



Cleaning & Decontamination Guidelines for Wild Animal Infestation of Man-Made Structures

This is a guideline for using Sporicidin® and Contec® brand products in the cleaning and disinfecting/sanitizing of surfaces and materials contaminated with waste matter from birds, bats, rodents, and other wild animals that may infest residential or commercial structures. This guideline is not applicable for the remediation of dirt floors, such those found in crawlspaces or in farm structures like coops and barns. Sporicidin® and Contec® brand remediation products are intended for use in this guideline for the cleaning and removal of feces, urine, and other waste matter from salvageable porous and semi-porous surfaces or materials, and the disinfection of hard, non-porous surfaces.

Clean up projects of this nature pose potential health hazards from exposure pathogenic microorganisms, requiring proper engineering controls and personal protective equipment to prevent cleaning personnel from contracting life-threatening illnesses. Table 1 below depicts some of the diseases that workers can be exposed to via respiratory, ingestion, and direct contact with contaminated materials and surfaces.

Disease	Pathogen	Classification	Infectious Hazard
Histoplasmosis	<i>Histoplasma capsulatum</i>	Fungal	Bird & bat feces
Cryptococcosis	<i>Cryptococcus neoformans</i>	Fungal	Bird feces
Psittacosis	<i>Chlamydophila psittaci</i>	Bacterial	Bird feces
Rabies	Rabies virus	Viral	Bat & rodent carcasses
Hantavirus pulmonary syndrome	Hanta virus	Viral	Rodent feces & urine
Leptospirosis	<i>Leptospira ssp.</i>	Bacterial	Rodent feces & urine
Lymphocytic Choriomeningitis	Lymphocytic choriomeningitis virus	Viral	Rodent feces & urine

Table 1 - Potential Health Hazards

1.0 TRAINING

Employees should be trained and supervised by personnel experienced in hazardous/infectious material cleaning, removal and disposal procedures. Employees should also be physically and mentally capable of working in close quarters or in confined spaces while wearing personal protective equipment for extended periods of time.

2.0 RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personnel performing cleanup operations of this nature should protect themselves with the following PPE:

- 2.1 Powered Air Purifying Respirator (PAPR) or full face respirator w/HEPA filter and organic vapor cartridge
- 2.2 Tyvek® suit or other chemical and biological protective clothing
- 2.3 Rubber boots
- 2.4 Rubber gloves and cut & puncture resistant gloves
- 2.5 Protective knee pads

3.0 RECOMMENDED TOOLS

- 3.1 Shovels or other scraping tools
- 3.2 Tongs for picking up animal carcasses and sharp objects
- 3.3 Misting devices, such as pressure sprayer, ULV fogger or airless sprayer for applying chemical agents and cleaners
- 3.4 Mops & buckets
- 3.5 Trigger sprayers (for applying chemical agents and cleaners)
- 3.6 Contec® QuickConnect™ Mopping System consisting of: (#2725E Stainless Steel 60" handle, #HCPH1001 QuickConnect™ Mop Head Frame, #HCPH8005 PREMIRA® Hygienic Backer Plate, #PRMM0001 PREMIRA® II Microfiber Pad 5"x19")

- 3.7 EasyReach® Cleaning Tool 16.5" consisting of: (#2665SF EasyReach® Cleaning Tool lightweight stainless steel with flat mop head, #MEQT0001 EasyReach® quilted polyester Cleaning Pads for EasyReach® tool)

4.0 RECOMMENDED CLEANING SUPPLIES

- 4.1 Scrub brushes, sponges, pads or cloths for cleaning surfaces
- 4.2 Paper towels or wipers
- 4.3 Black Heavy-duty leaf/trash bags
- 4.4 Biohazard/Infectious Materials tape

RECOMMENDED SPORICIDIN® AND/OR CONTEC® PRODUCTS

- 4.5 Sporidicin® Disinfectant Solution (gallons or 32 oz. spray bottle)
- 4.6 Sporidicin® Disinfectant Towelettes (canister)
- 4.7 Sporidicin® Enzyme Cleaner Concentrate or Enzymatic Cleaner (may be used as a cost effective cleaning detergent solution)
- 4.8 Contec® Citric Acid Disinfectant (gallons or 32 oz. spray bottle)
- 4.9 Sporidicin® Mold & Mildew Stain Remover w/Hydrogen Peroxide (H₂O₂) (gallon or 2.5-gallon jug)

5.0 SITE PREPARATION & ENGINEERING CONTROLS

Proper planning and preparation is essential in order to safely and effectively remediate hazardous waste cleanup projects. Care must be taken to prevent contamination of clean up personnel and occupants, as well as prevent the spread of contamination inside and outside the structure during the cleanup.

5.1 Posting of Warning Signs - Highly visible warning signs should be posted at entry ways to prevent unauthorized or unprotected personnel from entering the contaminated area.

5.2 Removal of Live Pests - Any live pests should be removed from the premises prior to starting the project. In the case of bats, raccoons, opossums, or other wild animals, it is advisable to request removal by your local animal control agency or hire a pest removal specialist. Once the pests have been vacated, steps should be immediately taken to seal up all possible points of entry that pests may have used to prevent future intrusions.

5.3 Set up Containment of the Operation and Transition zones and isolate the HVAC System – To prevent the spread of biological contamination indoors, a Containment should be erected to separate the Operation zone from the Transition zone, and another Containment should separate the Transition zone from the Clear zone. Restoration Industry Association Forensic Restoration Guidelines can be consulted for more information on Containments. HVAC vents or air supply vents should be sealed to prevent further cross-contamination of the air supply system and consideration given to having the vent system professional cleaned as the final step of the remediation process.

5.4 Removal of Carcasses and Nesting Materials - Pest carcasses should be removed using tongs or similar devices to minimize contamination of PPE and placed into double-bagged plastic trash bags. Vacant nests or nesting materials should be carefully removed to prevent aerosolizing contaminants and placed in double-bagged trash bags and sealed with tape. Bagged material should be clearly labeled as infectious materials and disposed of in accordance with local requirements for infectious waste.

6.0 CLEANING & DISINFECTING/SANITIZING

All surfaces and materials within the affected area should be cleaned to remove gross filth and fecal matter, followed by thorough disinfection or sanitization with Sporidicin® Disinfectant Solution, Disinfectant Spray, Disinfectant Towelettes, or Contec® Citric Acid Disinfectant. Sporidicin® Disinfectant Solution or Contec™ Citric Acid Disinfectant can be applied to surfaces with saturated towels or sponges. The following devices can be used to apply disinfectants onto surfaces; airless sprayer, foaming sprayer, pressure sprayer, trigger sprayer, ULV misting sprayer. The use of ULV foggers should be limited to misting chemical agents onto surfaces in a controlled and precise manner only to achieve the required dwell times stated on the product label. **The use of a fogging device to fill a structure or space with a chemical fog or vapor is not recommended.**

6.1 Removal of Gross Waste Matter - To suppress and prevent fungal and bacterial spores from becoming airborne during the removal of gross contamination, the waste matter can be lightly misted with Sporidicin® Mold & Mildew Stain Remover w/H₂O₂ or Sporidicin® Enzyme Mold Stain Cleaner using misting devices or sprayers. Once contaminants are thoroughly dampened, scoop or scrape the debris up and place into double-bagged trash bags and seal with tape. Re-dampen the waste matter as needed until all gross filth has been removed.

6.2 Cleaning Contaminated Surfaces & Materials - Once all gross waste matter has been removed, all surfaces and materials should be thoroughly cleaned and disinfected/sanitized by with Sporidicin® Disinfectant or Contec® Citric Acid Disinfectant and allowed to remain wet for the product label stated dwell time, then wiped clean and allowed to air dry.

6.2.1 Porous materials – Articles and materials, such as insulation, carpets, rugs, clothing, upholstered furniture and draperies may be difficult to effectively clean and decontaminate, therefore may require specialized cleaning or discarded and replaced. Discarded articles should be double-bagged or sealed in plastic wrap, labeled and disposed of as infectious materials in accordance with local requirements.

6.2.2 Semi-porous materials - Concrete, cinder block, wood, plywood and oriented strand board (OSB) – Apply Sporidicin® Mold & Mildew Stain Remover w/H₂O₂ or Sporidicin® Enzyme Mold Cleaner directly to the surface and allow to remain wet for 5-10 minutes, followed by wiping clean and allow to air dry.

6.2.3 Hard, non-porous surfaces – Surfaces such as glass, metal, tile, rubber, plastic, vinyl, porcelain and most painted and glazed surfaces may be disinfected by applying Sporidicin® Disinfectant Solution or Contec® Citric Acid Disinfectant directly to the surface and allow to remain wet for the stated label disinfection dwell time, followed by wiping clean and allow to air dry.

6.3 HVAC System - HVAC internal duct surfaces and components should be cleaned in accordance with industry guidelines. External ductwork surfaces, grills, grates and registers should be cleaned and disinfected with Sporidicin® Disinfectant or Contec® Citric Acid Disinfectant.

6.4 Disinfection of Equipment, Tools & Personal Protective Equipment - All tools, equipment and individual personal protective equipment used in the cleanup of contaminated areas should be cleaned and disinfected using Sporidicin® Disinfectant or Contec® Citric Acid Disinfectant prior to removal from the contaminated area. Respirator HEPA filters should be treated as infectious materials and disposed of accordingly (see DISPOSAL OF INFECTIOUS MATERIALS section below).

7.0 DISPOSAL OF INFECTIOUS MATERIALS

Soiled cleaning materials, such as paper towels, cloths, sponges and mop heads, should be placed in double-bagged trash bags, sealed with duct tape, labeled and disposed of as infectious materials in accordance with local requirements. Sporidicin® and or Contec® products can be disposed of by pouring the used liquid down the regular sewer drain and discarding the empty container in the regular trash. Consult your local waste disposal company or local health department prior to disposing of EPA registered products down the sanitary sewer. Follow local waste disposal regulations.

For additional information contact our office at (800) 424-3733 or visit our website at www.sporidicin.com.

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