permit safe human entry and occupancy or re-occupancy.
- No person, other than the CO or SPID utilizing the label-approved respiratory protective equipment or gas detecting device, may enter, occupy or reoccupy the fumigated structure for any reason prior to completion of the aeration procedure(s) and declaration of clearance.
- All warning agent containers must be removed from the structure.

- In no instance shall ventilation or aeration time be less than that recommended by manufacturer of fumigant on the registered label.
- CO or SPID does allow anyone to enter the structure until
 - Aeration is completed
 - He has personally checked the breathing zone of each room within the fumigated structure for fumigant levels with suitable gas-detecting equipment and found the structure to be safe for human entry and occupancy
- CO or SPID personally certifies by his own signature as a result of his final personal inspection and monitoring of the entire structure that the structure is safe for human entry, occupancy or re-occupancy.
- Notice of clearance is in writing and conspicuously posted by the CO or SPID on all entrances of the fumigated structure
- Clearance notices cannot be posted prior to clearing
- The signature of the CO or SPID and the exact date and hour of release for reentry and re-occupancy is put on all notices

A special identification cardholder shall always perform his functions under the direction and supervision of his certified operator. No special identification cardholder shall perform any pest control work independently of or without the knowledge and direction of his certified operator.

