



8/22/2019

**Mold Inspection Analysis
&
Remediation
Scope of Work**



**6700 Strathmore Road
Richmond VA 23237**

A Service Provided by Madison Taylor Inc.

P.O. Box 868 Gainesville, VA 20156

877-932-4652

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8/22/2019

US Army Reserve Center
6700 Strathmore Road
Richmond VA 23237

Re: 6700 Strathmore Road

Dear US Army Reserve Center,

Per your request, Madison Taylor Indoor Environmental conducted a mold inspection on 8/19/2019 at the above referenced property. The inspection was conducted to gather pertinent data for the assessment of mold levels within the building, moisture level evaluation of building materials, as well as the formation of microbial remedial specifications. Limited microbial samples (spore trap, slide & swab) were taken during this assessment. Digital and Thermal photos were taken and may be included within this report.

Background Information

The following information was reported to Madison Taylor Inc. at the time of this assessment:

- Client requested mold inspection

Visual Inspection

- Visible mold fully colonized in carpets in conference room
- Visible mold on hard surface conference table
- Visible mold on all chairs in conference room
- Elevated relative humidity 80% average on 2nd level
- Elevated relative humidity 1st level
- Temperature in the building ranged between 75 and 84 degrees (f)
- Visible mold on chairs in many offices noted
- Strong microbial volatile organic compound odors in the building
- Some occupants in building reporting a potential health reaction to the indoor air quality of the building
- Extensive mold growth in HVAC unit/air handler
- Standing water in the air handler HVAC unit with floating colonized mold in the condensation overflow pan and likely bacteria growth observed

Certificates of Laboratory Analysis are provided in Appendix A.

Microbial Sampling

Non-viable air samples were collected to further assess the conditions and to confirm/identify the presence of fungal organisms. Non-viable microbial air samples were collected using an Aero-Trap Spore Impactor. The Aero-Trap was pre-calibrated to draw air through the Impactor at a rate of 15.0 liters per minute and samples were run for 2 minute periods in each location. Samples were delivered to Aerobiology Laboratory Associates, Inc. of Virginia for analysis. Fungal analysis was performed by direct microscopic exam to identify fungal groups and concentration.

Conclusion

Based on data collected during this assessment the following analysis was made:

Fungal growth is evident (see lab results) in portions of the dwelling. Fungal growth is believed to extend to areas not accessible at the time of inspection, to include ceiling or wall cavities. Water/moisture intrusion in the living spaces was supporting continued fungal growth. The moisture source is due to Relative Humidity Problem. Testing and analysis show elevated (above ambient) concentrations of fungal spores, including hyphal elements, *Penicillium/Aspergillus*, *Pithomyces* and *Cladosporium*

Recommendations

The following recommendations are provided based on data collected during this assessment:

Investigation and development of corrective measures and verification of corrective measure should be conducted regarding moisture in the Entire building portions of the building. Have an HVAC company insure HVAC systems are properly functioning and conditioning air. The HVAC units need to reduce relative humidity in the entire building to below 60% RH. These actions should be completed immediately following remediation. Remedial actions should strictly follow industry accepted practices and procedures for fungal abatement.

Microbial remedial specifications for the home were generated and are attached for your use.

At present there are no government regulations in place to regulate the removal of mold/bacteria and/or what are permissible levels. Common Sense has to prevail; we are dealing with a fungus that is invisible to the naked eye by itself. Mold is wonderful at fulfilling its purpose when outside but can become a contaminant inside a built environment and produce allergenic reactions when certain people are exposed to them.

Every contaminated site is different and different protocol and methods will need to apply, you the home or building owner will be informed of progress as an ongoing dialog. The purpose of Mold Remediation is to identify moisture problems and allow the building owner opportunity to fix it. We remove contaminated materials and contaminants in such a way as to prevent human exposure and further damage to building materials and furnishings. Porous materials that have mold and/or bacteria in them or growing on them may have to be discarded because they can infiltrate porous substances and make it impossible to fully decontaminate them. As a general rule it is not sufficient to just kill the mold, for example with a biocide. The mold must be removed because the chemicals and proteins that they are made of can still cause an allergic reaction to humans and pets although non-viable or dead.

Unless specified this estimate does not include the build back that may be necessary after demolition of moldy unsalvageable materials. The following estimate is based on the information available at the time of inspection and is subject to change. Some factors, but not all, that may affect the final price are delays during the remediation process caused by outside forces, such as contractor delay, the finding of previously undiscovered mold, delays in getting tests results, etc. The procedures are the ones that are dictated in a third party protocol report or the best practices deemed by us using due precaution and professional judgment. If Post tests are not conducted nor post clearance tests performed the building owner and tenants understand that we (Madison Taylor Inc. or any of its subsidiaries) cannot be responsible for any microbial contamination that may or may not already be present. If we through breach of containment fail to keep the work area or adjacent areas at a safe level we will be responsible for the immediate area of concern and will clean it up promptly and at our own expense.

Since mold requires water and/or high humidity to grow we cannot be responsible for future changes in the environment. It is important to fix the moisture problem that caused the microbial problem in the first place. Future delayed or insufficient maintenance is imperative to prevent future growth. Hence, Madison Taylor Inc. cannot guarantee against any future re-occurrence. The manufacturers of encapsulates that may be offered have their own warranties that are in force for certain amounts of time. See their literature for details. We guarantee that the procedures and products used are the industry standards (or Better) at the time of the work. MSDS sheets are available for all products used and OSHA mandated work practices are to be followed. Insurances, Certifications, Licenses, and References are available for you inspection at anytime.

We are not Health Practitioners; you may or may not gain health benefits from our services. Because of elevated levels of mold and health concerns in the house we strongly suggest you consult with your doctor prior to any remediation attempts.

If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

John K. Taylor

Certified Indoor Environmentalist-CIE,

Certified Mold Professional-CMP

Certified Mold Technician-CMT

Certified Mold Inspector-CMI

Certified Master Home & Building Inspector

Certified Water Restoration Professional -WRT,

Certified Applied Microbial Remediation Professional- AMRT

Approved HUD 203(k) Consultant

Madison Taylor Inc.

Inspection, Environmental & Restoration

Corporate Mailing Address

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Enclosure

Appendix A

Certificates of Laboratory Analysis





Certificate of Analysis
AIHA-LAP EMLAP# 102977

43760 Trade Center Place
Suite 100
Sterling, Virginia 20166
(877) 648-9150
www.aerobiology.net

Madison Taylor, Inc.
P.O. Box 868
Gainesville, Virginia 20156
Attn: John Taylor
Project: **US Army Reserve Ctr. JT**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 08/19/2019
Date Received: 08/21/2019
Date Analyzed: 08/21/2019
Date Reported: 08/21/2019
Project ID: 19037157
Page 1 of 3

1054 Spore Trap Analysis: SOP 3.8

| Client Sample Number | 1 | | | | 5 | | | |
|-------------------------------|-----------------------------------|---------|-------|--------|-----------------------------------|--------|-------|--------|
| Sample Location | Command Conf Room | | | | Control | | | |
| Sample Volume (L) | 30 | | | | 30 | | | |
| Lab Sample Number | 19037157-001 | | | | 19037157-005 | | | |
| Spore Identification | Raw Ct | spr/m³ | % Ttl | In/Out | Raw Ct | spr/m³ | % Ttl | In/Out |
| Alternaria | 3 | 100 | <1 | - | - | - | - | - |
| ascospores | 25 | 833 | <1 | 3/1 | 8 | 267 | 20 | - |
| basidiospores | - | - | - | - | 12 | 400 | 30 | - |
| Cercospora | 1 | 33 | <1 | - | - | - | - | - |
| Cladosporium | 3 | 100 | <1 | 1/2 | 7 | 233 | 18 | - |
| Curvularia | 4 | 133 | <1 | - | - | - | - | - |
| Drechslera/Bipolaris group | 1 | 33 | <1 | - | - | - | - | - |
| hyphal elements | 5 | 167 | <1 | - | - | - | - | - |
| Penicillium/Aspergillus group | 648 | 1293413 | 100 | >100/1 | 11 | 367 | 28 | - |
| Pithomyces | 20 | 667 | <1 | 20/1 | 1 | 33 | 3 | - |
| Rusts | 1 | 33 | <1 | - | - | - | - | - |
| Smuts,Periconia,Myxomycetes | - | - | - | - | 1 | 33 | 3 | - |
| | Debris Rating 2 | | | | Debris Rating 2 | | | |
| Analytical Sensitivity | Analytical Sensitivity: 33 spr/m³ | | | | Analytical Sensitivity: 33 spr/m³ | | | |
| Comments | | | | | | | | |
| Total *See Footnotes | 711 | 1295513 | ~100% | >100/1 | 40 | 1333 | ~100% | - |

Report developed and generated by Madison Taylor Indoor Environmental Division.
Reviewed by a Certified Indoor Environmental Professional.



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Page 2 of 3

| Client Sample Number | 4 | | | | 5 | | | |
|-------------------------------|-----------------------------------|--------|-------|-----------------|-----------------------------------|--------|-------|--------|
| Sample Location | Office 1st Floor 109 | | | | Control | | | |
| Sample Volume (L) | 30 | | | | 30 | | | |
| Lab Sample Number | 19037157-004 | | | | 19037157-005 | | | |
| Spore Identification | Raw Ct | spr/m³ | % Ttl | In/Out | Raw Ct | spr/m³ | % Ttl | In/Out |
| ascospores | 4 | 133 | 5 | 1/2 | 8 | 267 | 20 | - |
| basidiospores | 2 | 67 | 3 | 1/6 | 12 | 400 | 30 | - |
| Cladosporium | 1 | 33 | 1 | 1/7 | 7 | 233 | 18 | - |
| Curvularia | 2 | 67 | 3 | - | - | - | - | - |
| Penicillium/Aspergillus group | 58 | 1933 | 78 | 5/1 | 11 | 367 | 28 | - |
| Pithomyces | 6 | 200 | 8 | 6/1 | 1 | 33 | 3 | - |
| Smuts, Periconia, Myxomycetes | - | - | - | - | 1 | 33 | 3 | - |
| Ulocladium | 1 | 33 | 1 | - | - | - | - | - |
| Debris Rating 2 | | | | Debris Rating 2 | | | | |
| Analytical Sensitivity | Analytical Sensitivity: 33 spr/m³ | | | | Analytical Sensitivity: 33 spr/m³ | | | |
| Comments | | | | | | | | |
| Total *See Footnotes | 74 | 2467 | ~100% | 2/1 | 40 | 1333 | ~100% | - |

Client Sample #: 2
Sample Location: Conf Carpet
Test: 1051, Surface - Qualitative Direct Microscopic Exam SOP 3.7: 48hr TAT

Lab Sample #: 19037157-002

| Results: | Observation |
|--|-------------------------|
| Moderate Aspergillus conidiophores seen | 1 per 5 fields |
| Moderate hyphal elements seen | 1 per 5 fields |
| Numerous Penicillium/Aspergillus group spores seen | 3-4 per field (minimum) |

Debris Rating: 2

Client Sample #: 3
Sample Location: CSM 228A
Test: 1051, Surface - Qualitative Direct Microscopic Exam SOP 3.7: 48hr TAT

Lab Sample #: 19037157-003

| Results: | Observation |
|--|-------------------------|
| Numerous Cladosporium spores seen | 3-4 per field (minimum) |
| Numerous hyphal elements seen | 3-4 per field (minimum) |
| Numerous Penicillium/Aspergillus group spores seen | 3-4 per field (minimum) |

Debris Rating: 2



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Footnotes and Additional Report Information

Debris Rating Table

| | | |
|---|---|---|
| 1 | Minimal (<5%) particulate present | Reported values are minimally affected by particulate load. |
| 2 | 5% to 25% of the trace occluded with particulate | Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded. |
| 3 | 26% to 75% of the trace occluded with particulate | Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded. |
| 4 | 75% to 90% of the trace occluded with particulate | Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded. |
| 5 | Greater than 90% of the trace occluded with particulate | Quantification not possible due to large negative bias. A new sample should be collected at a shorter time interval or other measures taken to reduce particulate load. |

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1. Penicillium/Aspergillus group spores are characterized by their small size, round to ovoid shape, being unicellular, and usually colorless to lightly pigmented. There are numerous genera of fungi whose spore morphology is similar to that of the Penicillium/Aspergillus type. Two common examples would be Paecilomyces and Acremonium. Although the majority of spores placed in this group are Penicillium, Aspergillus, or a combination of both. Keep in mind that these are not the only two possibilities.
2. Ascospores are sexually produced fungal spores formed within an ascus. An ascus is a sac-like structure designed to discharge the ascospores into the environment, e.g. Ascobolus.
3. Basidiospores are typically blown indoors from outdoors and rarely have an indoor source. However, in certain situations a high basidiospore count indoors may be indicative of a wood decay problem or wet soil.
4. The colorless group contains colorless spores which were unidentifiable to a specific genus. Examples of this group include Acremonium, Aphanocladium, Beauveria, Chrysosporium, Engyodontium microconidia, yeast, some arthrospores, as well as many others.
5. Hyphae are the vegetative mode of fungi. Hyphal elements are fragments of individual Hyphae. They can break apart and become airborne much like spores and are potentially allergenic. A mass of hyphal elements is termed the mycelium. Hyphae in high concentration may be indicative of colonization.
6. Dash (-) in this report, under raw count column means 'not detected (ND)'; otherwise 'not applicable' (NA).
7. The positive-hole correction factor is a statistical tool which calculates a probable count from the raw count, taking into consideration that multiple particles can impact on the same hole; for this reason the sum of the calculated counts may be less than the positive hole corrected total.
8. Due to rounding totals may not equal 100%.
9. Analytical Sensitivity for each spores is different for Non-viable sample when the spores are read at different percentage. Analytical Sensitivity is calculated as spr/m^3 divided by raw count. $\text{spr/m}^3 = \text{raw counts} \times (100\% / \text{read}) \times (1000 / \text{Sample volume})$. If Analytical Sensitivity is 13 spr/m^3 at 100% read, Analytical Sensitivity at 50% read would be 27 spr/m^3 , which is 2 times higher. Analytical Sensitivity provided on the report is based on an assumed 100% of the trace being analyzed.
10. Minimum Reporting Limits (MRL) for BULKS, DUSTS, SWABS, and WATER samples are a calculation based on the sample size and the dilution plate on which the organism was counted. Results are a compilation of counts taken from multiple dilutions and multiple medias. This means that every genus of fungi or bacteria recovered can be counted on the plate on which it is best represented.
11. If the final quantitative result is corrected for contamination based on the blank, the blank correction is stated in the sample comments section of the report.
12. The results in this report are related to this project and these samples only.
13. For samples with an air volume of < 100L, the number of significant figures in the result should be considered (2) two. For samples with air volumes between 100-999L, the number of significant figures in the result should be considered (3) three. For example, a sample with a result of 55,443 spr/m^3 from a 75L sample using significant figures should be considered 55,000. The same result of 55,443 from a 150L sample using significant figures should be considered 55,400 spr/m^3 .
14. If the In/Out ratio is greater than 100 times it is indicated >100/1, rather than showing the real value.

Terminology Used in Direct Exam Reporting

Conidiophores are a type of modified hyphae from which spores are born. When seen on a surface sample in moderate to numerous concentrations they may be indicative of fungal growth.

Suzanne S. Blevins

Suzanne S. Blevins, B.S., SM (ASCP)
Laboratory Director

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Report developed and generated by Madison Taylor Indoor Environmental Division.
Reviewed by a Certified Indoor Environmental Professional.

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Appendix B

Microbial Remediation Specifications



Fungal Remediation Specifications

- Personnel performing remediation or cleaning of fungal contamination may be at risk for developing Organic Toxic Dust Syndrome (OTDS) or Hypersensitivity Pneumonitis. OTDS may occur after a single heavy exposure to fungi-contaminated dust. All personnel must utilize appropriate personal protection (PPE) in the form of approved respirators, eye protection and protective clothing and gloves. Use of these measures should be restricted to those trained in their proper use.
- Use of Anti-Microbial solutions must be limited to properly ventilated areas. Do not combine chemicals as improper mixing may produce poisonous gasses.
- Remediation should carefully follow the following documents: IICRC S520, EPA Mold Remediation in Commercial Buildings and Schools and New York City Standards for mold remediation.
- These Microbial Remediation Specifications do not address any other potential environmental hazards other than mold that might be present in the referenced property and only pertains to those areas included in the assessment and the data provide regarding those areas. Consideration for potential exposure to environmental hazards whether through implementation of these guidelines or any other activity to take place in the property must be evaluated.

Specifications

Elevated concentrations (above ambient) of potentially toxigenic microbial organisms were noted in the Entire building of the property.

Remediation guidelines are generated by Madison Taylor Inc. at the request of and for the exclusive use of US Army Reserve Center. Copies of same will not be released by Madison Taylor Services. to any third party without the prior express written consent from the client named in this report. This report applies only to those conditions provided for the time, place and location referenced by the client. This report makes no express or implied warranty or guarantee as to the implementation methodology used by the client. Madison Taylor Services is not able to assess the degree of hazard resulting from implementation of these guidelines, or from personal exposure to microbial organisms.

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IMPORTANT

Reassess containment and PPE if additional areas of visible fungal growth are discovered during the implementation of this Microbial Remediation Specification.

Demolition:

1. Set up containment barriers and achieve negative air (-.02 lb) within work areas.
2. Removal and disposal of contaminated materials (fabric chairs, carpet) according to accepted industry standards.
 - Remove fabric chairs with colonized mold in the building
 - Remove carpets with colonized mold approx 400 sft
 - Remove additional building materials as needed

Remediation/Cleaning:

1. Sanding and/or wipe down of all exposed joists and structural items as needed.
2. Detailed sanding and/or treatment of exposed contaminated surfaces.
3. Detail cleaning using (hepa-vac, chemical wipes)
4. Full unit wipe-down and treatment
5. Application of Anti-Microbial Solution (Benefect) to exposed wood, plastic and concrete surfaces as needed
6. Contents cleaning furnishings etc. entire building required
7. HVAC duct system cleaning.
8. Continuous air changes utilizing 3 stage air scrubbers.

Post-abatement Sampling:

1. Non-viable spore trap and swab/tape sampling mirroring the initial series of tests will generally take place for clearance. Particle counting and other inspection methods may be utilized instead if Madison Taylor Inc. deems these methods sufficient to provide a warranty on work. Third Party Firm Clearance Testing will be provided for all fanniemae / dbi projects according to their contract requirements.
2. Interpretation- Sample(s) analysis will be made for comparison of indoor sample(s) to the outdoor ambient (or control) sample(s). Samples collected indoors should be quantitatively equal to or less than the outdoor (or control) sample(s) and qualitatively similar or results should not be unusual for the conditions noted.
3. Final clearance for re-build once acceptable levels are achieved and corrective measures have been completed.

Note: Remediation specifications may require revision and change orders if circumstances change or new facts are discovered.

Appendix C

Microbial Remediation Proposal



Proposal

Madison Taylor Services guarantees to perform the mold remediation process according to the industry accepted guidelines contained in IICRC S520, NYC Guidelines and EPA Standards. The procedures required for this contract are defined further in the Explanation of Remediation portion of this document.

Area(s) of Concern:

- Entire building

Scope of Remediation

1. The (Area of Concern) will be isolated from the unaffected area(s) of the building by constructing a series of 6 mil Polyethylene containment barriers and sealing the ventilated areas.
2. Negative Air Machines/Scrubbers will be located in and around the affected areas to maintain negative air pressure (-.02) within the containment barriers. The Air Scrubber will also filter the contaminated air removing particulates as small as .03 microns.
3. All demolition materials (sheet rock, insulation, vapor barriers, soda blasting media etc.) will be disposed of according to Local, State and Federal Guidelines by a designated and qualified Madison Taylor Services representative. If contaminated materials must be transported through “clean areas” they will be wrapped or bagged in 6 mil plastic to prevent the spread of mold to uncontaminated sections of the building.
4. Remaining surfaces (joists, studs and concrete etc.) will be soda blasted, sanded and/or brushed (as required) to remove any remaining fungi. Once the cleaning process is complete, the surfaces may be treated with an anti-microbial biocide compound to prevent further growth and kill any remaining spores. If the use of anti-microbial biocide is required, prior approval for application will be documented in writing and signed by a Madison Taylor Services representative and all homeowner(s). Material Safety Data Sheets (MSDS) describing the compound and its risks will be provided to all occupants.
5. The remediation process will end when the Project Manager determines through inspection, testing and laboratory analysis that the project has been successful in returning the contaminated areas back to pre-event levels.

Pricing

Remediation Costs \$34,002.00

Fee for Service:

\$17,001.00 due at contract signing and \$17,001.00 due at final clearance

Estimated Remediation:

1 working days

Estimated Start Date:

7 to 10 working days

Included in Remediation Costs:

- Labor and Material for Remediation Scope of work (Attached)
- Disposal Container for Contaminated Material
- Tools for Remediation (Attached)
- Equipment Trailer Drop and Retrieve
- Supplement power if needed (Generator/Compressor on Equipment Trailer)
- Clearance testing and inspection.

Contingency: In the event the remediation process reveals additional contamination, a change order may be necessary. Additional work not addressed in this proposal and scope of work will not proceed without a signed change order if additional charges will be required. Madison Taylor Inc. has permission to remove any and all building materials or other contaminated items from the dwelling to achieve clearance. In some cases additional demolition or removal will be made without approval when this takes place, there will be no additional charges to the client.

Once your mold remediation project starts an equipment trailer and a debris trailer will be dropped. The equipment trailer will have the equipment listed on the required tools, equipment and supply form which is attached to your scope of work. The debris trailer is used to dispose of contaminated material and this container will not be covered and will leak unsanitary water during rain and when pulled from site. The trailer removal and set will be made by large vehicles and will affect the ground area you designate for the drop. Both the debris and equipment trailer should not be tampered with and should be avoided by the client unless accompanied by an Madison Taylor Services Representative.

30 yd dumpster

Designated Trailer Drop Area

Tools, Equipment and Supplies – Mold Remediation

Job Name: 6700 Strathmore Road

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| | | | | |
|-----------------------------|----------|-------------------------------------|-----------|-------------------------------------|
| Air Scrubber | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Hepa Vac wet/dry | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Tyvox Suits | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Respirators / filters/ Pump | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Plastic Size and Mil | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Towels | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Chemicals | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Drylock | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Spray Bottles | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Fan/ Dryers | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Extension Cord | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Light | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Extra Equipment Filters | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Staple Gun | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Tape/ Duct Tape | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Shop VAC & Filters | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Chlorine | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Trash Can | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Buckets | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Brushes | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| HVAC Cleaning Service | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| First Aid Kit | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Magnet tool | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Pry Bars | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Dust Pan | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Gloves | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Push Broom | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Wall Board Saw | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Mop | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Soda Blaster | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Paper Towels | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Windex | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Dehumidifier | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Drop Cloths | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Soda Bags | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Straps/Bungie | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Moisture Meter | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Carbon For HVAC | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| General Tools | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Paint Tools | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Containment Rods | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Floor Covering | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Absorbent spill protect | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |
| Misc. on proj. mang. list | Required | <input checked="" type="checkbox"/> | Confirmed | <input checked="" type="checkbox"/> |

Report developed and generated by Madison Taylor Indoor Environmental Division.
Reviewed by a Certified Indoor Environmental Professional.

Appendix D

Material Safety Data Sheet (MSDS)



MATERIAL SAFETY DATA SHEET

SECTION I – PRODUCT IDENTIFICATION

Product Name: Benefect® Botanical Disinfectant
Product Use: Disinfectant
Regulatory Class: Registered Product – EPA # 84683-1-74771
D.O.T. Classification: Not Regulated
TDG Classification: Not Regulated
Manufacturer: Sensible Life Products
Address: 7 Innovation Drive, Flamborough, Ontario L9H 7H9
Telephone: (905) 690-7474
Emergency Phone: (905) 690-7474

| | |
|--------------|---|
| HEALTH | 0 |
| FLAMMABILITY | 0 |
| REACTIVITY | 0 |

SECTION II – ACTIVE INGREDIENTS

| Ingredients | CAS# | WT% | ACGIH-TLV | LD ₅₀ |
|-------------|-----------|---------|------------------|----------------------|
| Oils, thyme | 8007-46-3 | 0.3 – 1 | None established | 4700 mg/kg oral, rat |

SARA – Section 313 (Toxic Chemical Release Reporting) 40 CFR 372 – No ingredients above reportable quantities.
 Toxic Substances Control Act (TSCA) – All the ingredients are listed or exempt from listing on the Chemical Substance Inventory.
 California Proposition 65 – No ingredients listed.

SECTION III – PHYSICAL AND CHEMICAL DATA

Boiling Point (°C): As for water
Vapor Pressure (mm Hg): Not applicable
Vapor Density (Air = 1): Not applicable
Solubility in Water: Some separation occurs, agitation not required, efficacy is guaranteed
Physical State: Liquid
Appearance: Light Tan
Freeze-Thaw Stable: Yes

Specific Gravity (H₂O=1): 1.00-1.02
% Volatile (Wt%): Not applicable
Evaporation Rate: As per water
pH (100%): 4.0 - 5.0

Viscosity: As per water
Odor: Lemon - Spice

SECTION IV – FIRE AND EXPLOSION DATA

Flammability: Not flammable
Flash Point (°C, TCC): Not Applicable
Hazardous Combustion Products: None
Auto-ignition Temperature: Non-combustible

LEL: Not applicable
UEL: Not applicable

SECTION V – REACTIVITY DATA

Conditions for Chemical Instability: Stable
Incompatible Materials: None known
Reactivity, and Under What Conditions: As for water
Hazardous Decomposition Products: None

SECTION VI – TOXICOLOGICAL PROPERTIES

Route of Entry: Inhalation most likely

ACUTE TOXICITY PROFILE:

| Route of Exposure | Result | Reference/Verification |
|----------------------|-------------------------------------|---|
| Ingestion | EPA Category IV (>5000 mg/kg) | EPA Toxicity Profile Review for 84683-1 |
| Dermal Toxicity | EPA Category IV (>5000 mg/kg) | EPA Toxicity Profile Review for 84683-1 |
| Inhalation | EPA Category IV (>2 mg/L) | EPA Toxicity Profile Review for 84683-1 |
| Eye Irritation | EPA Category IV ("minimal effects") | EPA Toxicity Profile Review for 84683-1 |
| Skin Irritation | EPA Category IV ("no irritation") | EPA Toxicity Profile Review for 84683-1 |
| Dermal Sensitization | Non-Sensitizer | EPA Toxicity Profile Review for 84683-1 |

SUMMARY (as per EPA Toxicity Profile Review for 84683-1):

Signal Word (e.g. DANGER, WARNING or CAUTION): None required on product label, as all routes of exposure are Category IV.

Precautionary Statements: None are required on product label.

First Aid Statements: None are required on product label.

EFFECTS OF CHRONIC EXPOSURE:

Does not contain any recognized carcinogens, mutagens or reproductive toxicants.

SECTION VII – ECOLOGICAL DATA

Environmental Fate: "Readily biodegradable" (85% in 28 days, OECD 301D Method)
Aquatic toxicity: "Not toxic to aquatic life" (IC50 >100 mg/L, Protocol EPS 1/RM/24)

SECTION VIII – PREVENTATIVE MEASURES

Gloves: None required

Eye Protection: None required

Respiratory Protection: None required

Other Protective Equipment: None required by OSHA or NIOSH

Engineering Controls: General ventilation adequate

Leak and Spill Procedure: Dispose of down drain or absorb and place in trash.

Waste Disposal: No special disposal requirements. Dispose of down drain or absorb and place in trash.

Comply with local government regulations, if any. Offer empty container for recycling.

Storage and Handling Requirements: Store airtight at room temperature. Keep out of the reach of children. No special handling requirements.

SECTION IX – FIRST AID

If irritation occurs, rinse affected area thoroughly with cool water. If swallowed, drink plenty of water.

SECTION X – PREPARATION INFORMATION

Date: 2011/07/20

MSDS Prepared by: Sensible Life Products

Telephone: (905) 690-7474

DISCLAIMER

The information contained herein is believed to be accurate and also represents the best information obtained by the manufacturer and recognized technical sources. Health and safety precautions in this data sheet may not be adequate for all individuals and product uses. It is the user's obligation to evaluate the information contained in this sheet along with the safe uses of the product. Good personal hygienic practices should be followed.

Sensible Life Products assumes no responsibility for injury or damage from the use of Benefect Botanical Disinfectant that in any way differs from what is provided in the label directions.

Appendix E

Photos















Report developed and generated by Madison Taylor Indoor Environmental Division.
Reviewed by a Certified Indoor Environmental Professional.





Appendix F

Remediation Contract

Owner/Contractor Agreement

| | |
|---|--|
| Owners/Agents Name(s): US Army Reserve Center | Contractor's Name: Madison Taylor Inc. |
| Address: 6700 Strathmore Road Richmond VA 23237 | Address: P.O. Box 868 Gainesville Virginia 20156 |
| Telephone Number: Work: Home: 254-220-8083 | Telephone Number: 877-932-4652 |
| Case No.: 8222019844 | |

THIS AGREEMENT, made this date, 8/22/2019, between the above mentioned (Owner/Agent) and Contractor, is for Mold/Bacteria Remediation/Cleaning of the property located at 6700 Strathmore Road Richmond VA 23237. Owner(s) shall pay the Contractor the maximum sum of \$34,002.00 for completion of the work including all sales tax due by law, together with such increases or decreases in the contract prices as may be approved in writing by both the Owner(s) and Contractor. The General Provisions listed below are made a part of this agreement.

1. Contract Documents: This agreement includes all general provisions, special provisions and plans that were accepted by the Owner(s). Work not covered by this agreement will not be required unless it is required by reasonable inference as being necessary to produce the intended result. By executing this Agreement, the contractor represents that he/she has visited the site and understands local conditions, including state and local building regulations and conditions under which the work is to be performed.

2. Owner: Unless otherwise provided for in the Agreement, the owner will secure permits and pay for necessary easements, exceptions from zoning requirements, or other actions which must precede the approval of a permit for this project. If owner fails to do so then this contract is void. If the Contractor fails to correct defective work or persistently fails to carry out the work in accordance with the agreement or general provisions, the owner may order the Contractor in writing to stop such work, or a part of the work, until the cause for the order has been eliminated.

Signature required on page (5)

3. Contractor: The Contractor will supervise and direct the work and the work of all subcontractors. He/She will use the best skill and attention and will be solely responsible for all construction methods and materials and for coordinating all portions of the work. Unless otherwise specified in the Agreement, the Contractor will provide for and/or pay for all labor, materials, equipment, tools, machinery, transportation, and other goods, facilities, and services necessary for the proper execution and completion of the work. The Contractor will maintain order and discipline among employees and will not assign anyone unfit for the task. The Contractor warrants to the owner that all materials and equipment incorporated are new and that all work will be of good quality and free of defects or faults. The Contractor will pay all sales; use and other taxes related to the work and will secure and pay for the building permits and/or other permits, fees, inspections and licenses necessary for the completion of the work unless otherwise specified in the Agreement. The Contractor will indemnify and hold harmless the owner from and against all claims, damages, losses, expenses, legal fees or other costs arising or resulting from the Contractor's performance of the work or provisions of this section. The Contractor will comply and perform the work in accordance with all rules, regulations, laws, ordinances and orders of any public authority. The Contractor is responsible for and indemnifies the owner against acts and omissions of employees, subcontractors and their employees, or others performing the work under this Agreement with the Contractor. The Contractor will provide drawings, samples, product data or other information provided for in this Agreement, where necessary.

4. Subcontractor: Selected by the Contractor, except that the Contractor will not employ any subcontractor to whom the owner may have a reasonable objection, nor will the Contractor be required by the Owner to employ any subcontractor to whom the Contractor has reasonable objection.

5. Work by Owner or Other Contractor: The Owner reserves the right to perform work related to the project, but which is not a part of the Agreement, and to award separate contracts in connection with other portions of the project not detailed in this Agreement. All Contractors and subcontractors will be afforded reasonable opportunity for the storage of materials and equipment by the Owner and by each other. Any costs arising by defective or ill-timed work will be borne by the responsible party.

6. Binding Arbitration: Claims or disputes relating to the Agreement or General Provisions will be resolved by the Construction Industry Arbitration Rules of the American Arbitration Association (AAA) unless both parties mutually agree to other methods. The notice of the demand for arbitration must be filed in writing with the other party to the Agreement and with the AAA must be made in a reasonable time after the dispute has arisen. The award rendered by the arbitrator(s) will be considered final and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

7. Cleanup and Trash Removal: The Contractor will keep the Owner's property free from waste or rubbish resulting from the work. All waste, rubbish, tools, construction materials, and machinery will be removed promptly after completion of the work by the Contractor. Mold clean up may leave staining of affected materials. It is understood Madison Taylor Services cannot be held responsible for mold, pigment or chemical stain removal.

Signature required on page (5)

If fees are not paid according to the contract to the contractor the contractor may return the waste materials to the site.

8. Time: With respect to the scheduled completion of the work, time is of the essence. If the Contractor is delayed at anytime in the progress of the work by change orders, fire, labor disputes, acts of God or other causes beyond the Contractor's control, the completion schedule for the work or affected parts of the work may be extended by the same amount of time caused by the delay.

9. Payments and Completion: Payments may be withheld because of: (1) defective work not remedied; (2) failure of Contractor to make proper payments to subcontractors, workers, or suppliers; (3) persistent failure to carry out work in accordance with this Agreement or these General Conditions, or (4) legal claims. Payments will be paid to the Contractor in two (2) payments. The first payment of \$17,001.00 will be due upon contract signing. The second and final payment of \$17,001.00 will be due within three (3) days of clearance testing. Final payments will be processed on credit card we have on file for initial payment upon verification of favorable clearance results by Acquired Home Services Inc. The initial deposit is non-refundable.

10. Protection of Property and Persons: The Contractor is responsible for initiating, maintaining, and supervising all necessary or required safety programs. The Contractor must comply with all applicable laws, regulations, ordinances, orders or laws of federal, state, county, tribal or local governments. The Contractor will indemnify the owner for all property loss or damage to the owner caused by his/her employees or his/her direct or sub-tier subcontractors.

At no time during the remediation process will any non-employee enter or attempt to enter the remediation containment spaces or work areas. All non-employees must be escorted by an Madison Taylor Services. project manager when entering areas under containment or those included in the scope of work.

11. Insurance: The contractor will purchase and maintain such insurance necessary to protect from claims that result from injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, their representatives, employees or subcontractors.

12. Changes in the Contract: The Owner may order changes, additions or modifications without invalidating the contract. Such changes must be in writing and signed by the owner and accepted by the Contractor.

13. Correction of Deficiencies: The Contractor must correct promptly any work of his/her own or his/her subcontractors found to be defective or not complying with the terms of the Contract.

14. Warranty: The Contractor will provide a two-year warranty to test and clean if recontamination occurs and visible mold is discovered. This warranty is void if there is a new water event or the original source of moisture/water is not remedied.

15. Termination: If the Owner fails to make a payment under the terms of the Agreement, through no fault of the Contractor, the Contractor may, upon ten working days written notice to the Owner, and if not satisfied, terminate this Agreement. The Owner will be responsible for paying the contractor per the terms in this Contract.

16. Attorneys' Fees and Court Costs: If legal proceedings, including arbitration, are instituted by either party to enforce any provision of this agreement, or for any other reason whatsoever involving Madison Taylor Services. as a party or as a witness to the legal proceeding, Madison Taylor Services. shall be entitled to recover reasonable attorneys' fees, reasonable witness fees at a fair market rate, court costs and all ancillary expenses incurred in resolving or defending the matter, regardless of whether it results in a judgment, dismissal, or settlement.

If the Contractor fails or neglects to carry out the terms of the contract, the Owner, after ten working days written notice to the Contractor, may terminate this Agreement. The Owner may finish the job by whatever reasonable method the owner deems expedient. If the cost of completion exceeds the contract balance, the difference, will be paid to the Owner by the Contractor.

17. Application of Wall and Floor Sealants: Madison Taylor Inc. provides and or applies moisture resistant sealants during some remediation projects. These sealants and applications are not a waterproofing guarantee for your project. Hydrostatic pressure issues and or active water leaks should be addressed by a waterproofing company and could include many actions to alleviate the problem. Please insure that the dwelling has adequate gutters and downspouts that expel away from the foundation, a positive grade that slopes away from the foundation and proper exterior sealant and drain tile at foundation locations. The sealants applied during your remediation will only help with most water vapor issues. Please consult with your remediation specialist if there is a concern.

18. Changes in scope of work: On occasion, situations are discovered during the remediation which may call for the scope of work to be modified allowing for successful mold decontamination services. Madison Taylor Inc. may change the scope of work during the remediation to accomplish a favorable clearance result. Client and owners will be made aware of any potential changes during the remediation only if there will be additional charges.

Owner(s) Signature(s) and Date

Owner(s) Signature(s) and Date

Owner(s) Signature(s) and Date

Owner(s) Signature(s) and Date

Contractor's Signature and Date

Fee For Service Authorization Form

Report developed and generated by Madison Taylor Indoor Environmental Division.
Reviewed by a Certified Indoor Environmental Professional.

I authorize Madison Taylor Services to utilize the credit card below for the agreed upon charges as detailed in the remediation report and contract. The card information is as follows:

Name On Card: _____

Card Number: _____

Card Expiration: _____

Billing Address and Zip Code For Card:

Authorized Signature / Date

Handwritten instructions on this form will be considered invalid. All charges will be made according to the agreement between the parties.