

Maximum Development Group, LLC d/b/a

MDG ENVIRONMENTAL, LLC

Corporate Office

1000 Maplewood Drive, Suite 207, Maple Shade, New Jersey 08052

TEL (856) 755-9300 FAX (856) 755-1922

**FUNGAL REMEDIATION & BACTERIAL CONTAMINATION
WORK PLAN**

at the property of:

Mullica Township Police Department

4528 White Horse Pike

Elwood, New Jersey

prepared for:

TOWNSHIP OF MULLICA

4528 White Horse Pike

Elwood, New Jersey 08217

Attention: Mr. Ralph Condo

MDG Project No. 23-227-1

September 7, 2023

Prepared by:



Christopher Macri, IH, CMC, CIE
Senior Industrial Hygienist

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MDG Environmental, LLC

Mold Remediation Work Plan

Township of Mullica

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1.0 PROJECT DESCRIPTION

This specification provides performance requirements and evaluation criteria for the removal and cleaning of various items, building components and contents that have or may have been affected by microbiological contamination (i.e., mold growth/bacterial contamination) in the lower level Police Department of the building located at 4528 White Horse Pike in Elwood, New Jersey.

2.0 SCOPE OF WORK

The fungal and bacterial contamination is the result of ground water intrusion. The ground water has been contaminated with sewage that is reportedly overflowing from the septic tanks and saturating the soil. The contaminated ground water enters the lower level of the building through the masonry block walls and migrates up through the concrete slab floor.

***NOTE: Repairs/corrections to the septic system and water proofing to prevent ground and surface water from entering the building must be done prior to a full fungal and/or bacterial remediation. If the water intrusion issues are not addressed, the fungal (mold) amplification issues will continue.**

The HVAC ducts that service the lower level of the building should be cleaned and sanitized by a National Air Duct Cleaning Association (NADCA) certified HVAC cleaning professional according to NADCA approved methods for microbial contamination.

The removal and cleaning schedule is summarized below:

2.1 Removal and Cleaning Schedule

Throughout the Lower Level of the Building

Once the appropriate repairs and water proofing have been conducted:

The basement/lower level of the building should be isolated from the upper level by sealing doorways and openings with 6-mil polyethylene sheeting and zippered doors to create a positive seal.

Any openings/penetrations between the lower level and the upper level of the building should be sealed with polyethylene sheeting and tape, closed cell foam or any other means necessary to provide a proper seal to prevent cross contamination of other areas.

Any vent openings of the HVAC system should be sealed with polyethylene sheeting and tape as necessary to provide a proper seal to prevent cross contamination of other areas.

The lower level of the building should be placed under negative pressure by installing the appropriate number of HEPA filtered air filtration devices to create approximately four (4) air changes per hour. HEPA filtered air filtration devices should remain in operation during the entire mold remediation project.

- Once under negative pressure, all contents in the lower level should be cleaned and removed. Soft porous contents should be HEPA vacuumed on all sides, tops and bottoms. Hard non-porous contents should be HEPA vacuumed and damp wiped with plain water or a mild detergent solution on all sides, tops and bottoms. Cloth items should be laundered. Contents (i.e., cloth, upholstered furniture, window treatments, soft items, etc.) that are visibly moldy and/or significantly water damaged and cannot be cleaned should be disposed.

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2.0 SCOPE OF WORK – CONTINUED

2.1 Removal and Cleaning Schedule – Continued

Throughout the Lower Level of the Building – Cont'd

- Once the contents have been removed, the wall coverings on the exterior walls should be removed down to the masonry block foundation walls, i.e., remove the wood panels, furring strips, polyethylene sheeting from the walls, etc.
- Remove the floor coverings down to the concrete slab floor in order to clean the floor, but more importantly, to expose the concrete so it can be waterproofed to prevent ground water from entering through the porous concrete floor.
- Remove all of the ceiling tiles throughout the lower level in order to access the space above the drop ceiling for cleaning.
- All debris should be placed in 6-mil polyethylene bags and sealed. The sealed bags should be damp wiped prior to removal from the contained lower level.
- Treat the exterior walls and concrete floor with a biocide solution capable of killing sewage related bacteria. Allow the appropriate dwell time on the walls and floor for the biocide to be effective.
- All surfaces throughout the lower level including walls, floors, joists, decking, partitions, ducts, etc., should be thoroughly HEPA vacuumed to remove gross fungal particulate/contamination.
- All surfaces throughout the lower level including walls, floors, joists, decking, partitions, ducts, etc., should be scrubbed free of fungal amplification and contamination (visible and non-visible microbial contamination) using stiff nylon bristle brushes.
- Once dry, all surfaces throughout the lower level including walls, floors, joists, decking, partitions, ducts, etc., should be HEPA vacuumed a second time.
- Once completely dry, any exposed unfinished wood surfaces should be sealed with a clear encapsulant that contains an anti-microbial additive.

Upon completion of the cleaning activities, HEPA filtered air filtration devices should be operated as air scrubbers for a period of no less than 24 hours following the mold remediation activities or until post mold remediation inspection and testing can be conducted. Furthermore, MDG recommends that the air filtration devices are covered with 6-mil polyethylene sheeting and shut down 8 to 24 hours prior to post mold remediation inspection and testing. This will include any air and/or wipe samples to determine the effectiveness of the mold remediation activities.

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3.0 FINAL INSPECTION/CLEARANCE FOR RE-OCCUPATION

MDG should perform a final inspection and clearance sampling. The final inspection will include confirmation that:

- Surfaces are free of dust and debris.
- All visible mold has been removed.
- All contaminated materials and debris have been removed.
- If applicable, any water damaged building components that lack integrity have been removed and replaced as necessary.

Air and/or wipe samples should be collected by MDG upon final inspections of remedial areas. The analytical results will determine if the remedial areas are cleared for re-occupation or if additional remediation will be required.

It should be noted that mold remediation projects do not result in a sterile environment and it is impossible to remove all mold spores in the work area.

4.0 PERSONNEL PROTECTION

4.1 Respiratory Protection

The contractor shall provide workers with personally issued and marked respiratory protection equipment approved by NIOSH/MISHA. As a minimum, respiratory protection should consist of full-face dual cartridge negative pressure air purifying respirators with HEPA cartridges, and if required, acid gas (chlorine) cartridges, organic vapor cartridges or other respiratory protective equipment necessary to prevent inhalation of aerosolized chemicals. **Disposable respirators (i.e., dust masks, etc.) should not be allowed.**

4.2 Protective Clothing

The contractor must provide workers with sufficient sets of protective disposable clothing consisting of full-body coveralls, head covers, gloves and boots in sizes to properly fit individual workers. All workers should wear polyethylene coated Tyvek suits (Saranex) with attached boots or the equivalent. Gloves may include latex surgical gloves covered by outer polyvinyl chloride (PVC) outer gloves. Integral boot/head cover/coveralls may be acceptable.

The contractor should provide eye protection (i.e., full-face respirator, safety glasses or goggles) and hard hats, as required by job conditions or by applicable safety regulations. Re-usable equipment (i.e., footwear, hard hats) should be left in the contaminated enclosed work area until the end of the remediation work. At that time, such items must be decontaminated if they will be used again.

ATTACHMENT A

Work Area Containment

Work Area Containment

These are based on various guidelines that are available in the industry and do not necessarily apply to this project. These are for guideline purposes only and may or may not apply to this project. Specific cleaning instructions pertaining to this project are listed within the main body of the mold remediation work plan under Section 2.0 and 2.1. The Institute of Inspection, Cleaning & Restoration Certification (IICRC) S520 standard should be followed for professional mold remediation projects.

Containment Purpose – Enclosure to prevent exposure to workers and occupants and to minimize the spread of contamination.

Full Negative Pressure Enclosure

Definition – The process of pumping filtered air out of the work area to create a lower pressure inside the work area as compared to outside.

Isolate each work area using barrier tape, polyethylene sheeting and plywood, sealing foam and warning signs.

The HVAC system serving each work area shall be shut down prior to beginning any remediation work.

Install critical barriers consisting of one (1) layer of 6 millimeter fire retardant Polyethylene sheeting:

- Entrances and openings to each designated work area
- Includes HVAC ducts
- Windows
- Doors to remain closed
- Exposed duct work/seams
- Cover furnaces/heating systems, pipe penetrations
- Perform content preservation, cleaning and packing
- Perform pre-cleaning of surfaces in work area as necessary
- De-energize electrical service, if necessary, following lock out, tag out procedures
- Use ground fault circuit interrupts (GFCI) on all electrical cords and equipment
- Fire extinguishers inside and outside of work area
- Install temporary lighting (as needed)
- It may be necessary to provide alternate heating devices in the work areas during winter months

Construct Negative Pressure Enclosure:

- Install 6 millimeter Polyethylene sheeting (number of layers depends on the situation)
- Secure with duct tape (or wood supports as necessary)
- Cover all surfaces (except areas to be remediated)
- Overlap seams on Polyethylene sheeting
- Install HEPA filtered exhaust units
- Filter sizes 10 um, 5 um, 0.3 um (this combination of filters will trap most spore sizes)
- There should be enough units to provide four (4) air changes per hour
- AFD Exhaust units should be exhausted to the exterior when possible
- Negative air pressure airflow can be checked using smoke tubes

Install a decontamination system:

The decontamination system should contain three (3) chambers with an air lock between each:

- Equipment room
- Airlock
- Shower room
- Airlock
- Clean room

ATTACHMENT B

Clean Up and Disposal Procedures

Clean Up and Disposal Procedures

These are based on various guidelines that are available in the industry and do not necessarily apply to this project. These are for guideline purposes only and may or may not apply to this project. Specific cleaning instructions pertaining to this project are listed within the main body of the mold remediation work plan under Section 2.0 and 2.1. The Institute of Inspection, Cleaning & Restoration Certification (IICRC) S520 standard should be followed for professional mold remediation projects.

All cleanup activities will be performed under full containment of the work area. Personnel protective equipment will include a respirator with HEPA air filter, disposable suit, gloves and goggles.

Moldy materials including:

- Non-porous surfaces.
- Porous surfaces.
- Clothing, drapes, bedding, upholstered furniture, carpet and padding, wallboard, wood surfaces, books and papers.

Non-porous hard surfaces (i.e. glazed tile, plastics, metals, etc.):

- Wet wipe with mild detergent and water usually removes mold.
- HEPA vacuuming may be appropriate for heavy dust/dirt on surfaces.

Porous

Bare wood:

- Wooden studs can be HEPA vacuumed to remove buildup of dust and spores, if necessary.
- Wet cleaning with a mild detergent and water with a nylon bristle brush.
- Do NOT saturate the wood.
- If the wood is structurally damaged, it must be replaced.
- Be certain wood is completely dry before enclosing or painting.

Concrete and cinderblock:

- Use HEPA vacuum to remove dust and spores if necessary.
- Clean surfaces with mild detergent and water.
- Do NOT saturate surfaces with water.
- Do NOT pressure wash interior surfaces
- Be sure concrete or cinderblock is allowed to dry completely.

Wallboard:

- Evaluate quantity of mold and where it is present.
- Determine how mold occurred and where water or moisture came from.
- Small areas of mold on the surface of the wallboard can be cleaned.
- Large areas of mold should prompt replacement of affected wallboard panels.
- Replacement of gypsum wallboard is often cheaper than cleaning, prepping and painting existing wallboard.
- The mold on the hidden side of the sheetrock is usually more than what is visible.
- Wet/moldy insulation should be removed from wall cavity.
- Remove visible mold with HEPA vacuum before removing wallboard.

Carpet and cushions:

- All carpet and padding should be dried.
- Mold growth on carpet:
 - If less than ten (10) square feet of the carpet is affected by the mold, the carpet can be cleaned by steam cleaning and cleaning solution, allowed to dry and HEPA vacuumed.
 - If more than ten (10) square feet of the carpet is affected by the mold, the carpet should be removed and discarded. Prior to removal, the carpet should be HEPA vacuumed.
 - In areas where carpet is present in an area with moldy materials, but the carpet is not moldy: HEPA vacuum the carpet and clean if necessary to remove musty odors.

Clean Up and Disposal Procedures (Continued)

Clothing, drapes, bedding and upholstered furniture:

- Active mold growth:
 - Generally discard items; laundering or dry cleaning can be performed but staining and weakened fabric will likely occur where there was active mold growth.
- No mold growth:
 - Launder, dry-clean or steam clean to remove most spores and musty odor.

Books and Papers:

- If wet and there is no mold – dry immediately or store in freezer or freeze-dry.
- If wet and moldy – discard or dry and clean with HEPA vacuum.
- If dry and moldy – discard or clean with HEPA vacuum.

Cleaning:

- Mild detergent solution and water.

Cleaning Sequence:

- Clean furnishings such as tables and chairs as they are removed from the space.
- Place plastic bags or wrap items to be disposed of, such as moldy clothing etc. then remove from space.
- Clean visible mold from surfaces and bag or wrap in plastic.
- Cycle negative air machines or allow setting time of about 12 hours or more.
- Perform final cleaning from top down of all surfaces.

Waste Disposal:

- Currently there are no federal or state regulations governing mold waste disposal.
- EPA recommendations and good practices dictate that moldy materials be placed in plastic bags or wrapped in plastic and sealed.
- Waste should be sent to the landfill as construction and demolition (C&D) debris.