

STRUCTURAL AND CONTAINER FUMIGATION



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McCloud Services' fumigation programs are designed specifically for each facility. They protect human health and provide food safety and brand protection, as well as eliminate pest infestations. We design and perform our fumigations to limit your exposure to risk and liability. Safety is our number-one priority.

With more than 60 years of experience in performing fumigations in food plants, grain facilities, trailers, rail cars and other structures, we have developed a market-leading reputation for providing consistent, reliable and high quality service to our clients.

PREPARATION

Preparation of the treatment site is typically conducted during normal operations with minimal disruption. Remaining preparations are finalized after the plant has formally ceased all normal business activities. We perform all building preparations, including the development of a site-specific safety plan to eliminate the risk of unauthorized entry into the plant, while under treatment.

FUMIGATION MANAGEMENT PLAN

McCloud fumigations include Fumigation
Management Plans (FMP), as required. A FMP is an
organized, written description of the required steps
involved to help ensure a safe, legal and effective
fumigation.

CLEARING AND AERATION

All fumigated spaces must be cleared prior to re-entry or the commodity transferred to a place carded site. An aeration and clearing plan is formulated prior to the introduction as part of the FMP. Your licensed fumigator will test the fumigated spaces using approved cleaning devices for all on-site fumigations. Only when levels are at or below the threshold limit value, will the fumigated site be returned to your control. If the fumigated hopper or rail car is transported during fumigation, arrangements must be made to have the car aerated at the receiving site by qualified personnel.

MONITORING

During structural fumigations, the interior areas are monitored remotely with specialized gas detection equipment to ensure that fumigant levels reach the required concentration. This allows licensed fumigators to characterize gas concentrations throughout the structure to assist in determining if additional gas is required to obtain the necessary ounce per hour accumulations to kill all life stages of targeted pests. Standard Operating Procedures (SOPs) will require readings to be performed hourly to provide the fumigation team the most accurate information possible.

EXTERIOR INSECT MANAGEMENT TREATMENTS

Weather permitting, the exterior perimeter of the building is treated with an approved residual insect management material. This material is applied with power spray or backpack-type application equipment to assist in the prevention of insects from entering the facility post fumigation.

FUMIGANTS

SULFURYL FLUORIDE

PROFUME® offers effective, reliable stored product pest control that fits with operational needs. It is packaged in cylinders as a liquid under pressure. PROFUME® is non-flammable, non-corrosive as a gas, odorless and has a high vapor pressure. It quickly penetrates the fumigated area, is effective against a variety of stored product pests and dissipates rapidly during aeration. The active ingredient in PROFUME® gas fumigant is sulfuryl fluoride. Sulfuryl fluoride disrupts the glycolosis and citric acid cycles within cells throughout the insect body, depriving insects of the necessary energy for survival. It controls all life stages of target insects and, using Precision Fumigation techniques, is customized for each application situation.

MAGNESIUM PHOSPHIDE AND ALUMINUM PHOSPHIDE (SOLID PHOSPHINE PRODUCTS)

Magnesium and aluminum phosphide are solid phosphine formulations. The material may be packaged as pellets, tables, plates or sachets. The phosphine gas is liberated when the solid fumigants are exposed to the moisture in the air. Typical exposure times can range from several days to weeks, depending on the type of formulation used, type of commodity and commodity temperature. These products are labeled for a wide range of commodities and sites. They are most often used for the fumigation of bulk commodities in bins, silos or transportation equipment.

METHYL BROMIDE

The use of the fumigant methyl bromide is an excellent choice in controlling pests in stored commodities, structures or shipments that must meet agricultural quarantine regulations. Methyl bromide has been the fumigant of choice for many due to its broad labeling, impressive penetration characteristics and protection it provides to food products and packaging, while controlling mice, rats and all life stages of insects, including eggs. There may be issues with availability of methyl bromide due to reduced stocks. Methyl bromide stocks may be available for certain critical uses and for quarantine fumigations.

PHOSPHINE FUMIGANTS: MAGNESIUM PHOSPHIDE, ALUMINUM PHOSPHIDE AND CYLINDERIZED PHOSPHINE

Phosphine fumigants are packaged in solid and cylinderized formulations to match a variety of needs. The cylinderized form, ECO2FUME®, offers reduced disposal concerns which may occur with solid phosphine formulations. The solid phosphine fumigants have long been a fumigant of choice for rail transportation of bulk commodities and bin fumigations.

All phosphine fumigants can cause corrosion of precious metals and, therefore, are typically not advised for areas containing sensitive computer equipment or controls, or other sites where copper or other precious metals are present.

PHOSPHIDE AND CYLINDERIZED PHOSPHINE ECO2FUME® (CYLINDERIZED PHOSPHINE)

ECO2FUME® fumigant gas is a non-flammable, pre-mixed, cylinderized mixture of phosphine and carbon dioxide, which provides highly effective fumigation in both sealed and unsealed storage facilities. ECO2FUME® fumigant gas is a gaseous mixture of 2% phosphine (by weight) in carbon dioxide. Carbon dioxide is an excellent carrier for phosphine and diluting phosphine to this concentration ensures ECO2FUME® is nonflammable in all proportions with air. ECO2FUME® fumigant gas can be used in a wide variety of applications to attain insect-free and dustfree products. ECO2FUME® has the unique ability to allow fumigation of a variety of storage facilities. ECO2FUME® can be used to control a variety of stored product pests. In most cases, ECO2FUME® can be dispensed from outside the storage facility, enabling more effective concentration control with improved worker safety. ECO2FUME® is registered for a wide range of agricultural commodities, processed foods, non-food items in structures and transportation equipment.

PROTECTING THE HEALTH AND SAFETY OF OUR CLIENTS, THEIR EMPLOYEES AND CUSTOMERS



COMMITTED TO YOUR SAFETY AND THE ENVIRONMENT

We take our cues from nature not only in the design of our pest management programs, but also in our corporate philosophy. As a result, we approach solving pest management issues within the context of the natural ecology, by exploring and implementing innovative alternatives to traditional pesticides. In order to protect the health and safety of our clients, their employees and customers, and the integrity of our clients' brands, McCloud Services strives to lessen the negative impact on the environment arising from our business activities and to encourage an ecological mindset within our staff. We emphasize the need for our people to use resources wisely by training them in proper use and disposal of environmentally sensitive materials, in conjunction with minimizing the overall use of these materials in our operations, giving equal consideration to the materials' impact on:

- The safety of the people affected by it
- The efficacy of the project
- The environment

McCloud Services assures leadership in environmental care by operating in compliance with applicable safety and environmental regulations and laws, and by exceeding regulatory requirements in both degree and timing wherever possible.

We respect the Earth on which we are all dependent. We value our society, the communities where our customers and employees live, and the quality of the world that future generations will inherit.

ABOUT US

Founded in 1904, McCloud Services is a leader in integrated pest management solutions, serving the food supply chain of custody, health care, hospitality, property management and retail industries. Protecting more than half of the largest food related brands in the U.S., our highly trained and experienced service specialists and entomologists use an ongoing, flexible approach designed to meet each clients' specific needs.

Our mission is to protect our customer's health, property, food and environment while providing the highest level of safety for our employees and the general public. We adhere to our core values in our relationships with our customers and each other. McCloud Services is a founding member and shareholder in Copesan, an alliance of premier pest management companies with locations throughout North America.



Regional Service Locations

Illinois, Indiana, Iowa, Kansas, Kentucky, Missouri and Tennessee

> www.mccloudservices.com 800-332-7805