

## Guidelines for Decontamination of Walk-in Coolers & Freezers Affected by Floodwater Damage

This set of guidelines is for cleaning and disinfecting walk-in coolers and freezers typically found in commercial and institutional food service businesses, retail food establishments, restaurants, and food manufacturing/distribution facilities. These guidelines also apply when attempting to address refrigeration equipment that has been damaged by floodwaters. Although the degree of floodwater damage can vary, this guideline specifically addresses issues associated with “catastrophic floods”: intrusion of contaminated floodwater and/or loss of power for extended periods of time. Flood waters can introduce mud, silt, debris, pesticides, petrochemicals, and sewage into otherwise hygienic environments. Loss of refrigeration often leads to food spoilage from heavy growth of bacteria and mold. It is imperative that employees or cleaning crews tasked with decontaminating coolers and freezers take the necessary precautions to protect themselves from health hazards and to follow safety protocols when cleaning and decontaminating.

Sporicidin® and other Contec-branded remediation tools and solutions can be used to clean, disinfect, sanitize and deodorize walk-in coolers and freezers, as well as associated food storage racks, benches, bins, tubs and containers impacted by floodwaters and loss of power.

### **A. TRAINING**

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

### **B. RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Personnel performing clean-up operations of this nature should protect themselves with the following PPE:

1. Powered Air Purifying Respirator (PAPR) or full face respirator w/HEPA filter and organic vapor cartridge
2. Tyvek® suit or other chemical and biological protective clothing
3. Rubber boots
4. Rubber gloves and cut & puncture resistant gloves
5. Protective knee pads

### **C. RECOMMENDED TOOLS:**

1. Shovels or other scraping tools
2. Gas-powered generator for powering electrical tools/equipment/lighting
3. Battery-powered work lights
4. Extension Cords (if needed)
5. ATP Meter for conducting hygiene testing pre-clean vs. post-clean
6. FOAMiT® Foaming Pressure Sprayer or other spraying devices for applying chemical agents and cleaners
7. Long-handled deck brushes for scrubbing textured walls and floors
8. Mops and buckets
9. Trigger sprayers (for applying chemical agents and cleaners)
10. Contec QuickConnect™ Mopping System consisting of:
  - a. Part number 2725E (Stainless Steel 60” handle)
    - i. HCPH1001 (QuickConnect Mop Head Frame)
    - ii. HCPH8005 (PREMIRA® Hygienic Backer Plate)
    - iii. PRMM0001 (PREMIRA II Microfiber Pad 5”x19”)
  - b. EasyReach™ Cleaning Tool with 16.5” handle consisting of:
    - i. Part number 2665SF (EasyReach Cleaning Tool w/lightweight stainless steel with flat mop head)

- ii. MEQT0001 (EasyReach quilted polyester Cleaning Pads for EasyReach tool)
- c. PREMIRA® Tight Quarters Mop System consisting of:
  - i. Part number HCPH1005 (QuickConnect Mop Head Frame, 7.5" stainless steel)
  - ii. 2686 (QuickConnect handle, 16" stainless steel, lightweight)
  - iii. HCPH8004 (PREMIRA Tight Quarters Hygienic Backer Plate, 4"x9")
  - iv. ATFM0120 (PREMIRA II Microfiber Pads, 5"x11")

**D. RECOMMENDED CLEANING SUPPLIES**

1. Scrub brushes, sponges, pads or cloths for cleaning surfaces
2. Paper towels or wipers
3. Black Heavy-duty leaf/trash bags
4. Red Heavy-Duty Duct Tape

**E. RECOMMENDED SPORICIDIN® AND/OR CONTEC PRODUCTS**

1. Sporidicin® Disinfectant Solution
  - a. Part number RE-1284F (four 1 gallon bottles)
  - b. RE-3202F (two 2.5 gallon jugs)
  - c. PS-3212F (twelve 1 quart bottles with trigger sprayer)
2. Sporidicin® Disinfectant Towelettes
  - a. Part number JUM-8506F canister of 85 textured jumbo wipes
  - b. CAN-18012F canister of 180 5"x8" wipes
3. Sporidicin® Antimicrobial Lotion Soap for use as personnel hand wash
  - a. Part number CALS-2416 case of 24 bottles, each containing 16 ounces in a pump dispenser
  - b. ALS-1282 case of two 1 gallon bottles of soap (for refilling 16 ounce bottles)
4. Sporidicin® Enzyme Mold Cleaner Concentrate
  - a. Part number ENZ-3212 (may be used as a cost effective cleaning detergent solution)
5. Contec® Citric Acid Disinfectant
  - a. Part number CAD1284 case of four 1 gallon bottles
  - b. CAD3212 case of twelve 1 quart bottles with trigger sprayer
6. Sporidicin® Mold & Mildew Stain Remover with stabilized Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>)
  - a. Part number MRC-101-1 case of four 1 gallon bottles
  - b. MRC-101-320 case of two 2.5-gallon jugs

**F. ENGINEERING CONTROLS & SAFETY CONSIDERATIONS**

1. Electrical Safety – Often in catastrophic floods, the affected area will lose electrical power. **CAUTION:** The power may be restored at any time without notice! Since high floodwaters may have damaged the cooling units, turn off the electrical breakers to protect the cleaning crew from electrical shock and prevent further damage to the cooler or freezer.
2. Containment Area – If a significant amount of mold or mildew growth is present, prevent the spread of bacterial or fungal spores by setting up a HEPA-filtered negative air pressure containment before attempting to clean up the mold.

**G. GENERAL CLEANING & RESTORATION PROCEDURES**

1. **Inspection & Inventory** – All food items and contents should be removed from coolers and freezers, inspected, inventoried, categorized as either salvageable or non-salvageable, and then photographed for the client's insurance purposes.
2. **Salvageable Food** – All hermetically-sealed food (cans, pouches, etc.) should be removed from cartons or containers and carefully inspected for leaks, punctures or evidence of spoilage. All salvageable foodstuffs in containers should be thoroughly disinfected by using one of the EPA-registered products listed in **Section E**, followed by rinsing the container/packaging with potable water and allowing to air dry or dry with paper towels. Any containers showing signs of swelling, leaking, or punctures must be discarded in the trash. **When in Doubt, Throw It Out!**

3. **Non-Salvageable Food** – All perishable foods, other than hermetically-sealed products, should be removed from its from cartons or containers, placed in heavy duty plastic bags and sealed with red duct tape and disposed of in accordance with local health codes applicable to food disposal requirements. The empty cartons or containers should be disposed of in the garbage.
4. **Cleaning and Decontamination of non-food items** – All storage racks, benches, bins, trays, totes, tubs and containers previously used to store food products inside the cooler or freezer should be thoroughly cleaned and decontaminated using the products listed in **Section E** above.
  - a. Clean and remove all visible, gross contamination using one of the listed cleaning products:
    - i. MRC-101 Sporidicin® Mold & Mildew Stain Remover w/Peroxide
    - ii. ENZ-3212 Sporidicin® Mold & Mildew Stain Cleaner Concentrate
  - b. Wipe or air dry
  - c. Disinfect/Sanitize per product label instructions using either:
    - i. Sporidicin® Disinfectant Solution
      - RE-1284F (gallon bottles)
      - RE-3202F (2.5 gallon jugs)
      - PS-3212F (1 qt bottles with trigger sprayers)
    - ii. Sporidicin® Disinfectant Towelettes
      - JUM-8506F (Jumbo Scrubby Wipes)
      - CAN-18012F (5" x 8" wipes)
    - iii. Contec® Citric Acid Disinfectant
      - CAD1284 (gallon bottles)
      - CAD3212 (1 qt bottles with trigger sprayers)
  - d. Rinse with potable water and wipe dry with clean paper towels
5. **Walk-In Cooler Remediation Guidelines** - Each walk-in cooler or freezer situation should be carefully assessed on a case-by-case basis and the approach to remediation should be adjusted or modified to fit the given situation and circumstances. In some cases, certain steps may not be applicable. In other cases, other circumstances may require additional consideration, equipment, cleaning and disinfecting chemicals.
  - a. Remove all gross amounts of dirt, sand, silt or debris from floor using shovel, scrapers, brushes and mops then discard debris in trash bags
  - b. Using a foaming sprayer, generously **apply one** of the following cleaning agents to all interior walls, ceiling, door and floor surfaces and allow foam to dissolve before proceeding:
    - i. MRC-101 Sporidicin® Mold & Mildew Stain Remover (contains stabilized hydrogen peroxide)
    - ii. ENZ-3212 Sporidicin® Mold & Mildew Stain Cleaner – mix 4 ounces into a gallon of water to make an effective cleaning solution.
  - c. After the foam breaks down and disappears, use a stiff bristle nylon deck brush and thoroughly scrub all interior walls, ceiling, door facing and floor surfaces.
  - d. Using either a flat microfiber mop pad, or one of the Contec Wall Washing Systems listed in **Section C.10** above, thoroughly mop and clean the all interior surfaces until all traces of contamination are removed. If visible contamination is present, you may need to use several disposable microfiber pads to complete the cleaning.
  - e. Allow the newly cleaned surfaces to dry somewhat prior to the next step, or dry wipe the surfaces before proceeding.
  - f. Spray or wipe Sporidicin Disinfectant Solution or Citric Acid Disinfectant onto all interior surfaces and allow to remain wet for 10 minutes.
  - g. Once the dwell time has been reached, rinse away any disinfectant residue with potable water. The rinse should be done after using any cleaning product or disinfectant so no residues are left behind that could affect the smell and taste of food.

- h. Repeat the cleaning & disinfection process above for the exterior cooler/freezer walls, door facing and roof (if applicable).

**H. DISINFECTION OF EQUIPMENT, TOOLS & PERSONAL PROTECTIVE EQUIPMENT**

All tools, equipment and individual personal protective equipment used in the clean-up of contaminated areas should be cleaned and disinfected using Sporidicin® Disinfectant or Contec® Citric Acid Disinfectant prior to removal from the contaminated area.

**I. DISPOSAL OF INFECTIOUS MATERIALS**

Soiled cleaning materials, such as paper towels, cloths, sponges and mop heads, should be placed in labeled trash bags, which are then sealed with red duct tape and disposed of in accordance with local requirements. 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](http://www.sporidicin.com).

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### Special Considerations When Decontaminating Cooler and Freezers

- Cooler or freezer wall panels that have been damaged or have cuts or holes that were below the floodwater line should have the entire panel replaced.
- Cooler or freezer walls that are attached to quarry tile floors that have missing or damaged caulking seal should be disassembled and removed to allow for cleaning and removal of silt that entered through the open seams.
- Free-standing coolers or freezers that sit directly onto the floor must have the panels disassembled, cleaned and sanitized to remove the silt and contamination beneath the wall panels.
- Coolers or freezers that have flood-soaked wood floors will need to have the floors replaced.
- Coolers or freezers that sit directly on the floor and have aluminum floors will need to have the aluminum floor raised and cleaned underneath to remove trapped silt and other contamination.
- If water damage occurs again, these remediation steps or techniques will need to be repeated.
- Periodic cleaning and maintenance is required to prevent malodors from forming.