November 7, 2024

Ms. Sandra Duran
Combined Facilities Director
Town of Sudbury
275 Old Lancaster Road
Sudbury, MA 01776

Re: Sampling of Surfaces for Mold, Hosmer House – 299 Old Sudbury Road, Sudbury, MA

Dear Ms. Duran:

Introduction & Summary

The Town of Sudbury retained Smith and Wessel Associates, Inc. (SWA) to perform a mold evaluation at the Hosmer House located at 299 Old Sudbury Road, Sudbury, Massachusetts. The house is historic, serves as a museum and was constructed circa 1793. In particular, SWA was tasked with collecting swab samples from various surfaces throughout the building to determine for mold.

SWA has performed several evaluations for the presence of mold and moisture in finishes over the past two years. Initially, the evaluation included the 2nd floor Art Storage and adjoining spaces. Testing indicated that airborne mold spores were elevated in the Art Storage room and corrective measures were taken to mitigate the issue. Following corrective measures, further testing was conducted and satisfactory results were realized.

Further evaluations were performed through the house and it was determined that elevated mold spores were realized in the basement. Again, corrective measures were undertaken including installing air scrubbers and dehumidifiers to alleviate the issue.

On October 24, 2024 Richard Bourassa representing SWA returned to the site to conduct a visual inspection for mold and swab sampling of various surfaces throughout the space for mold.

Background & Observations

During the October 24, 2024 assessment, SWA observed two dehumidifiers and a HEPA air filtration unit operating in the basement. In addition, HEPA air filtration units were also in operation in the stairwells on the main floors. No suspect visible mold or musty odors were observed during the evaluation.

Sampling & Analytical Methods

Swab Sample for Analysis of Mold Spores and Structures, Hyphae, & Other Particulates – Sterile swabs provide a standardized sampling method for the determination of mold spores, microbial, bio-aerosol, and inorganic dust contamination on surfaces. They provide the ability to quickly take a sample and measure the relative degree of contamination.

This analysis determines the types of mold spores present, and categorizes the extent of fungal material present into four categories:

- Rare: 1 to 10 spores
- Low: 11 to 100 spores
- Medium: 101 to 1,000 spores
- High: > 1,000 spores

Fifteen sterile swab samples were collected from various surfaces throughout the house. The samples were analyzed by EMSL Analytical, Inc. (EMSL) of Woburn, Massachusetts, via direct microscopic examination (EMSL Method M041). Laboratory results of all airborne and surface mold testing are presented in **Appendix A** of this report.

Findings

Surface Mold Results – Sterile swab samples were collected from tables, shelves, and a window frame in the basement, a shelf in the 1st floor north west room, a desk in the 1st floor office, baseboard trim in the 1st floor stairway, a table in the 1st floor dining room, an artwork frame in the 1st floor parlor, an artwork frame in the 2nd floor large northwest room, from the back of a piece of furniture in the 2nd floor southwest bedroom, a shelf inside the cabinet in the 2nd floor Art Storage room, a table in the 2nd floor northeast bedroom, and a window sill in the 2nd floor southeast bedroom.

Sterile swab samples provide a standardized sampling method for the determination of mold, microbial, bio-aerosol, and inorganic dust contamination. They provide the ability to quickly take a sample and measure the relative degree of contamination.

The results of the swab samples indicated three fungal spore types, including low levels of Aspergillus/Penicillium in the north and east portions of the basement, 1st floor parlor, and the 2nd floor southeast bedroom (11-100 fungal spores),and high levels in the 1st floor northwest room (>1,000 fungal spores).

Cladosporium was identified at low levels in the center of the basement, 1st floor stairway, 2nd floor southwest bedroom (11-100 fungal spores), medium levels in the south basement, 1st floor office, 2nd floor northeast bedroom, and southeast bedroom (101-1,000 fungal spores), and high levels in the west basement, 1st floor northwest room and dining room, 2nd floor large north west room, and art storage (>1,000 fungal spores).

Penicillium/Talaromyces was also identified at low levels in the south portion of the basement and 1st floor office (11-100 fungal spores), medium levels in the 1st floor stairway and dining room (101-1,000 fungal spores), and high levels in the center and west portions of the basement, 2nd floor large northwest room and southwest bedroom (>1,000 fungal spores).

Laboratory results of surface swab sampling are presented in **Appendix A** of this report.

Conclusions and Recommendations

Based on the follow-up assessment conducted on October 24, 2024, SWA makes the following conclusions and recommendations:

Some level of mold was identified on all those surfaces tested throughout the building. It is not uncommon to identify mold on surfaces within a structure as mold often enters from the outside environment through passive entry points such as open doors and windows. However, for mold to be present on all surfaces tested and to be at medium to high levels on several surfaces indicates that conditions are allowing the mold to settle and continue to colonize. The presence of Penicillium/Talaromyces on various surfaces is further evidence that mold is propagating as Talaromyces is the sexual state of Penicillium.

SWA recommends controlled cleaning of surfaces noted to have medium to high levels of mold spores be performed by qualified personnel using approved antibacterial biocides and engineering controls. In addition, further measures to mitigate moisture in finishes will assist in reducing conditions that are suitable to mold growth and propagation. It may be necessary to install additional dehumidifiers, air scrubbers and to promote air flow through use of fans and the like. Doors to rooms should not be left closed for long periods of time as this does not allow proper air flow and promotes conditions conducive to mold growth.

Once the surfaces have been cleaned and additional air scrubbers and dehumidifiers installed, it would be prudent to wait for a period of time and then perform follow-up testing for surface mold. It would also be prudent to include air testing for airborne mold spores.

If mold continues to propagate in the space, it may be necessary to contract a building specialist to evaluate the building envelope, mechanical systems, etc.

Should you have any questions or concerns please do not hesitate to contact us at your earliest convenience.

Respectfully submitted,
SMITH & WESSEL ASSOCIATES INC.

Richard A. Bourassa, Jr.
Project Manager

Appendix A

Laboratory Analytical Sheets

EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801
Tel/Fax: (781) 933-8411 / (781) 933-8412
http://www.EMSL.com / bostonlab@emsl.com

EMSL Order: 132406497
Customer ID: SMIT50B
Customer PO:
Project ID:

Attention: Richard Bourassa
Smith & Wessel Associates, Inc.
188 Greenville Street
Spencer, MA 01562

Project: Hosmer House/24330

Phone: (978) 346-4800
Fax: (978) 346-7265
Collected Date: 10/24/2024
Received Date: 10/25/2024
Analyzed Date: 10/28/2024

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Swab Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number: / Client Sample ID: / Sample Location:	132406497-0001 SW01 Basement North	132406497-0002 SW02 Basement East	132406497-0003 SW03 Basement South	132406497-0004 SW04 Basement West	132406497-0005 SW05 Basement Center
Spore Types	Category	Category	Category	Category	Category
Alternaria (Ulocladium)	-	-	-	-	-
Ascospores	-	-	-	-	-
Aspergillus/Penicillium++	Low	Low	-	-	-
Basidiospores	Rare	Rare	-	-	-
Bipolaris++	-	-	-	-	-
Chaetomium++	-	-	-	-	-
Cladosporium	Rare	Rare	Medium	High	Low
Curvularia	-	-	-	-	-
Epicoccum	Rare	-	-	-	-
Fusarium++	-	-	-	-	-
Ganoderma	-	-	-	-	-
Myxomycetes++	Rare	Rare	Rare	Rare	Rare
Pithomyces++	-	-	-	-	-
Rust	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-
Stachybotrys/Memnoniella	Rare	-	-	-	-
Unidentifiable Spores	Medium	-	-	-	-
Zygomycetes	-	-	-	-	-
Acremonium++	Low	-	-	-	-
Aureobasidium++	-	-	-	-	-
Penicillium/Talaromyces	-	-	Low	*High*	*High*
Hyphal Fragment	Medium	Low	Low	-	-
Insect Fragment	-	-	-	-	-
Pollen	-	-	-	-	-
Fibrous Particulate	-	-	-	-	-

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

- Denotes Not Detected.
++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.

Steve Grise, Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

Initial report from: 10/28/2024 09:50 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

EMSL Analytical, Inc.

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Project: Hosmer House/24330

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Swab Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number:	132406497-0006	132406497-0007	132406497-0008	132406497-0009	132406497-0010
Client Sample ID:	SW06	SW07	SW08	SW09	SW10
Sample Location:	1st Floor NW Room	1st Floor Office	1st Floor Stairway	1st Floor Dining Room	1st Floor Parlor
Spore Types	Category	Category	Category	Category	Category
Alternaria (Ulocladium)	-	-	-	-	-
Ascospores	-	-	-	-	-
Aspergillus/Penicillium++	*High*	-	-	-	Low
Basidiospores	-	-	-	-	-
Bipolaris++	-	-	-	-	-
Chaetomium++	-	-	-	-	-
Cladosporium	High	Medium	Low	High	Rare
Curvularia	-	-	-	-	-
Epicoccum	-	-	-	-	-
Fusarium++	-	-	-	-	-
Ganoderma	-	-	-	-	-
Myxomycetes++	-	-	Rare	Rare	-
Pithomyces++	-	-	-	-	-
Rust	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-
Zygomycetes	-	-	-	-	-
Acremonium++	-	-	-	-	-
Aureobasidium++	-	-	-	Rare	-
Penicillium/Talaromyces	-	*Low*	*Medium*	*Medium*	-
Hyphal Fragment	-	-	-	-	-
Insect Fragment	-	-	-	-	-
Pollen	-	-	-	-	-
Fibrous Particulate	-	-	-	-	-

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

- Denotes Not Detected.
++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.

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or other Approved Signatory

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Project: Hosmer House/24330

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Swab Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number:	132406497-0011	132406497-0012	132406497-0013	132406497-0014	132406497-0015
Client Sample ID:	SW11	SW12	SW13	SW14	SW15
Sample Location:	2nd Floor Large NW Room	2nd Floor SW Bedroom	2nd Floor Art Storage	2nd Floor NE Bedroom	2nd Floor SE Bedroom
Spore Types	Category	Category	Category	Category	Category
Alternaria (Ulocladium)	-	-	-	-	-
Ascospores	-	-	-	-	-
Aspergillus/Penicillium++	-	-	-	-	Low
Basidiospores	-	-	-	-	Rare
Bipolaris++	-	-	-	-	-
Chaetomium++	-	-	-	-	-
Cladosporium	High	Low	High	Medium	Medium
Curvularia	-	-	-	-	-
Epicoccum	Rare	Rare	-	-	-
Fusarium++	-	-	-	-	-
Ganoderma	-	-	-	-	-
Myxomycetes++	-	Rare	-	-	Rare
Pithomyces++	Rare	-	-	-	-
Rust	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-
Zygomycetes	-	-	-	-	-
Acremonium++	-	-	-	-	-
Aureobasidium++	-	-	-	-	-
Penicillium/Talaromyces	*High*	*High*	-	-	-
Hyphal Fragment	-	-	-	-	-
Insect Fragment	-	-	-	-	-
Pollen	-	Low	-	-	-
Fibrous Particulate	-	-	-	-	-

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

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