MOLD REMEDIATION PROTOCOL

Former YMCA Building
480 South 3rd Street
Clinton, Iowa 52732

Prepared For:

City of Clinton **611 South 3rd Street** **Clinton, Iowa 52732**	**East Central Intergovernmental Association** **7600 Commerce Park** **Dubuque, Iowa 52002**

Prepared By:

8951 Windsor Parkway
Johnston, IA 50131

August 19, 2024

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1.0 SUMMARY

Impact7G, Inc. (Impact7G) was retained by the city of Clinton (Client) complete a Cleanup Plan for the removal of mold withing a portion of the former Young Men's Christian Association (YMCA) building at 480 South 3rd Street (see Appendix A) in downtown Clinton, Iowa 52732 (hereinafter referred to as the "Site."

Terracon Consultants, Inc. (Terracon) completed a Moisture and Microbial Investigation on August 18 and 22, 2022 (see Appendix B) of Building A (see Structure Identification Map in Appendix C). Indoor air samples collected by Terracon revealed an indoor mold source and surface sample results confirmed microbial growth. Additionally, substrate moisture readings revealed Wet and At Risk (above 20% wood moisture equivalent (WME) and between 17%-20% WME, respectively) substrate materials. Visible suspect microbial growth, apparent water staining, and "musty" odors were observed throughout Building A.

Molds are part of the natural environment and can be found anywhere, inside or outside. Most typical indoor air exposures to mold do not pose an adverse health risk. Molds can cause potential adverse effects by producing allergens (substances that cause allergic reactions). Allergic reactions typically include symptoms such as runny nose, red eyes, and irritated throat, nose or skin. Symptoms other than allergic and irritant types are not commonly reported as a result of exposure or inhalation of mold in the indoor environment.

Due to many factors, including occupant activity, weather, indoor air exchange rates, and disturbance of microbial growth locations, airborne levels of mold can alter frequently and by great amounts. It is possible for report interpretations and ranges of accuracy to vary since comprehensive, generally accepted industry standards do not currently exist for indoor air quality inspections of mold in residential environments. The results reported and any opinions reached by Impact7G are for the benefit of the Client. Our conclusions, recommendations, and opinions are based on the Terracon Moisture and Microbial Investigation Report and an analysis of the observed site conditions. It should be understood that changes to applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge.

Due to the findings of previous investigation and observed site conditions, Impact7G has prepared this Mold Remediation Protocol to aid in the removal of mold contaminated building materials.

2.0 PROPERTY INFORMATION

The Site is comprised of an approximately 27,000 basal square foot structure located on an approximately 0.964-acre parcel. The Site is currently owned by the city of Clinton and consists of a three-story building with a basement constructed circa 1905 (Building A) and a two-story building with a basement constructed circa 1905 (Building B1); a two-story addition with a basement/sub-level constructed circa 1961 (Building B2), a three-story addition with a sub-level constructed circa 1978 (Buildings C2 and C3), and a one-story addition constructed circa 1980 (Building C1). Building A is a three-story, 6,504 basal square-foot brick and limestone structure with a basement.

The Site historically operated as a Young Men's Christian Association (YMCA).

- The first floor consists of a main lobby, non-residential rooms, and a multi-purpose room at the north end. Flooring is predominantly floor tile or carpet over floor tile. Exterior walls and the

ceiling of the first floor are plaster and lath while some interior walls are drywall. A drop ceiling (ceiling tiles) is present throughout some of the first floor.

- The second floor consists of dormitory rooms, non-residential rooms, and a large open room at the north end. Flooring on the second floor is mainly floor tile or carpet over floor tile. Exterior walls and the ceiling of the second floor are plaster and lath while some interior walls are drywall. A drop ceiling (ceiling tiles) is present throughout most of the second floor.
- The third floor consists mainly of dormitory rooms. Exterior walls and the ceiling of the third floor are plaster and lath while interior walls are mainly drywall. A drop ceiling (ceiling tiles) is present throughout most of the third floor. Flooring on the third floor is typically carpet over floor tile.
- The basement consists of two main large, open rooms and non-residential rooms. Walls in the basement are predominantly brick and concrete. Basement flooring is mainly floor tile over concrete though there is carpet over wood flooring in the open room at the north end. The ceiling of the basement is concrete and a drop ceiling (ceiling tiles) is present throughout the south portion.

The Site was vacated by January 1, 2021 and has been vacant since. Electricity and water have been shut off at the Site.

The property is eligible for listing in the National Register of Historic Places and federal funds are being used for the project. Therefore, the Iowa State Historic Preservation Office must review the project under Section 106 of the National Historic Preservation Act and approve proposed work.

3.0 INDOOR AIR QUALITY SAMPLING

A Moisture and Microbial Investigation was completed by Terracon on August 18 and 22, 2022 to identify moisture and microbial growth in Building A. The report is included in Appendix B. A summary of the results is as follows:

Airborne Mold Samples

Fungal spore trap air samples were collected at 30 locations inside the building and two locations outside the building. Duplicate samples were also collected at three locations. All air samples were submitted for analysis by "spore trap" method, which is also called "non-viable air sampling method" because spore traps do not require the germination and growth of the spores before identification. Analysis includes identification to genus or group of all fungi present, quantification to spores/m^3, and a general assessment of background debris. Currently there are no generally accepted protocols or regulations regarding air sampling for molds, in large part due to the inability of any single technique to provide a complete analysis of all mold spores and mold growth in an area.

- Total airborne fungal spore concentrations inside of the building ranged from <13 spores/m^3 to 210,000 spores/m^3.
- The total outdoor fungal spore concentrations were 5,800 spores/m^3 and 6,000 spores/m^3.
- Although fungal spore concentrations indoors were generally lower than those found outdoors, certain fungal spore types were present in higher percentages compared to the outdoor samples; this indicates indoor amplification.
- Of the 31 indoor samples that identified *Penicillium/Aspergillus*, 26 spaces had concentrations of *Penicillium/Aspergillus* types of spores that dominated the total sample concentration and had elevated concentrations compared to outdoor samples, indicating the presence of fungal growth.

Surface Samples
Surface samples were collected from six locations to determine if fungal contamination was present. The surface samples were analyzed by direct microscopic examination. The samples were examined for the presence of mold growth, as indicated by groups, clumps, and/or chains of single spore types, usually accompanied by intact mycelial and/or sporulating structures.

- Microbial growth was confirmed on two of the surface samples. The dominants types of mold growth detected in the samples were *Ascotricha* (Tape Lift 2) and *Aspergillus* (Tape Lift 6)

Substrate Moisture Readings
Following use of an infrared imaging camera to detect moisture impacted materials, a moisture meter was used throughout the building to confirm materials that may have been impacted by moisture intrusion. Moisture reading measurements were used to directly establish if materials are in a Dry (below 17% WME), At Risk (17%-20% WME), or Wet (above 20% WME) condition.

- The west wall of room 3 and all walls in room 6 on the first floor were detected as Wet.
- At Risk readings from the first floor were noted at walls on rooms 1, 4, 5, and the lower stairwell.
- The west wall of room 10 on the second floor was detected as Wet.
- At Risk readings from the second floor were noted on walls in south restroom, room 10, and room 11.
- The majority of the basement walls were detected as Wet.
- At Risk readings from the basement were recorded in B3, B4, B5, and B7.

Apparent Water Staining or Suspect Microbial Growth
Apparent water staining or suspect microbial growth was observed in the following areas:

- Exterior walls and flooring throughout the basement.
- Ceiling tiles throughout the basement.
- Countertops in the main room of the first floor.
- Room 3, northwest wall in room 4, and lower wall in room 5 on the first floor.
- Countertops in room 6 on the first floor.
- Handrails and horizontal surfaces throughout the stairwells.
- Ceiling tiles in the majority of the former rooms/units on the second floor including north hallway.
- Walls in rooms 8-10 on the first floor.
- Flooring in northeast portion of the second floor (room 11, north restroom, and storage rooms) and the second floor north hallway.
- Counters in room 8 on the second floor.
- Select west side walls on the second and third floors that are adjoining (and in some cases, generally open to) the 1961 portion of the building.
- Ceiling tiles and flooring in the majority of the former rooms/units on the third floor.

The report noted “musty” odors were generally present throughout the building and were noted to be strongest in the basement and first floor areas, as well as the west side of the second floor (second floor north hallway area). In addition to the areas identified above, it appeared microbial growth or moisture were impacting miscellaneous materials, debris, and other trash throughout the building. Staff also observed that field paperwork utilized during the survey became damp after a short period of time within the building indicating elevated air moisture.

It was noted that significant moisture intrusion, water damaged materials, and microbial growth were observed in the 1961 and 1978 portions of the structure (both of which have reported roof leaks, and the tunnel spaces were previously observed to have varying amounts of standing water). Since the structures are generally open and accessible to each other on each floor/level of the building, these conditions could contribute to the continued deterioration of the conditions of Building A as a whole.

4.0 REMEDIATION

The goal of this mold remediation is to remove non-historic, mold-damaged materials to be disturbed in conjunction with asbestos abatement using work practices that control the dispersion of mold from the work area and protect remediation workers from exposures to mold. The listed remediation methods were designed to achieve this goal; however, they are not meant to exclude other similarly effective methods and are not a substitute for a site-specific work plan. Since little scientific information exists that evaluates the effectiveness and best practices for mold remediation, these guidelines are based on principles used to remediate common indoor environmental hazards.

Moisture is still entering Building A via the roof and connected additions. Without the ability to control moisture and temperature, it would be difficult to limit re-growth of mold. Therefore, the scope of this project is to remove mold-damaged materials from Building A that will be disturbed as part of asbestos abatement. Impact7G recommends the underlying moisture problem be corrected before remediation of non-porous materials to prevent recurring mold growth. Indoor moisture can result from numerous causes, such as: roof and façade leaks; plumbing leaks; floods; condensation; and high relative humidity. An appropriate building expert may be needed to identify and repair building problems.

Relative humidity should generally be maintained at levels below 60% (ideally between 30-50%) to inhibit mold growth. Short-term periods of higher humidity would not be expected to result in mold growth. It is possible for mold growth to occur with long-term periods of higher humidity, such is the case with Building A. Additionally, condensation on cold surfaces could result in water accumulation at much lower relative humidity levels.

Currently, existing research does not correlate the amount of mold growth to the frequency or severity of health effects. However, as the presence of moldy materials increases, so does the potential for exposure and the need to limit the spread of mold-containing particles to workers and building occupants. As such, the size of the area impacted by mold growth as well as practical considerations were used to help define the following remedial procedures.

5.0 REMEDIATION PROCEDURES

Impact7G recommends the Client perform mold remediation activities, including removal of non-historic, mold contaminated materials located within Building A that will be disturbed as part of asbestos abatement. Physically removing mold contamination is the primary means of remediation in this protocol.

5.1 Engineering Controls

Contractor shall prevent cross-contamination and shall use engineering controls to ensure worker health and safety. In accordance with generally accepted industrial hygiene principles and Occupational Safety and Health Act “OSHA” regulations and standards, engineering controls, not

personal protective equipment, are the first line of defense for ensuring worker health and safety. Engineering controls may include, but are not limited to: source containment, isolation barriers, pressure differentials, dust suppression, and high efficiency particulate air (HEPA) filtration and vacuuming.

5.2 Containments

Prior to remediation, erect containments around the areas of visible and suspected hidden mold growth, extending several feet beyond the affected area. Containment shall be designed to seal off the contaminated area in an air-tight manner and limit access to authorized personnel only. A structural enclosure shall be built to contain a work area and separate it from any unaffected sections of rooms or the structure. HEPA-filtered negative air filtration devices (AFDs), are to be installed to create negative pressure differentials in relation to surrounding areas. Critical barriers shall be established to separate unaffected from affected areas. Walls, floors, cabinets, fixtures or other surfaces that are not to be removed should be sealed with polyethylene barriers. The following must be completed in each unit prior to remedial activities:

- Isolate the air handling system from work zone by sealing off supply and return grills with polyethylene barriers and duct tape.
- Use critical barriers (minimum of 4 mil of polyethylene and duct tape) to isolate the containment areas. Critical barriers should block all openings so that mold particles cannot be carried outside the remediation area by air movement or through the mechanical ventilation system.
- Air exchanges are used to dilute airborne fungal concentrations in work or containment areas. This will reduce worker exposure and accelerates the clean-up effort. Airflow direction should be from clean to contaminated areas. A minimum of four air changes per hour is required for contaminant ventilation and dilution.
- Establish a negative air pressure differential of >5 Pa or >0.02 in. water column at all times between indoor areas external to the containment barriers and the enclosed remediation area. Establish negative pressure using HEPA-filtered ventilation equipment. Provide make up air and test or monitor containment for leakage daily.

<u>Decontamination Chamber</u>

A decontamination chamber, also known as a “decon unit,” is engineered to provide a transition space between the containment (“contaminated area”) and surrounding clean areas, and are used for:

- Entry to and exit from work area
- Decontaminating exterior surfaces of plastic bags or sheeting used to contain contaminated materials, remediation tools, and the exterior clothing of personnel when exiting the work area.

5.3 Content Removal

Prior to construction of containment, all contents within the area of remediation will be removed by contractor.

5.4 Remediation Scope of Work

The scope of work will consist of physically removing non-historic, mold contaminated materials from Building A that will be disturbed as part of asbestos abatement. Remediation may take place on all floors as asbestos abatement will occur on all floors. The scope of work may consist of, but is not limited to, removing building materials such as drywall and insulation, ceiling tiles, and carpet.

This protocol will focus on remediating building materials that will not be replaced. Remediated structural components can be considered clean (post-remediation evaluation) when contamination and debris have been removed, and surfaces are visibly free of dust. The term “visibly” may include direct

and indirect observation and/or post remediation inspection. Remediated areas should also be free of malodors associated with microorganisms. Mold remediation will be accomplished with a combination of two methods, air-based and physical material removal methods.

Air-Based Method

With the exception being cleanup, the air-based method, consisting of vacuuming components and contents, is not expected to be used as part of this project. This method uses a vacuum with a filter that is 99.97% efficient in removing particles at 0.3 micrometers. It is recommended that this method be applied at least three times in a cross pattern to each affected item. HEPA vacuums are used to remove contaminants from both structural materials and contents. Most units that filter to this level are designed and marketed by manufacturers for cleaning up hazardous materials, such as lead and asbestos. Only well-constructed professional HEPA vacuums that effectively filter particles to HEPA levels (99.97% of particles at 0.3 microns) should be used.

HEPA vacuum cleaners function best if bags are not full. HEPA units should be cleaned and checked for proper performance before being placed on the job site. Hoses, filter bags and assemblies should be checked any time a drop in suction occurs or when the bag is changed. HEPA vacuum cleaners should be serviced within the capture zone of an AFD, or outdoors using appropriate precautionary measures. Damaged HEPA filters or improperly assembled canisters can potentially allow the escape of contaminants.

Physical Material Removal Methods

Abrasive tools with a dust collection device attached, coupled with a HEPA vacuum, may aid in removing debris generated by physical material removal methods. These techniques should be used with caution as it can lead to extremely high levels of contaminants in the air, potentially creating unacceptable exposure for workers or occupants or allowing spread of contaminants into previously unaffected areas.

Remediation practices for porous building materials are identified below:

- *Porous materials*: wrap or bag the materials in plastic sheeting and discard in a secure disposal container. Securely bag waste and dispose.

Biocide/Antimicrobial Application

Biocide/Antimicrobial agents are not expected to be used as part of this project.

Antimicrobial Coatings and Sealants

Antimicrobial coatings and/or sealants are not expected to be used as part of this project.

Work Rules

The following work rules are to be followed for the duration of the mold remediation project:

- No smoking in the building.

Decontamination

All equipment should be HEPA vacuumed, damp wiped, and bagged before it is removed from the work area. This includes cleaning tools, negative air machines, waste containing bags, outer clothing, respirators, gloves, and goggles. Workers should wear at least an N-95 respirator when cleaning or replacing HEPA filtered equipment components. At the end of the removal effort, all materials used for containment should be bagged and the area decontaminated as part of the final job site cleaning. Any

tools or materials for re-use that may have become contaminated must be inspected and cleaned before leaving the worksite if possible, or at the earliest possible moment. Heavily contaminated items must be bagged if they cannot be decontaminated on-site.

Clearance Inspection: Prior to dismantling the containment, a visual inspection shall be completed by Impact7G to ensure all materials have been removed and surfaces have been adequately cleaned. If the visual clearance inspection fails, contractor will need to complete work prior to re-inspection. A visual assessment failure occurs when work identified in the work specification is not completed in a way that sufficiently eliminates the mold hazard and/or material debris remains within the structure at the time of the visual clearance inspection. The remediation contractor will be notified of all deficiencies and work to address deficiencies will be completed at no additional cost to the Client. Impact7G will schedule a re-inspection deficiencies have been addressed.

5.5 Disposal

Waste materials should be removed from the work area to the waste container in a manner that minimizes the possibility of cross-contamination or occupant or worker exposure. Mold-contaminated, unrestorable contents should be handled and removed carefully, packaged in polyethylene, such as disposal bags, or securely wrapped in polyethylene sheeting, unless contents are disposed directly through a waste-out chute or transfer system. Sharp items capable of puncturing polyethylene material should be packaged in such a way as to prevent them from penetrating the material before being bagged or wrapped. Polyethylene surfaces should be HEPA-vacuumed, damp wiped with an appropriate cleaning agent, double bagged or wrapped in a fresh layer of polyethylene just prior to being removed from the contaminated area or decontamination chamber. Respirators are not required outside while transporting double-bagged materials. Bags should not be dropped, thrown or handled roughly. If bagged or wrapped disposal materials rupture outside the containment, transporting workers shall don appropriate PPE immediately, secure the area from public access, initiate clean-up (HEPA-vacuuming), and contain the debris.

If timely disposal of contaminated contents is not practical, it is recommended that staged debris be stored in a reasonably secure location. Generally, no special disposal provisions are recommended for mold-contaminated materials; however, federal, state, provincial and local disposal laws and regulations apply and shall be followed. Placing descriptive warning labels on bags and wrapped materials is recommended to discourage individuals from opening or removing them from the disposal site. It is recommended that label language be factual, not overstated or unnecessarily alarming.

6.0 WORKER PROTECTION

Protecting the health and safety of remediators and building occupants is of paramount importance for this remediation. Laws governing worker safety can be found in the Occupational Safety and Health Act (OSHA) and in regulations implementing the Act found in Title 29 of the Code of Federal Regulations (CFR). The principles referenced in these laws would apply to this project.

Applicable sections that can impact the employees of a remediation business include, but are not limited to, the following OSHA Standards found in Title 29 of the Code of Federal Regulations (CFR) parts 1910 and 1926:

- 29 CFR 1910 – General Industry Standards
- 29 CFR 1926 – Construction Industry Standards

The OSHA Standards for the Construction Industry (29 CFR 1926) require that no employee "shall work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health or safety" (29 CFR 1926.10). Employers shall comply with these safety and health regulatory requirements. Health and safety plans shall be established as required by applicable laws, rules and regulations promulgated by federal, state, provincial and local governmental authorities.

The primary function of Personal Protective Equipment (PPE) is to avoid inhaling mold and mold spores and to avoid mold contact with the skin or eyes. Employers shall provide dermal and respiratory protection for employees entering a containment area where microbial contamination is present and remediation is being performed. The selection of PPE depends on the anticipated exposure, types of microbial contamination, activities to be completed and potential hazards of chemicals that may be used in the remediation process. PPE can include, but is not limited to the following:

- skin and eye protection
- respiratory protection
- disposable protective clothing

Skin and Eye Protection

Gloves are required to protect the skin from contact with mold allergens (and in some cases mold toxins) and from potentially irritating cleaning solutions. Long gloves that extend to the middle of the forearm are recommended. The glove material should be selected based on the type of materials being handled. To protect eyes, the use of properly fitted goggles or a full-face respirator with HEPA filter is required. Goggles must be designed to prevent the entry of dust and small particles. Safety glasses or goggles with open vent holes are not acceptable.

Respiratory Protection

Respirators protect cleanup workers from inhaling airborne mold, mold spores, and dust. Respiratory protection must be used if mold spores or nuisance dusts could be released during the demolition, cleanup or restoration operations.

***Minimum*:** When cleaning up a small area affected by mold, use an N-95 respirator. This device covers the nose and mouth, will filter out 95% of the particulates in the air, and is available in most hardware stores.

Limited: Limited PPE includes use of a half-face or full-face air purifying respirator (APR) equipped with a HEPA filter cartridge. These respirators contain both inhalation and exhalation valves that filter the air and ensure that it is free of mold particles. Note that half face APRs do not provide eye protection. In addition, the HEPA filters do not remove vapors or gases. You should always use respirators approved by the National Institute for Occupational Safety and Health (see Resources List).

***Full*:** In situations in which high levels of airborne dust or mold spores are likely or when intense or long-term exposures are expected (e.g., the cleanup of large areas of contamination), a full-face, powered air purifying respirator (PAPR) is recommended. Full-face PAPRs use a blower to force air through a HEPA filter. The HEPA-filtered air is supplied to a mask that covers the entire face or a hood that covers the entire head. The positive pressure within the hood prevents unfiltered air from entering through penetrations or gaps. Individuals must be trained to use their respirators before they begin remediation. The use of these respirators must follow OSHA regulations.

Disposable Protective Clothing

Disposable clothing is recommended for this remediation project to prevent the transfer and spread of mold to clothing and to eliminate skin contact with mold. Mold-impervious disposable head and foot coverings, and a body suit made of a breathable material, such as TYVEK®, should be used. All gaps, such as those around ankles and wrists, should be sealed. All disposable PPE should be replaced after each shift and not re-used.

7.0 LIMITATIONS

The recommendations contained in this report are based on the measurements and data obtained during previous assessments. All measurements are considered a "snapshot-in-time" and are pertinent for the particular times and for the particular locations the measurements were obtained. Changes in weather, operating procedures, ventilation, temperature, humidity, tenant practices and other conditions, including the inappropriate introduction of moisture, may cause variations in anticipated airborne chemical concentrations. Our evaluation is limited to those parameters delineated above and is not intended to address all factors that may contribute to indoor air quality complaints. This assessment is not intended to evaluate the causes of health-related complaints, but instead presents an overview of indoor air quality parameters and as appropriate, provides recommendations that may reduce effects associated with indoor air pollutants. We have employed standard-of-practices to perform this analysis of risk and identification, but this evaluation is limited in scope to the areas listed above and per Client's request.

Our services consist of professional opinions and recommendations made in accordance with generally accepted industrial hygiene principles and practices and are designed to provide an analytical tool to assist the Client. Impact7G or those representing Impact7G bear no responsibility for the actual condition of the structure or safety of a site pertaining to indoor air quality regardless of the actions taken by the Client. Changes in the site conditions, building environment, site activities, control operation and remediation actions may affect our recommendations. The scope of services completed is not intended to be inclusive, to identify all potential concerns, or to eliminate the possibility of other environmental problems. Within current fungal and moisture investigative technology and methods, no level of assessment can show conclusively that a property or its structures are substantially safe for all populations regarding mold exposure. Mold spores are naturally occurring and finding mold in the air or growing on material should be anticipated in our results. Therefore, Impact7G cannot offer a certification that the property is clear of mold related liability regardless of our observations.

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Impact7G's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Impact7G makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

APPENDIX A

Site Vicinity Map

APPENDIX A - SITE VICINITY MAP

North

Site Vicinity Map

City of Clinton / ECIA
Fromer YMCA – 480 South 3rd Street
Clinton, Iowa 52732

IMPACT7G

APPENDIX B

Terracon Consultants, Inc. Moisture and Microbial Investigation Report

Moisture and Microbial Investigation Report

Former YMCA Building
480 South 3rd Street
Clinton, Clinton County, Iowa

September 29, 2022

Terracon Project No. 07207086; Task 32

Prepared for:

East Central Intergovernmental Association (ECIA)
7600 Commerce Drive
Dubuque, Iowa
&
The City of Clinton, Iowa
611 South 3rd Street
Clinton, Iowa

Prepared by:

Terracon Consultants, Inc.
Bettendorf, Iowa

September 29, 2022

East Central Intergovernmental Association
7600 Commerce Park
Dubuque, Iowa 52002-9673

Attn: Ms. Dawn Danielson
P: (563) 690-5772
E: ddanielson@ecia.org

Re: Moisture and Microbial Investigation Report
Former YMCA Building
480 South 3rd Street
Clinton, Clinton County, Iowa 52732
Terracon Project No. 07207086; Task 32
Brownfields Assessment Grant: BF97782001

Dear Ms. Danielson:

Terracon Consultants, Inc. (Terracon) is pleased to submit the attached report for the above-referenced site to East Central Intergovernmental Association (ECIA). The purpose of this report is to present the results of the moisture and microbial investigation conducted on August 18, 2022 and August 22, 2022. The assessment was conducted in general accordance with the Standard Consultant Contract *For Qualified Environmental Professional (QEP) Consultant Contract, ECIA Brownfield Coalition* (The Agreement) dated December 3, 2020, the Microbial Assessment Sampling and Analysis Plan – Revision 1 dated July 15, 2022 (the PSAP), and the email Notice to Proceed dated August 13, 2022.

These services were requested to identify moisture and microbial growth in the original site building (constructed circa 1905) of the Former YMCA structure located at 480 South 3rd Street Clinton, Iowa. Please refer to the attached report for additional information.

Terracon appreciates the opportunity to provide this service to the ECIA and the City of Clinton, Iowa. If you have questions regarding this report, please contact James at 563-468-4271.

Sincerely,
Terracon Consultants, Inc.

James R. Baxter
Environmental Group Manager

Dennis R. Sensenbrenner, PG
Senior Associate

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MOISTURE SAMPLING WORKSHEETS

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MOISTURE AND MICROBIAL INVESTIGATION REPORT
Former YMCA Building
480 South 3rd Street
Clinton, Clinton County, Iowa 52732
Terracon Project No. 07207086; Task T32
September 29, 2022

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted a moisture and microbial investigation of the former Young Men's Christian Association (YMCA) building located at 480 South 3rd Street, Clinton, Clinton County, Iowa for East Central Intergovernmental Association (ECIA). The survey was conducted on August 18, 2022 and August 22, 2022, in general accordance with the Standard Consultant Contract *For Qualified Environmental Professional (QEP) Consultant Contract, ECIA Brownfield Coalition* (The Agreement) dated December 3, 2020, the Microbial Assessment Sampling and Analysis Plan – Revision 1 dated July 15, 2022 (the PSAP), and the email Notice to Proceed dated August 13, 2022.

1.1 Project Objectives

We understand the moisture and microbial investigation was requested in support of the future use of the site. The demolition/renovation plans of the onsite structure are not yet determined; however, these services were based on the following assumptions:

- The 1905 (original) building will be renovated (assuming gut-renovated).
- The 1961 and 1978 building additions will be demolished.

Terracon also understands that the intent of the assessment is to assist the client with communicating the presence and location of moisture and microbes to employees, vendors, and contractors that may be associated with future plans for the site. The purpose of this survey was to evaluate the original site building (constructed circa 1905) for moisture intrusion and determine the location(s) of apparent microbial growth, if any.

In support of the project, Terracon's services included the following:

- Physical inspection of the interior of the project area to determine potential moisture intrusion locations and to identify areas of potential microbial growth;
- Measurements of air temperature and relative humidity;
- Determination of moisture content in accessible building materials based on the physical inspection;
- Fungal spore trap air testing;
- Tape lift samples of suspect microbial growth; and
- Preparation of this report.

1.2 Reliance

This report is for the exclusive use of ECIA and the City of Clinton, Iowa for the project being discussed. Reliance by other parties on this report is prohibited without written authorization of Terracon and ECIA. Reliance on this report by ECIA, the City of Clinton, Iowa, and all authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, this report, and the Standard Consultant Contract. The limitations of liability defined in The Agreement is the aggregate limit of Terracon's liability to ECIA.

1.3 Standard of Care

This investigation was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our investigation. Many factors, such as weather conditions, building occupancy, ventilation patterns, and seasonal variations in fungal concentrations, can affect the conditions observed. The information contained in this report should not be relied upon to represent conditions that existed prior to or after this investigation. Terracon does not warrant the services of regulatory agencies, laboratories, or other third parties supplying information that may have been used in the preparation of this report.

2.0 SITE DESCRIPTION

Based on information obtained from the Clinton County Assessor's Office[1], the original multi-story site building was constructed circa 1905, with reported additions in 1960 and 1978. The following table provides a summary of pertinent building information and construction information such as structure and finishes used within the building(s). As indicated above, Terracon's scope for this portion of the project was focused only on the 1905 portion of the structure.

[1] Posted at: https://clintoncity.iowaassessors.com/parcel.php?gid=260951.

Table 1. YMCA Building Description and Information

Building Description and Information			
Building Use	Former YMCA, currently unoccupied		
Owned/Leased	Owned by the City of Clinton, Iowa		
Building Square Footage	Approximately 70,000 square feet (SF)	Number of Floors	3
Construction Date	Circa 1905, additions in 1961 and 1978	Renovation Date(s)	Unknown
Basement:	Partial basement: 8,000 SF	Tunnels: Yes	Attic: No

*HVAC – Heating, Ventilation and Air Conditioning

The building is currently unoccupied and is in poor condition. Trash and debris were observed throughout the building including furniture, appliances, and miscellaneous building materials. Significant water and structural damage were observed throughout the building at the time of the site reconnaissance. During Terracon's visit to the site in January 2022, City personnel were on-site and indicated that the building had been broken into several times and that numerous copper pipes had been cut/removed from the site; Terracon personnel observed sections of copper pipe on the main level of the 1905 building and in the tunnel spaces around the large pool during the January 2022 field services, some of which still remained as observed during the August 2022 services.

3.0 MICROBIAL INVESTIGATION CRITERIA AND METHODS

3.1 Physical Inspection

The physical inspection was conducted to evaluate general indoor hygiene, building maintenance practices, areas of moisture intrusion, uncontrolled condensate formation, odors, and the presence of visible fungal growth. The inspection focused primarily on collecting observational data (i.e., information obtained by physical inspection of the building and interviews with the building management, owners, and occupants).

The physical inspection included:

- An examination of the physical structure and potential point sources of moisture intrusion;
- The identification of any discoloration or odor that could indicate moisture intrusion, water damage and microbial growth;
- Using a moisture meter and infrared (IR) imaging camera to detect moisture impacted materials;

3.2 Moisture Content in Building Materials

Excess moisture in building materials may result in the growth of fungi or bacteria. There are no regulations or standards for moisture content in installed building materials. Moisture content will vary building-to-building and across geography, depending largely on relative humidity and indoor environmental conditions. Terracon applied industry best practices and equipment manufacturer guidelines to determine the moisture content of materials in the project area.

A moisture meter and infrared (IR) camera were used to identify suspect water-impacted materials in the project area. Building materials have different absorptive and moisture retention properties and will come into equilibrium with environmental moisture (as indicated by relative humidity levels) or become wet by contact with water.

Our investigation was limited to accessible surfaces in the project area. Terracon did not perform intrusive investigation to inspect interior wall cavity spaces in the building. Terracon did not attempt to identify every potential source of potential moisture intrusion.

3.2.1 Infrared Camera

Some moisture-impacted materials, such as those inside wall cavities or interstitial spaces, or materials that show no visible signs of impact may not be detected by a physical inspection or by using a moisture meter. Infrared (IR) imaging allows the user to visualize temperature gradients in building materials, and moist areas are typically cooler than adjacent dry areas as a result of evaporative cooling. Terracon attempted to utilize a FLIR C2 IR camera (S/N 720097608) to scan the project areas to identify potential areas of moisture intrusion.

During Terracon's field services, the IR camera did not appear to be operating as expected as the aperture was not opening and closing properly during attempts to take photographs. Additional information on this deviation is included in Section 7.1.3. To compensate for the deviation, Terracon collected additional moisture meter measurements as detailed in the following section.

3.2.2 Moisture Meter Measurements

Following the visual inspection and Terracon's limited utilization of the IR camera, Terracon used a General® MMD900 moisture meter to assess the majority of the 1905 building for moisture intrusion. A calibration check was conducted onsite prior to the assessment. This instrument has two modes of operation:

- Search mode is used to measure relative moisture beneath the surface of materials by means of radio frequency, and
- Measure mode uses electrical conductivity to measure the moisture level of building materials between two electrodes. The moisture level value is reported as percent wood moisture equivalent (%WME).

The search mode was utilized at the base of walls and carpets to locate potential areas of moisture in each general area of the 1905 Building. Terracon also used the measure mode to assess materials and a majority of the walls at varying heights and locations throughout the building. The general locations of moisture meter readings exceeding 17% WME are shown in Exhibits 5-7 in Appendix A and copies of the moisture reading worksheets are included in Appendix B.

3.3 Temperature and Relative Humidity Monitoring

Indoor air temperature and relative humidity are physical conditions important to the perception of comfort. American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 55-2017 *Thermal Environmental Conditions for Human Occupancy* identifies six primary factors that affect comfort: metabolic rate (affected by the activity being conducted), clothing insulation, air temperature, radiant temperature, air speed, and humidity. The relationships are complex, but to summarize, a temperature range between 68- and 79-degrees Fahrenheit (°F) with relative humidity below 60 percent (%) is recommended for persons working at sedentary to moderately elevated physical activity levels. To avoid conditions sufficiently moist to promote the growth of molds or other bio growth, relative humidity should not exceed 60%.

Terracon measured temperature and relative humidity (RH) using an EXTECH Instruments Humidity/Temperature Pen (Model 445580), an electronic monitoring instrument. The instrument provides direct-reading measurements of temperature within the range of 14 to 122 degrees Fahrenheit (°F) and RH within the range of 10% to 90%. Measurements were conducted in the ambient environment outside the building and in various areas of the building interior during the site walkthrough.

3.4 Microbial Sampling

No state or federal exposure limits have been established for fungal bioaerosols, and regulatory standards or medically based threshold limit or dose-response relationships do not currently exist for exposure to airborne or surface concentrations of fungal spores. Terracon relies upon experience, professional judgment, current scientific literature, guidelines, and recommendations made by professional organizations and experts, and statistical methods in interpreting microbial sampling results.

High variability in airborne fungal spore concentrations can exist in different geographic locations, during different seasons, and weather patterns, and over the course of a given day. Generally, indoor air fungal spore concentrations in an HVAC-supplied building are typically less than, but qualitatively similar to, fungal spore concentrations found in the outside environment. To help interpret the sampling results, we compared indoor air and outdoor air measurements.

Terracon collected fungal spore trap samples using Air-O-Cell™ sampling cassettes and Zefon Bio-Pump® Plus Model ZDP-200 (S/N 6034) at a flow rate of 15 liters per minute for five minutes per

sample. As indicated in the Sampling and Analysis Plan for the site, a second pump (S/N 3974) was used to collect duplicate (side-by-side) samples at select locations. The locations of the spore trap sample locations are shown on Exhibits 1-4 in Appendix A. Spore trap air samples were collected at representative indoor and outdoor sample locations including:

1. Outside main entrance to 1905 building
2. Main level, southwest area near hallway to 1961 building[2]
3. Main level, approximate center of main lobby/Room 1
4. Main level, south-center portion of Room 5, near entrance to Room 6
5. Main level, northwest portion of Room 6 near wall staining
6. Lower stairwell landing between main level and basement
7. Basement, approximate center of Room B1
8. Basement, entrance of Room B3[2]
9. Basement, southwest corner of Room B2
10. Basement, approximate center of Room B8
11. Basement, approximate center of Room B6
12. Stairwell landing between Main Level and second floor
13. Second floor, approximate center of Room 11
14. Second floor, approximate center of north hallway, near entrance to Room 8 (kitchen)
15. Second floor, south-center portion of Room 8 (former kitchen)
16. Second floor, Room 10, near the doorway to Room 9
17. Second floor, inside Unit 207
18. Second floor, inside Unit 205
19. Second floor, south portion of east hallway
20. Second floor, south portion of east hallway[2]
21. Second floor, just inside entrance to south restroom
22. Second floor, inside Unit 201
23. Second floor, just inside north restroom
24. Stairwell between second floor and third floor
25. Third floor, inside Unit 328
26. Third floor, inside Unit 324
27. Third floor, inside Unit 320
28. Third floor, inside Unit 318
29. Third floor, southwest corner of open/common area
30. Third floor, north-center portion of open/common area
31. Third floor, inside Unit 313
32. Third floor, inside Unit 309
33. Outside main entrance to 1905 building

[2] Duplicate sample collected from this location

Utilizing laboratory-provided tape lift samplers, Terracon also collected six tape lift samples (tape lift sample locations are noted on Exhibits 1-4 in Appendix A) from the following surfaces that exhibited suspect microbial growth:

1. Main level, east side counter, water damaged/stained area
2. Basement, ceiling tile located immediately at bottom of steps
3. Basement, southeast portion from lower water damaged brick wall
4. Second floor, east lower portion of north hallway wall
5. Third floor, wall-mounted shelf on north side of open common area
6. Stairwell between first floor and second floor, on south side handrail near the lower set of steps

After the microbial sample collection, the sample cassettes and tape lift samples were shipped under chain-of-custody (COC) protocol to Eurofins EMLab P&K (EMLab), Marlton, New Jersey. EMLab is accredited by the AIHA® Laboratory Accreditation Programs, LLC under the Environmental Microbiology Laboratory Accreditation Program (EMLAP). Copies of the sampling worksheets, including pump calibration data are provided in Appendix B.

4.0 FINDINGS

This section includes the findings and a discussion of our physical inspection and sampling results. Appendix D includes photos of notable features and/or findings associated with this inspection.

4.1 Physical Inspection

Table 2 contains an overview of findings from the physical inspection. Significant findings are discussed in the section that follows.

Table 2. Physical Inspection Findings

Inspection Parameter	Observation Comments
Type of Occupancy	Former YMCA and living space; currently unoccupied
Type of Enclosure	Brick and concrete
Types of Finishes ■ Walls ■ Ceilings ■ Floors ■ Exterior	 ■ Plaster, drywall, glazed block ■ Plaster, acoustical ceiling tile, or cement ■ Terrazzo, vinyl floor tile, concrete, carpeting ■ Brick and concrete
Discoloration / Water Staining / Suspect Microbial Growth	Apparent water staining or suspect microbial growth was observed in the following areas: ■ Countertops in the main room of the first floor of the 1905 structure ■ Northwest lower wall in Room 4 on the first floor ■ Countertops in Room 6 on the first floor ■ Ceiling tiles throughout the basement ■ Exterior walls and flooring throughout the basement ■ Handrails and horizontal surfaces throughout the stairwells ■ Flooring in Room 11 and the second-floor north hallway ■ Counters in Room 8 on the second floor ■ Select west side walls on the second and third floors that are adjoining (and in some cases, generally open to) the 1961 portion of the building

Following a brief walkthrough, Terracon performed a physical inspection of the interior of the 1905 portion of the structure. Terracon did not perform an intrusive investigation in the building.

Based on our observations, “musty” odors were generally present throughout the building and were noted to be strongest in the basement and first floor areas, as well as the west side of the second floor (second floor north hallway area). As previously indicated, the building has not been occupied or utilized for an extended period of time and is not fully enclosed or tempered. Terracon observed suspect visible fungal growth as indicated in the above table. Miscellaneous materials, debris, and other trash throughout the building appeared to be impacted by either microbial growth or moisture; Terracon also observed that field paperwork utilized during the survey became damp after a short period of time within the building indicating elevated air moisture.

During Terracon's walkthrough and physical inspection Terracon noted the following observations. Please refer to Appendix B for detailed findings of the moisture evaluation.

First floor:

Terracon observed water staining on the ceiling and in corresponding spots on the floor near the center of the of the main room on the first floor. The spots and stains that were observed appear to be related to a reported previous leak from the restroom on the second floor (south restroom) as noted by City personnel during Terracon's previous site investigation activities. Additional moisture impacts were noted in Room 3 (water staining on walls), heavy microbial growth along the northwest portion of the wall in Room 4, and water staining along the lower walls throughout Room 5.

Second floor:

Terracon noted visible suspect microbial growth and water staining in the stairwells leading from the first floor the second floor. The majority of the former rooms/units on the second floor were observed to have moisture-impacted or water-stained ceiling tiles and light oxidation of the ceiling tile gridwork, and the flooring in the south restroom was observed to have heavy water staining (presumably related to the former leak as indicated above). Rooms 8-10 had noticeable water staining and suspect microbial growth along the walls, and the north hallway (which is generally open the 1961 portion of the building) had a significant amount of water-damaged materials (including ceiling tiles) on the floor of the hallway and the surface coatings were observed to have significant delamination from the substrate. Additional water damage was observed on the floors and ceilings in the northeast portion of the floor (Room 11, the north restroom, and the storage rooms).

Third floor:

Terracon noted visible suspect microbial growth and water staining in the stairwells leading from the second floor to the third floor. The majority of the former rooms/units on the third floor were observed to have moisture-impacted or water-stained ceiling tiles and light oxidation of the ceiling tile gridwork, and corresponding water staining on the carpeting and flooring. The emergency exit door at the north end of the third floor has broken into several times, and large gaps along the side and bottom of the door were observed, which could contribute to moisture intrusion issues.

Basement:

The basement and associated rooms/areas were generally observed to be heavily impacted by both moisture and microbial growth. The ceiling tiles in the main room (B1) were almost completely black with observed microbial growth and the majority of the outer walls (generally observed to be brick) and the flooring materials throughout the basement rooms had significant water damage and observed microbial growth from excess moisture exposure. It should be noted

that Terracon also conducted limited visual observations in the tunnel space in the northwest corner of the basement which leads further down into the sub-grade area that is part of the 1961 portion of the Site Building.

4.2 Moisture Content in Building Materials

Following Terracon's limited use of the IR camera, Terracon used a moisture meter throughout the building to confirm materials that may have been impacted by moisture intrusion. It should be noted that brick and concrete may not retain moisture the same way as wood or sheetrock and moisture meter measurements may not adequately detect moisture in these materials. Moisture reading measurements can be used to directly establish if materials are in a Dry (below 17% WME), At Risk (17%-20% WME), or Wet (above 20% WME) condition. The locations of the moisture content readings recorded above 17% are presented in Exhibits 5-7 Appendix A in, and a full summary of all the moisture readings collected are included in Appendix B.

A summary of key moisture readings for each floor is included below.

First floor:

The west wall of Room 3 and each of the four walls in Room 6 had moisture content readings in excess of 20% WME and are interpreted as Wet. At Risk moisture readings above 17% WME but below 20% WME were noted along the west and north walls and the northeast wall in Room 1, the northwest wall in Room 4, the south wall of Room 5 and the lower stairwell wall leading to the basement.

Second floor:

The west wall of Room 10 had a moisture content reading in excess of 20% WME and is interpreted as Wet. At Risk moisture readings above 17% WME but below 20% WME were recorded along the south wall and the northeast portion of the north wall in the south restroom, the south wall of Room 10, and the north wall of Room 11.

Third floor:

The third floor did not have moisture content readings above 17% WME. The highest reported moisture content was 12% WME and was located along the north wall of Room 3-318, and several locations with 11.9% WME located in Rooms 3-312 (east, south, and west walls) and 3-326 (west wall).

Basement:

As indicated on Exhibit 6 in Appendix A, the majority of the basement walls had moisture content readings exceeding 20% WME, with several locations including the east and west walls of Room

B1, the west wall of B3, the east and south walls of both B2 and B8, and the north wall of B6 at 87.6% WME, which is the maximum reading on the meter used for the survey. At Risk moisture readings above 17% WME but below 20% WME were recorded along the west wall in B7, the north, east, and west walls in B5, the east and west walls in B4, and the northeast and southeast walls in B3.

4.3 Temperature and Relative Humidity Measurements

The National Weather Service Forecast Office website[3] for the Davenport, Iowa, station indicated the following weather conditions on August 22, 2022: high temperature of 81°F, an average of 69°F; clear skies; an average wind speed of 4.7 miles per hour from the northwest; and a relative humidity average of 72%.

Temperature and relative humidity readings were collected at the indoor and outdoor spore trap sampling locations. A summary of indoor temperature and humidity levels obtained during this assessment is provided in Table 3 below.

Table 3. Temperature and Relative Humidity Levels

Location	Temperature	Relative Humidity
Outside main entrance to 1905 building	96.9°F	28.0%
Main level, southwest area near hallway to 1961 building[4]	84.0°F	48.9%
Main level, approximate center of main lobby/Room 1	82.9°F	59.2%
Main level, south-center portion of Room 5, near entrance to Room 6	75.9°F	68.7%
Main level, northwest portion of Room 6 near wall staining	75.3°F	73.4%
Lower stairwell landing between main level and basement	82.0°F	57.4%
Basement, approximate center of Room B1	75.9°F	66.9%
Basement, entrance of Room B3[6]	70.8°F	84.7%
Basement, southwest corner of Room B2	71.2°F	84.6%
Basement, approximate center of Room B8	70.7°F	83.4%
Basement, approximate center of Room B6	74.4°F	71.3%
Stairwell landing between Main Level and second floor	78.8°F	66.6%
Second floor, approximate center of Room 11	77.0°F	73.8%
Second floor, approximate center of north hallway, near entrance to Room 8 (kitchen)	78.0°F	67.5%
Second floor, south-center portion of Room 8 (former kitchen)	83.4°F	59.5%

[3] Posted at: https://w2.weather.gov/climate/index.php?wfo=dvn; accessed August 24, 2022.
[4] Indicates duplicate sample collected at this location

Location	Temperature	Relative Humidity
Second floor, Room 10, near the doorway to Room 9	80.4°F	65.9%
Second floor, inside Unit 207	76.8°F	77.0%
Second floor, inside Unit 205	77.5°F	70.5%
Second floor, south portion of east hallway[5]	84.9°F	66.6%
Second floor, just inside entrance to south restroom	82.0°F	61.2%
Second floor, inside Unit 201	80.2°F	66.1%
Second floor, just inside north restroom	80.4°F	68.3%
Stairwell between second floor and third floor	81.8°F	61.7%
Third floor, inside Unit 328	80.4°F	59.8%
Third floor, inside Unit 324	80.9°F	64.0%
Third floor, inside Unit 320	80.7°F	61.9%
Third floor, inside Unit 318	78.0°F	64.6%
Third floor, southwest corner of open/common area	78.4°F	73.4%
Third floor, north-center portion of open/common area	78.6°F	73.1%
Third floor, inside Unit 313	81.3°F	64.6%
Third floor, inside Unit 309	82.5°F	62.0%
Outside main entrance to 1905 building	84.2°F	47.4%

4.4 Tape-Lift Sample Results

Terracon collected tape-lift samples of suspect microbial growth on six surfaces to determine if fungal contamination was present. Terracon did not observe heavy dust accumulations on visible surfaces. Sampling locations are indicated on Exhibits 1-4 in Appendix A. Table 4 summarizes the results of the tape-lift sampling. The results of the tape-lift sampling confirmed that microbial growth was present.

[5] Indicates duplicate sample collected at this location

Table 4. Tape-Lift Sample Results

Sample #	Location	Substrate	Results[6]	Comments
TL1	Main level, east side counter, water damaged/stained area	Countertop	None	Normal trapping
TL2	Basement, ceiling tile located immediately at bottom of steps	Ceiling tile	4+ *Ascotricha* species (ascospores, ascomata, hyphae)	Mold growth
TL3	Basement, southeast portion from lower water damaged brick wall	Brick	None	Normal trapping
TL4	Second floor, east lower portion of north hallway wall	Drywall	None	Normal trapping
TL5	Third floor, wall-mounted shelf on north side of open common area	Countertop	None	Normal trapping
TL6	Stairwell between first floor and second floor, on south side handrail near the lower set of steps	Wood handrail	4+ *Aspergillus* species (spores, hyphae, conidiophores)	Mold growth

Laboratory analytical results of the tape-lift samples are provided in Appendix C. Photographic documentation of select sample locations is provided in Appendix D.

4.5 Fungal Spore Trap Sample Results

Terracon collected fungal spore trap air samples at 30 locations inside the building and two locations outside of the building. Duplicate samples were also collected at three of the aforementioned sample locations. Table 5 summarizes the results of the spore trap sampling. The results are reported in spores per cubic meter (spores/m^3).

[6] Quantities of molds graded <1+ to 4+, with 4+ denoting the highest numbers.

Table 5. Spore Trap Air Sampling Results

Laboratory Sample ID #	Terracon Sample ID	Sample Location	Total Concentration (spores/m^3)	Fungal Spore Types and Concentrations (spores/m^3)
3483 3307	ST-1	Outside main entrance to 1905 building	6,000	*Alternaria* (110) Ascospores (850) Basidiospores (2,800) *Cercospora* (27) *Cladosporium* (2,200) *Epicoccum* (13) Smuts, *Periconia*, Myxomycetes (27)
3483 3298	ST-2	Main level, southwest area near hallway to 1961 building	<13	NA
3483 3293	ST-3		210	Basidiospores (210)
3483 3293	ST-4	Main level, approximate center of main lobby/Room 1	530	Basidiospores (110) *Cladosporium* (53) *Penicillium/Aspergillus* types (210) *Stachybotrys* (160)
3483 3281	ST-5	Main level, south-center portion of Room 5, near entrance to Room 6	690	Ascospores (110) Basidiospores (430) *Cladosporium* (53) *Penicillium/Aspergillus* types (110)
3483 3302	ST-6	Main level, northwest portion of Room 6 near wall staining	1,800	Basidiospores (210) *Penicillium/Aspergillus* types (1,500)
3483 3301	ST-7	Lower stairwell landing between main level and basement	110	Basidiospores (53) *Penicillium/Aspergillus* types (53)
3483 3287	ST-8	Basement, approximate center of Room B1	1,300	Ascospores (110) Basidiospores (370) *Penicillium/Aspergillus* types (850)
3483 3289	ST-9	Basement, entrance of Room B3	3,300	Ascospores (110) Basidiospores (430) *Cladosporium* (160) *Penicillium/Aspergillus* types (2,600)
3483 3284	ST-10		6,700	Ascospores (110) Basidiospores (110) *Penicillium/Aspergillus* types (6,500) Smuts, *Periconia*, Myxomycetes (13)

Laboratory Sample ID #	Terracon Sample ID	Sample Location	Total Concentration (spores/m^3)	Fungal Spore Types and Concentrations (spores/m^3)
3483 3303	ST-11	Basement, southwest corner of Room B2	320	Basidiospores (210) *Penicillium/Aspergillus* types (110)
3483 3309	ST-12	Basement, approximate center of Room B8	210,000	*Chrysosporium*-like (31,000) *Penicillium/Aspergillus* types (180,000)
3483 3294	ST-13	Basement, approximate center of Room B6	960	Basidiospores (270) *Penicillium/Aspergillus* types (690)
3483 3291	ST-14	Stairwell landing between Main Level and second floor	4,700	Ascospores (110) Basidiospores (210) *Penicillium/Aspergillus* types (4,400)
3483 3574	ST-15	Second floor, approximate center of Room 11	850	Basidiospores (110) *Penicillium/Aspergillus* types (750)
3483 3308	ST-16	Second floor, approximate center of north hallway, near entrance to Room 8 (kitchen)	11,000	Ascospores (53) Basidiospores (320) *Epicoccum* (13) *Penicillium/Aspergillus* types (10,000) Smuts, *Periconia*, Myxomycetes (13)
3483 3313	ST-17	Second floor, south-center portion of Room 8 (former kitchen)	23,000	*Penicillium/Aspergillus* types (23,000)
3483 3310	ST-18	Second floor, Room 10, near the doorway to Room 9	1,200	Basidiospores (110) *Penicillium/Aspergillus* types (1,100)
3483 3685	ST-19	Second floor, inside Unit 207	41,000	Basidiospores (110) *Cladosporium* (110) *Penicillium/Aspergillus* types (40,000)
3483 3278	ST-20	Second floor, inside Unit 205	14,000	Basidiospores (110) *Penicillium/Aspergillus* types (14,000)
3483 3306	ST-21	Second floor, south portion of east hallway	3,700	Basidiospores (110) *Penicillium/Aspergillus* types (3,600)
3483 3296	ST-22		3,600	*Penicillium/Aspergillus* types (3,600)
3483 3300	ST-23	Second floor, just inside entrance to south restroom	3,300	Ascospores (53) Basidiospores (110) *Penicillium/Aspergillus* types (3,100)

Laboratory Sample ID #	Terracon Sample ID	Sample Location	Total Concentration (spores/m^3)	Fungal Spore Types and Concentrations (spores/m^3)
3483 3600	ST-24	Second floor, inside Unit 201	6,600	Ascospores (110) Basidiospores (160) *Penicillium/Aspergillus* types (6,300) *Pithomyces* (13) Smuts, *Periconia*, Myxomycetes (13)
3483 3658	ST-25	Second floor, just inside north restroom	2,000	Basidiospores (370) *Penicillium/Aspergillus* types (1,600)
3483 3359	ST-26	Stairwell between second floor and third floor	11,000	Ascospores (110) Basidiospores (110) *Nigrospora* (13) *Penicillium/Aspergillus* types (11,000) Smuts, *Periconia*, Myxomycetes (13)
3483 3323	ST-27	Third floor, inside Unit 328	6,300	*Alternaria* (13) *Epicoccum* (13) *Penicillium/Aspergillus* types (6,300) Smuts, *Periconia*, Myxomycetes (13)
3483 3326	ST-28	Third floor, inside Unit 324	1,000	Ascospores (53) Basidiospores (53) *Cladosporium* (53) *Penicillium/Aspergillus* types (850)
3483 3299	ST-29	Third floor, inside Unit 320	1,300	*Alternaria* (13) Ascospores (110) Basidiospores (110) *Penicillium/Aspergillus* types (1,000) Smuts, *Periconia*, Myxomycetes (13)
3483 3311	ST-30	Third floor, inside Unit 318	170	Basidiospores (53) *Penicillium/Aspergillus* types (110) Smuts, *Periconia*, Myxomycetes (13)
3483 3593	ST-31	Third floor, southwest corner of open/common area	1,500	Basidiospores (110) *Penicillium/Aspergillus* types (1,400)
3482 3327	ST-32	Third floor, north-center portion of open/common area	1,400	Ascospores (53) Basidiospores (270) *Penicillium/Aspergillus* types (1,100)
3483 3325	ST-33	Third floor, inside Unit 313	270	Basidiospores (160) *Penicillium/Aspergillus* types (110)
3483 3292	ST-34	Third floor, inside Unit 309	3,800	Ascospores (110) Basidiospores (160) *Penicillium/Aspergillus* types (3,500)

Laboratory Sample ID #	Terracon Sample ID	Sample Location	Total Concentration (spores/m^3)	Fungal Spore Types and Concentrations (spores/m^3)
3483 3312	ST-35	Outside main entrance to 1905 building	5,800	*Alternaria* (150) Ascospores (1,100) Basidiospores (2,800) *Cercospora* (150) *Cladosporium* (1,600) *Oidium* (13) *Pithomyces* (27) Rusts (13) Smuts, *Periconia*, Myxomycetes (13)

Sampling results from the interior areas were compared to those collected outside the building. A comparison of the sampling results yielded the following findings:

1. Total airborne fungal spore concentrations inside of the building ranged from <13 spores/m^3 to 210,000 spores/m^3.

2. The total outdoor fungal spore concentrations were 5,800 spores/m^3 and 6,000 spores/m^3. The types of outdoor fungal spores identified were considered by the analytical laboratory as typical for the outdoor environment and were in the low to high concentration ranges for August in Iowa climate code.

3. Although fungal spore concentrations indoors were generally lower than those found outdoors, certain fungal spore types were present in higher percentages compared to the outdoor samples; this indicates indoor amplification.

4. The types of fungal spore types identified inside the building were generally similar to those found outdoors, except for *Penicillium/Aspergillus* type of spores, *Stachybotrys* spores, *Chrysosporium*-like spores, and *Nigrospora* spores.

5. In 31 of the 33 indoor samples *Penicillium/Aspergillus* types of spores were identified. Of those samples, 26 spaces had concentrations of *Penicillium/Aspergillus* types of spores that dominated the total sample concentration and had elevated concentrations compared to outdoor samples, indicating the presence of fungal growth. Note: *Penicillium/Aspergillus* types can grow on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture levels and type of materials, in addition to other factors.

6. Total airborne fungal spore concentrations for the duplicate sample sets ranged from: <13 spores/m^3 to 210 spores/m^3 for set 1; 3,700 spores/m^3 to 6,700 spores/m^3 for set 2; and 3,600 spores/m^3 to 3,700 spores/m^3 for set three. Generally, the same types of spores were identified in the duplicate sample sets, although *Cladosporium* (160 spores/m^3) was

detected in one of the samples from the second set and the reported concentration of the *Penicillium/Aspergillus* strain was lower (basement, Room B1), and *Basidiospores* (110 spores/m^3) were reported in one of the samples from the third set (located in the south hallway on the second floor).

The locations of the fungal spore trap air samples can be found in Exhibits 1-4 in Appendix A. Air sampling worksheets, pump calibration records are included in Appendix B. The laboratory analytical results for the spore trap sampling are included in Appendix C. Photographic documentation is provided in Appendix D.

5.0 CONCLUSIONS

Based on our investigation, our conclusions are presented below:

- Although many fungal spore concentrations indoors were lower than those found outdoors, certain fungi were present in higher percentages compared to the outdoor samples; this indicates indoor amplification.
- Thirty one of the 33 indoor samples *Penicillium/Aspergillus* types of spores were identified. Of those samples, 26 samples had concentrations of *Penicillium/Aspergillus* types of spores that dominated the total sample concentration and had elevated concentrations compared to outdoor samples, indicating the presence of fungal growth.
- Two tape lift samples confirmed fungal growth in the following spaces:
  - Basement, ceiling tile located immediately at bottom of steps
  - Stairwell between first floor and second floor, on south side handrail near the lower set of steps
- Visual observations consistent with fungal growth were noted in Rooms 4 and 5 on the first floor, in the stairwells, in the north hallway of the second floor, and throughout the drywall and ceiling tiles in the basement.
- Water staining and apparent water damage was noted in several areas of the building, including the ceiling and floors throughout the first floor, the ceiling tiles and ceiling tile grid on the second and third floors, the flooring in the south restroom and in the north hallway area of the second floor, and the generally throughout the basement.
- While Terracon's scope of services for this portion of the project were focused on the 1905 Building, it should be noted that significant moisture intrusion, water damaged materials, and microbial growth have also been observed by Terracon in the 1961 and 1978 portions of the structure (both of these structures have reported roof leaks, and the tunnel spaces were previously observed to have varying amounts of standing water). Since the structures are generally open and accessible to each other on each floor/level of the building, these conditions could

contribute to the continued deterioration of the conditions of the Site Building as a whole.

6.0 RECOMMENDATIONS

Terracon recommends the following:

- A mold and moisture remediation guidance document should be prepared to assist with providing direction to contractors engaged in remediating building materials affected by moisture or microbial growth.
- Efforts should be made to seal off the 1905 Building from the remainder of the structure. At a minimum, this should consist of polyethylene sheeting installed along the doorways and observed openings between the spaces, including the west portion of the first floor, the doorways in the basement that lead to the tunnel spaces and stairwells, the doorways and hall areas on the second floor, and the doorway at the west end of the third floor.
- Observed mold and moisture-impacted materials (both porous and lightly porous or semi-porous materials, such as ceiling tiles, drywall, plaster, and wood) should be removed from the 1905 portion of the structure during planned renovation activities.
  - Due to the presence of asbestos-containing materials and lead-containing paints, it is presumed that these efforts will be combined and performed concurrently using appropriate work methods, the establishment of contained work areas, and the use of negative air machines equipped with high efficiency particulate air (HEPA) filters, where appropriate.
- While it is assumed that non-porous materials (such as plastic, metal, glass, etc.) will be removed from the structure during renovation, any non-porous materials that the City or contractors working at the site may consider for reuse at the site should be thoroughly cleaned using a detergent/disinfectant and water solution (such as Fiber lock Technologies Shockwave™ or similar product) or biocide and allowed to thoroughly dry. If a biocide solution is used, select one that will not leave a residue.
- Disinfection is not a substitute for the removal of water-damaged or fungal-containing porous materials since non-viable fungal spores remain allergenic. Dry all surfaces thoroughly after cleaning.

7.0 QUALITY CONTROL AND DATA VALIDATION

7.1 Microbial Quality Control and Data Validation

7.1.1 Sample Selection and Methods

Based upon the results of the visual assessment and at the discretion of the IH professional, Terracon collected fungal spore trap samples from various locations of the original portion of the building, including the basement and common areas such as hallways and stairwells. Spore trap air samples were also collected contemporaneously in the outdoor environment to provide comparison results.

Terracon used Air-O-Cell™ sampling cassettes and a Zefon Bio-Pump® Plus, calibrated to a flow rate of 15 liters per minute (LPM), for five minutes per sample to collect the spore trap samples. A second pump, which was also calibrated, was used to collect the duplicate samples as indicated in this report. Each spore trap sample collected was given a unique, sequential field sample number and corresponding laboratory-provided sample code. The sample ports on the cassettes were sealed with the laboratory-provided stickers, and each sample was placed into an unused, dedicated, and disposable sealable bag. The objective of the air sampling utilizing the Air-O-Cell® sampling cassettes was as follows:

- To capture and quantify a broad spectrum of fungal spores present in the air.
- To assess whether the levels present suggest a fungal problem in the indoor locations.

Terracon also collected surface samples using laboratory-provided tape lift samplers of observed suspect microbial growth. Surface samples collected were given a unique, sequential field sample number and were placed into a plastic case to prevent breakage during transport. Each case was also placed into an unused, dedicated, and disposable sealable bag. The objective of the surface sampling utilizing the tape samplers was as follows:

- To determine whether or not the visible stain, discoloration, etc. is indicative of microbial growth at the sample location.
- To determine and identify fungal organisms actually growing on the surface sampled, as opposed to the mere presence of fungal spores.
- To determine whether the spore population on the surface represents a normal population or a skewed population of spore type and also to note “marker” spore types that may indicate indoor fungal growth.

Concurrent with the spore trap and surface sampling, Terracon’s IH professionals collected temperature and relative humidity measurements at each spore trap sampling location. Indoor air temperature and relative humidity are physical conditions that can exacerbate microbial growth. Terracon measured temperature and relative humidity (RH) using an EXTECH Instruments Humidity/Temperature Pen (Model 445580), an electronic monitoring instrument. The instrument provides direct-reading measurements of temperature within the range of 14 to 122 degrees Fahrenheit (°F) and RH within the range of 10% to 90%.

7.1.2 Microbial Methods and Measurements

After sample collection, the air sample cassettes (and surface samples) were shipped under chain-of-custody (COC) protocol to EMLab P&K, LLC (EMLab) in Marlton, New Jersey. EMLab is accredited by the AIHA Laboratory Accreditation Programs, LLC under the Environmental Microbiology Laboratory Accreditation Program (EMLAP). The samples collected were submitted for standard laboratory analytical turnaround time (approximately five business days). Holding times and preservation requirements do not apply to microbial sampling. The laboratory analyzed the spore trap samples collected by direct microscopic visual estimation. The laboratory analysis includes identification to genus or group of fungal spores present, quantification as spores per cubic meter (spores/m^3), and a general assessment of background debris (non-biological particulate matter) present. It should be noted that some spores are very small, with very few distinguishing characteristics and cannot be differentiated by non-viable sampling methods. The laboratory analyzed the tape samples utilizing direct microscopic exam (qualitative) methodology. The direct microscopic exam directly identifies fungal growth (and doesn't just count the number of spores).

7.1.3 Quality Control and Data Validation

To ensure sample representativeness, Terracon collected three duplicate spore trap samples (approximately 10%) for quality control purposes. For the duplicate sampling, Terracon collected two concurrent samples side by side (using two Zefon Bio-Pump® Plus sampling pumps). It should be noted that analytical sensitivity can vary significantly with spore trap samples, even for samples collected side by side at the same time. Variability in direct measurement is influenced by a number of factors, including condition of the sample space, air flow around the sample pumps, and activity near the sampling pumps prior to and during sample collection, which adds to the considerations that must be given when interpreting spore trap sample results. Terracon's duplicate samples collected in the basement and on the second floor were reported to generally contain similar concentrations and fungal spore types. One of the samples from the first floor had an extremely low reported concentration (less than 13 spores/m^3) and thus, the total count was too low to distinguish a specific fungal spore type; the other duplicate sample from the first floor had a relatively low concentration of *basidiospores* (210 spores/m^3).

Due to the nature of variability that exists between observed microbial colonies growing on a substrate, the collection of duplicate surface samples was not conducted as a part of this investigation and was not part of the site-specific SAP.

Laboratory data validation (including precision and accuracy) was conducted by the EMLAP-accredited laboratory conducting the analysis in accordance with laboratory standard operating procedures included in the ECIA-approved generic QAPP. EMLab's internal reporting system includes automated fail-safes to ensure that all quality requirements are met, and notifications are added to the reports when any quality steps remain pending. Ongoing blind duplicate comparisons amongst analysts are performed to assure consistent, reliable, and documented

analytical quality along with internal reviews by senior laboratory QA staff who are not analysts and are 100% dedicated to quality assurance.

Upon receiving laboratory analytical data, Terracon confirmed that the COC received with laboratory analytical data indicated that the samples were received intact. Terracon also confirmed that the laboratory data received correlated to samples submitted as indicated on the COC and agree with Terracon's sample submissions. Terracon did not identify potential data discrepancies with the laboratory analytical data.

As indicated in Section 3.2.1, Terracon had one deviation from the PSAP as the IR camera did not appear to function normally while attempting to take photographs as part of the visual assessment. As a result, photographs of the areas observed are not included in the report. To supplement, Terracon collected approximately 375 total moisture readings from walls and other materials within the structure as indicated in the field worksheets in Appendix B.

8.0 LIMITATIONS / GENERAL COMMENTS

Terracon did not perform limited demolition or destructive activities during sampling. Reasonable efforts to visually assess materials within known areas of restricted access of the 1905 building (e.g., crawl spaces) were made; however, confined spaces or areas which may pose a health or safety risk to Terracon personnel were not accessed or sampled. Several areas, such as the subspace levels and tunnel spaces, are present in the adjoining structures and are accessible from various levels of the 1905 portion of the building but were not specifically accessed as part of the scope of services, and samples were not collected from these areas.

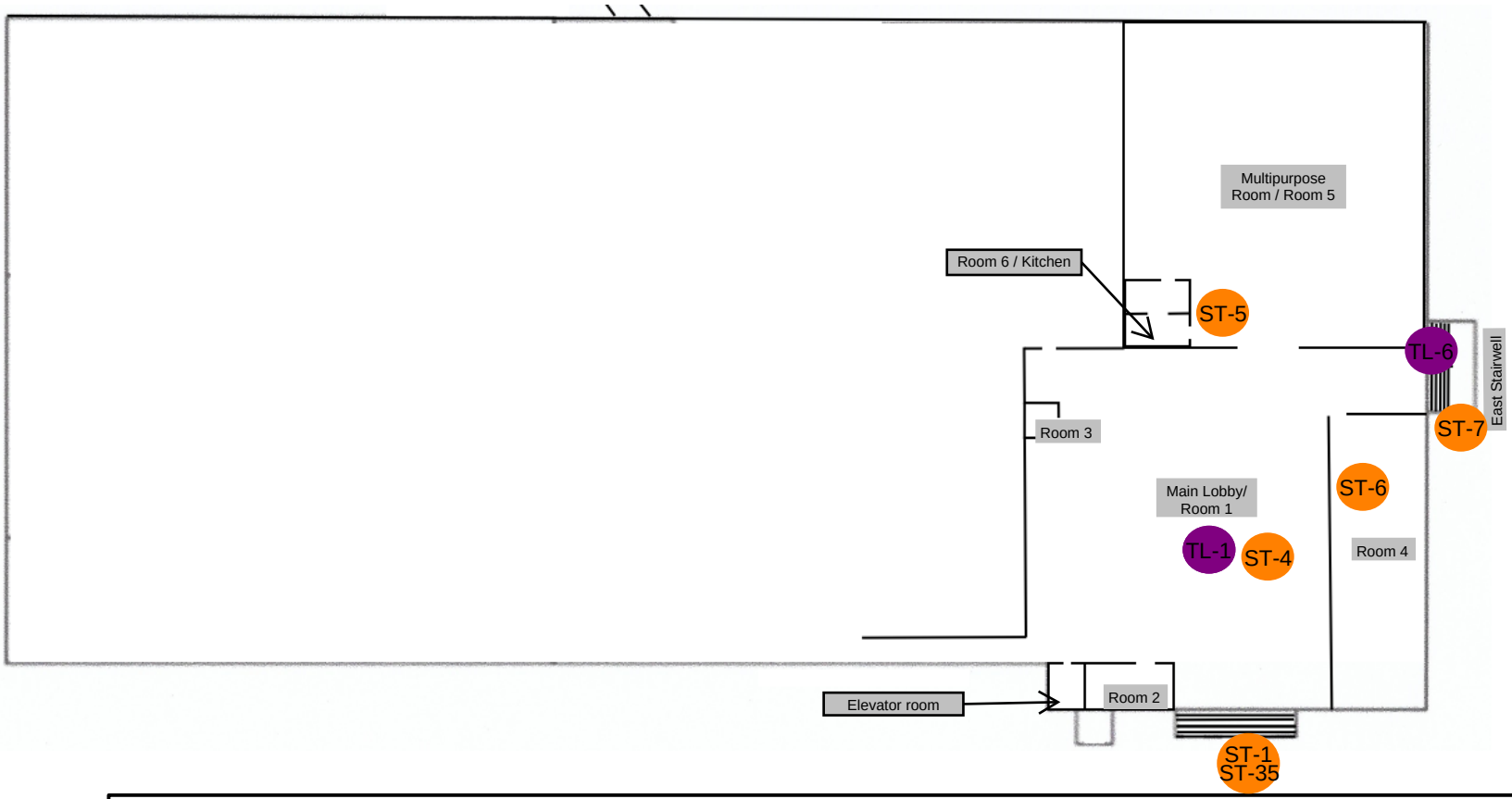
This survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions, and recommendations expressed in this report are based on the specific conditions during our sampling. The information contained in this report is relevant to the date on which the sampling was conducted and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by ECIA and the City of Clinton, Iowa for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories, or other third parties supplying information used in the preparation of this report. No warranty, express or implied is made.

APPENDIX A

Exhibits

ST-1 Approximate Spore Trap Sample Location

TL-1 Approximate Tape Lift Sample Location



N

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	JRB
Drawn by:	SMM
Checked by:	JRB
Approved by:	JRB

Project No.	07207086; T32
Scale:	N.T.S.
File Name:	Former YMCA
Date:	September 2022

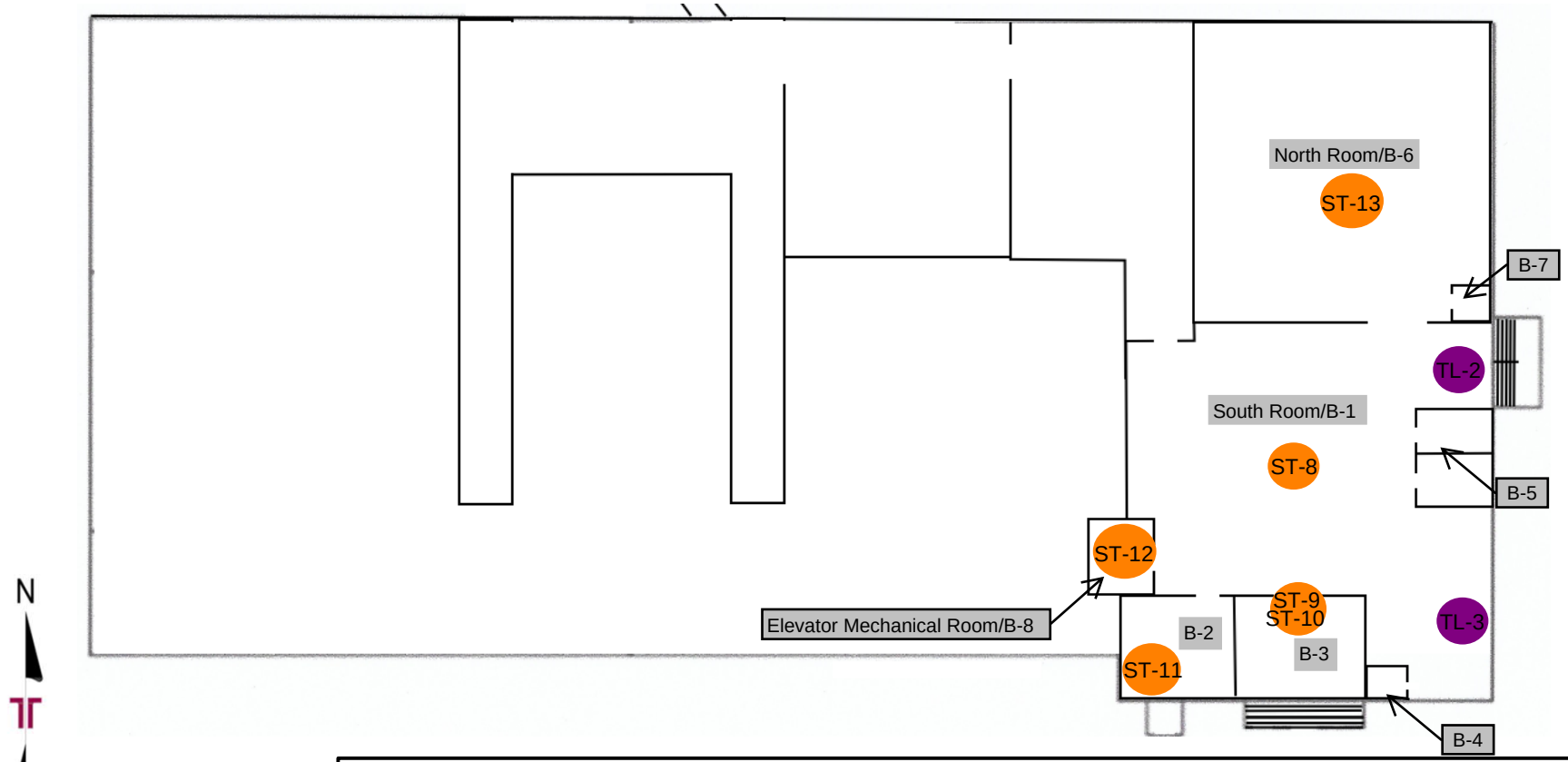
Terracon
Consulting Engineers & Scientists
870 40th Avenue Bettendorf, Iowa 52722
PH. (563) 355-0702 FAX. (563) 355-4789

SPORE TRAP SAMPLE LOCATION MAP

1905 Building - Main Level
Former YMCA – 480 South 3rd Street
Clinton, Iowa

EXHIBIT 1

Approximate Spore Trap Sample Location



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Project Manager:	JRB
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Approved by:	JRB

Project No.	07207086; T32
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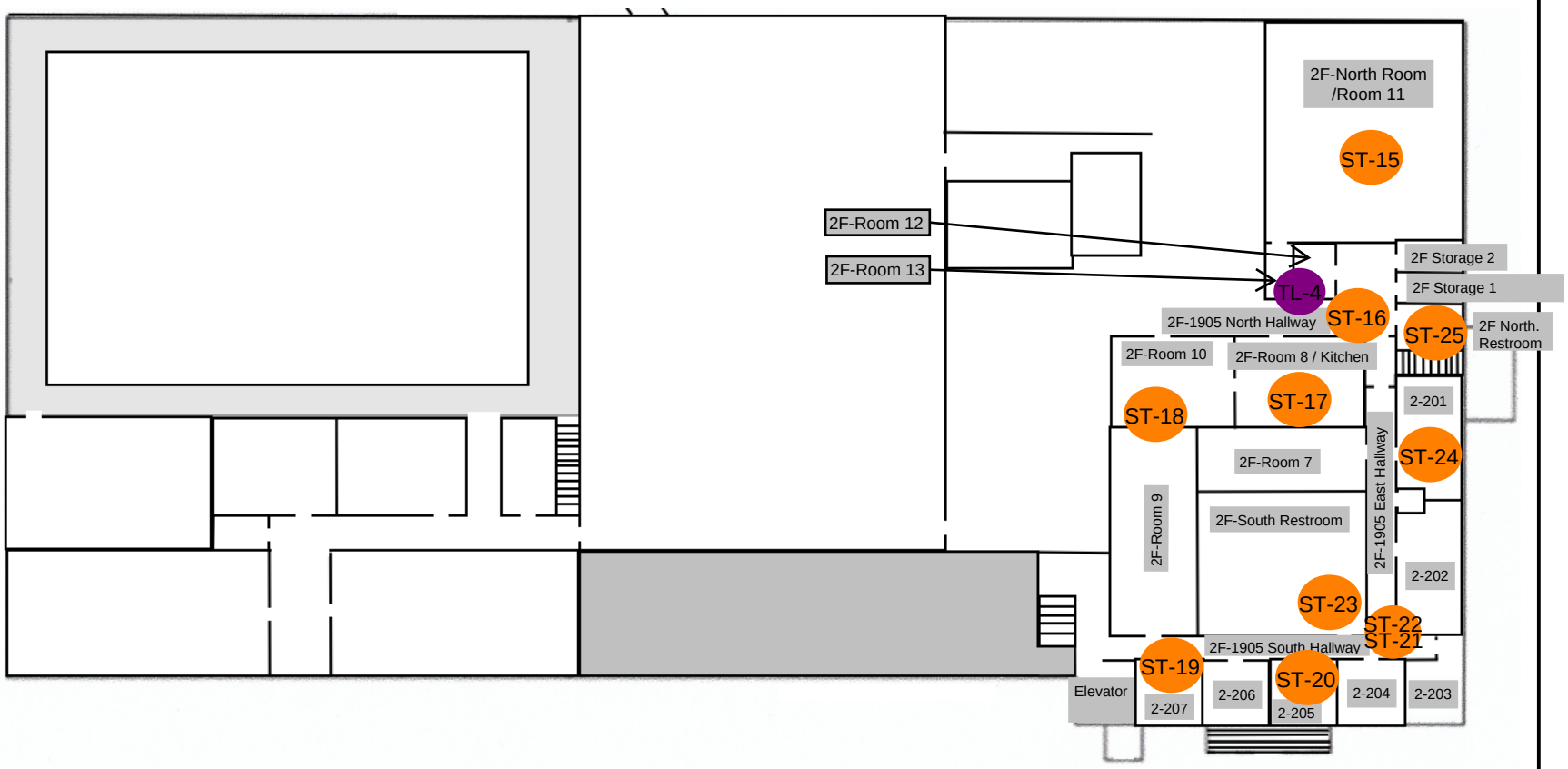
SPORE TRAP SAMPLE LOCATION MAP

1905 Building - Basement
Former YMCA – 480 South 3rd Street
Clinton, Iowa

EXHIBIT 2

Approximate Spore Trap Sample Location



N

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: JRB	Project No. 07207086; T32
Drawn by: SMM	Scale: N.T.S.
Checked by: JRB	File Name: Former YMCA
Approved by: JRB	Date: September 2022

Terracon
Consulting Engineers & Scientists
870 40th Avenue Bettendorf, Iowa 52722
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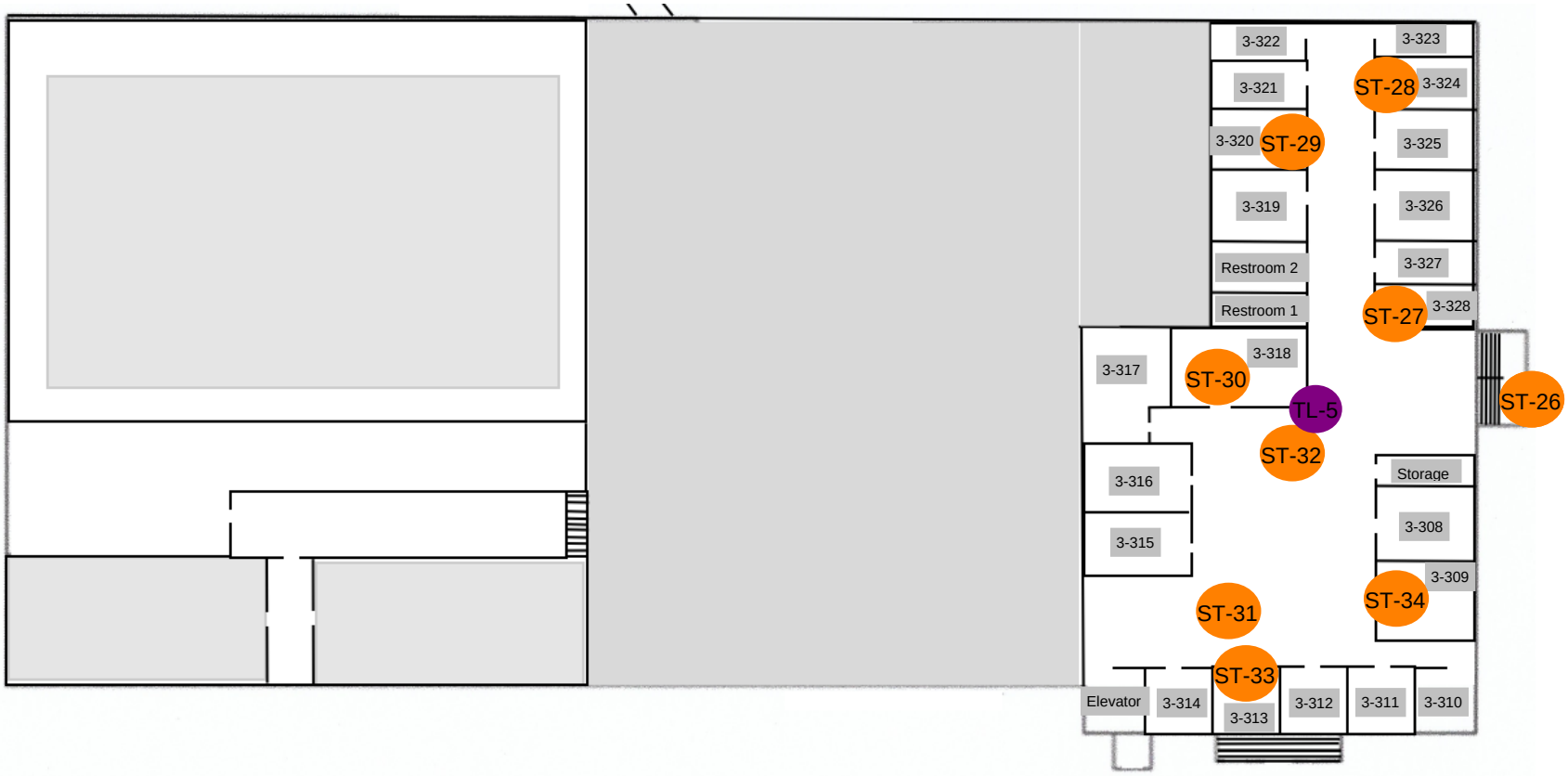
SPORE TRAP SAMPLE LOCATION MAP

1905 Building - Second Floor
Former YMCA – 480 South 3rd Street
Clinton, Iowa

EXHIBIT 3

Approximate Spore Trap Sample Location



N

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: JRB	Project No. 07207086; T32
Drawn by: SMM	Scale: N.T.S.
Checked by: JRB	File Name: Former YMCA
Approved by: JRB	Date: September 2022

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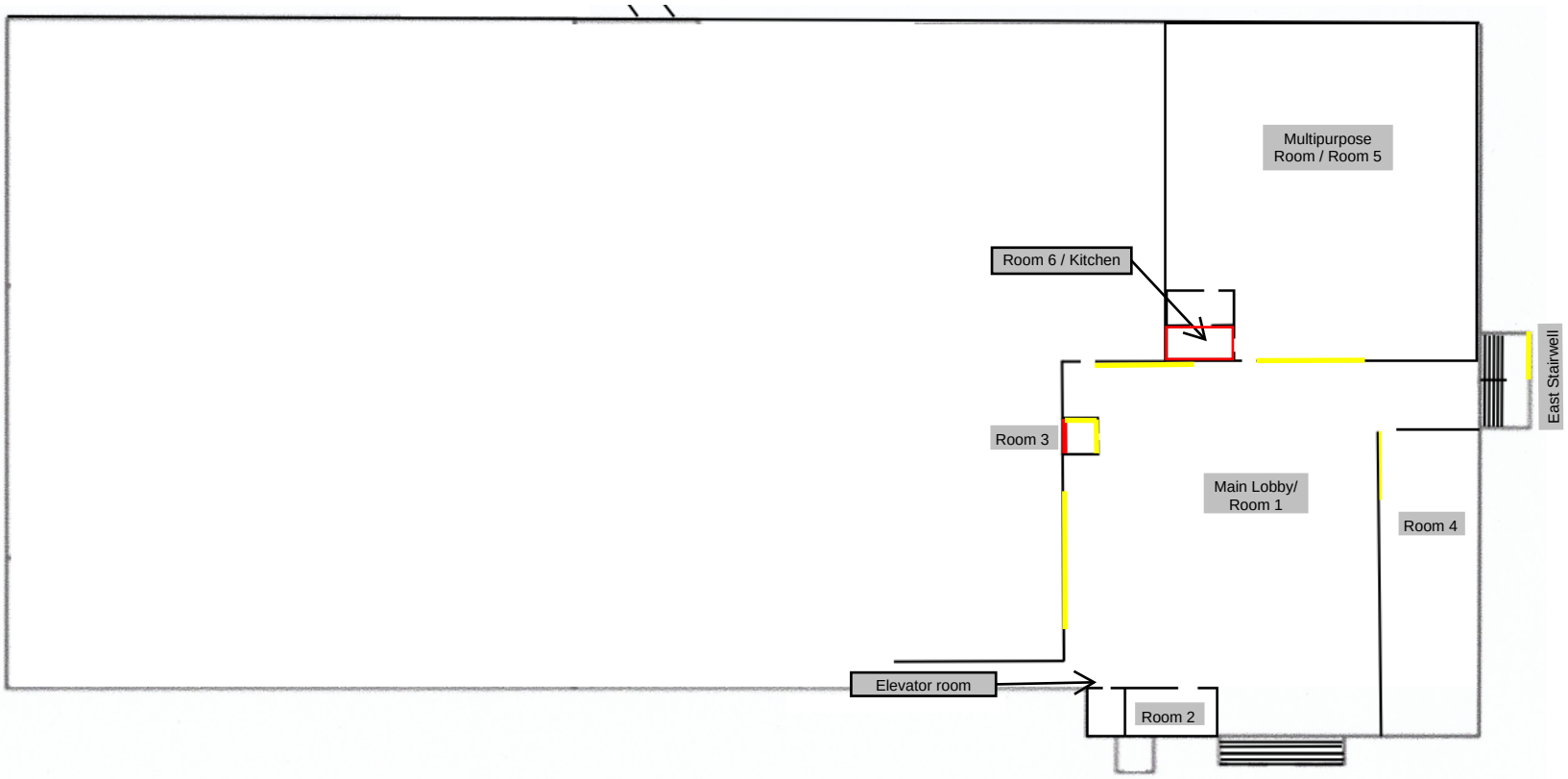
SPORE TRAP SAMPLE LOCATION MAP

1905 Building - Third Floor
Former YMCA – 480 South 3rd Street
Clinton, Iowa

EXHIBIT 4

Moisture reading results above 20% WME

Moisture reading results between 17-20% WME



N

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: JRB	Project No. 07207086; T32
Drawn by: SMM	Scale: N.T.S.
Checked by: JRB	File Name: Former YMCA
Approved by: JRB	Date: September 2022

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Consulting Engineers & Scientists
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MOISTURE LOCATION MAP

1905 Building - Main Level
Former YMCA – 480 South 3rd Street
Clinton, Iowa

EXHIBIT 5

Moisture reading results above 20% WME

Moisture reading results between 17-20% WME

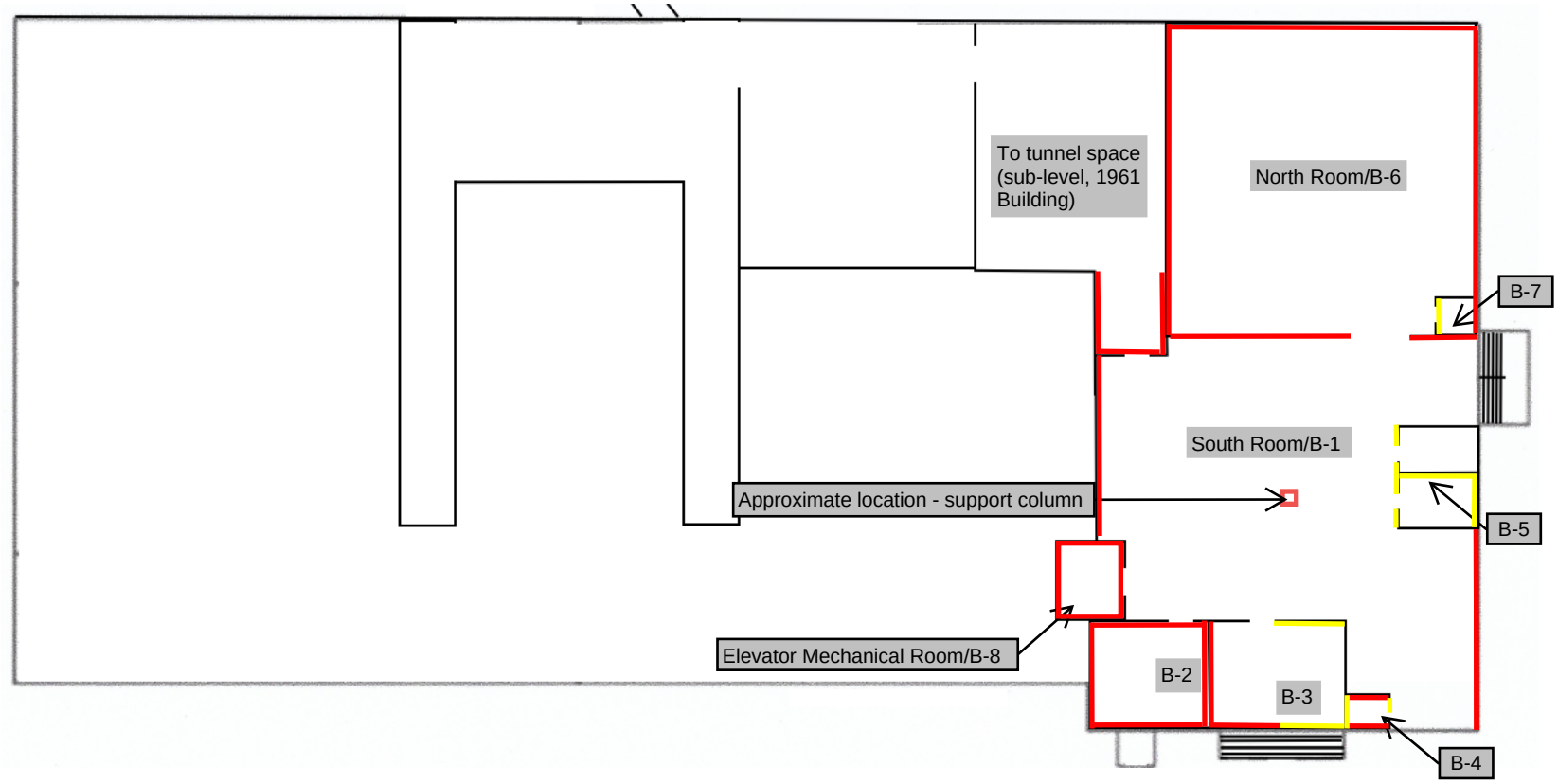

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager:	JRB
Drawn by:	SMM
Checked by:	JRB
Approved by:	JRB

Project No.	07207086; T32
Scale:	N.T.S.
File Name:	Former YMCA
Date:	September 2022

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Consulting Engineers & Scientists
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MOISTURE LOCATION MAP

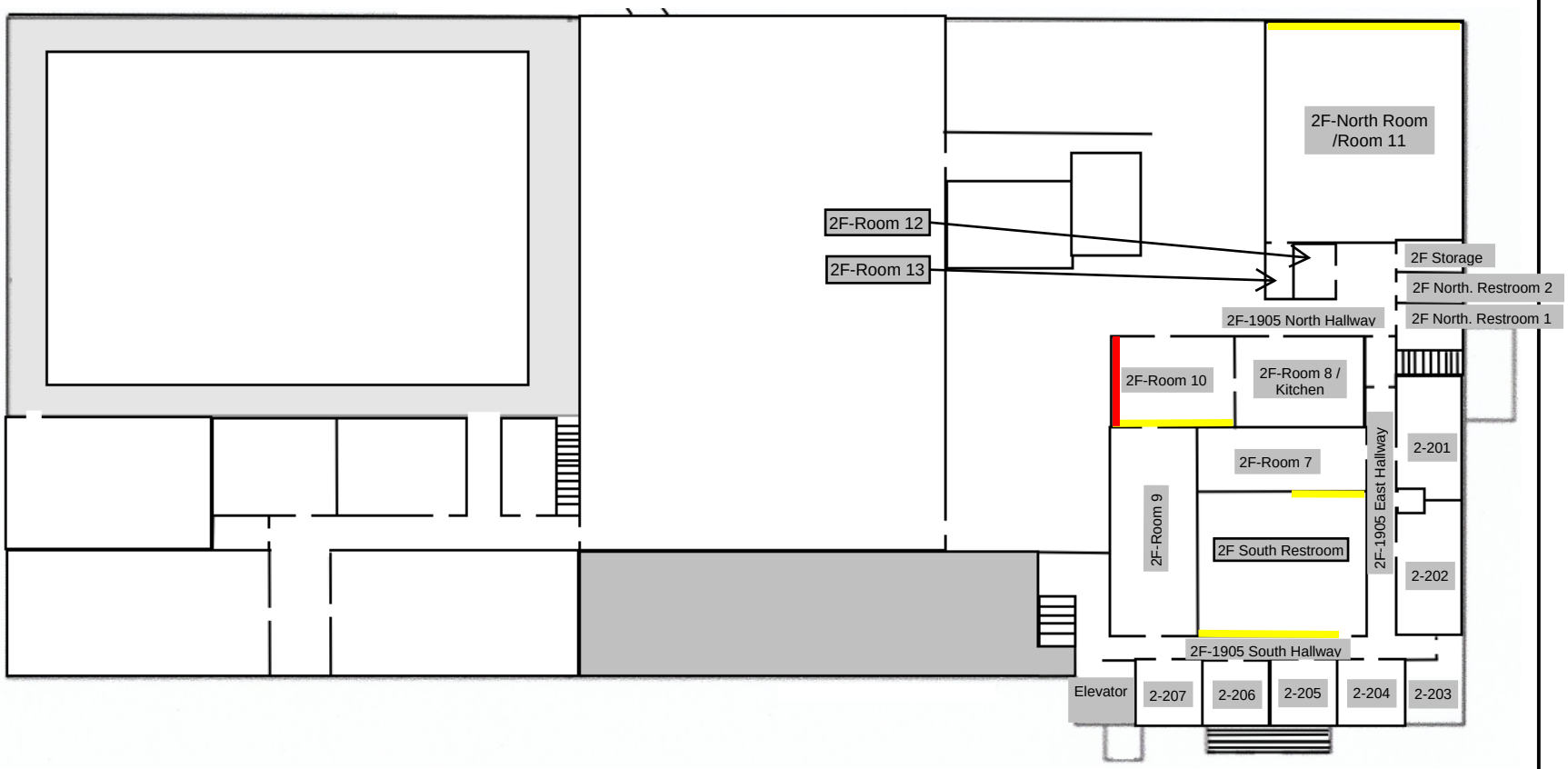
1905 Building - Basement
Former YMCA – 480 South 3rd Street
Clinton, Iowa

EXHIBIT

6

Moisture reading results above 20% WME

Moisture reading results between 17-20% WME



N

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: JRB	Project No. 07207086; T32
Drawn by: SMM	Scale: N.T.S.
Checked by: JRB	File Name: Former YMCA
Approved by: JRB	Date: September 2022

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MOISTURE LOCATION MAP

1905 Building - Second Floor
Former YMCA – 480 South 3rd Street
Clinton, Iowa

EXHIBIT 7

APPENDIX B

Mold Sampling Worksheets
Pump Calibration Data

LOCATION: Former YMCA – 1905 Building **DATE:** August 22, 2022

ADDRESS: 480 South 3rd Street, Clinton, Iowa

CONTACT NAME: Mr. Jason Craft, City of Clinton, Iowa **PHONE:** 563.242.2144

TERRACON TEAM: James R. Baxter, Alex J. Davis

SAMPLE TYPE (one type / worksheet):					
AIR:	**PUMP ID:**	Bio-Pump Plus SN 6034	☑ **SPORE TRAP**		
☐ **CULTURE MEDIA:**	☐ **MEA**	☐ **TSA Blood**	☐ **Cornmeal**	☐ **Other**	
	SAMPLER TYPE:				
OTHER:	☑ **Tape lift**	☐ **Swab**	☐ **Bulk**	☐ **Dust**	☐ **Other**
TEMPERATURE/RELATIVE HUMIDITY METER:					
Extech Humidity/Temperature Pen 445580					
MANUFACTURER, MODEL, SERIAL #					MANUFACTURER, MODEL, SERIAL #

SAMPLE # ST-1 / 3483 3307 **ON** 09:03 **OFF** 09:08 /// 5 **MIN** 75 **L**
LOCATION # 1 **PHOTO #:** **TEMP:** 96.9 °F **RH:** 28.0 %
LOCATION DESCRIPTION: Outside main entrance to 1905 building

SAMPLE # ST-2 / 3483 3298 **ON** 09:12 **OFF** 09:17 /// 5 **MIN** 75 **L**
LOCATION # 2 **PHOTO #:** **TEMP:** 84.0 °F **RH:** 48.9 %
LOCATION DESCRIPTION: Main level, southwest area near hallway to 1961 building

SAMPLE # ST-3 / 3483 3571 **ON** 09:12 **OFF** 09:17 /// 5 **MIN** 75 **L**
LOCATION # 3 **PHOTO #:** **TEMP:** 84.0 °F **RH:** 48.9 %
LOCATION DESCRIPTION: Main level, southwest area near hallway to 1961 building

SAMPLE # ST-4 / 3483 3293 **ON** 09:20 **OFF** 09:25 /// 5 **MIN** 75 **L**
LOCATION # 4 **PHOTO #:** **TEMP:** 82.9 °F **RH:** 59.2 %
LOCATION DESCRIPTION: Main level, approximate center of main lobby/Room 1

SAMPLE # ST-5 / 3483 3281 **ON** 09:29 **OFF** 09:34 /// 5 **MIN** 75 **L**
LOCATION # 5 **PHOTO #:** **TEMP:** 75.9 °F **RH:** 68.7 %
LOCATION DESCRIPTION: Main level, south-center portion of Room 5, near entrance to Room 6

CALIBRATOR: Air-O-Cell flow meter (MANUFACTURER, MODEL, SERIAL #) **PUMP IDs:** #6034 and #3974 Zefon Bio-Pump Plus (ID #, MANUFACTURER, MODEL)

PRE-CALIBRATION	POST-CALIBRATION
Calibrated by: James Baxter	**Calibrated by:** James Baxter
DATE: 08/22/2022 **TIME:** 08:55	**DATE:** 08/22/2022 **TIME:** 17:00
PRE-CAL AVE 15 **+ POST-CAL AVE** 15 **÷ 2 =** 15 **LPM**	

BUILDING CHARACTERISTICS

Age of building: Original structure – 1905; additions in 1961 and 1978 Number of floors: 3

Building size: Approximately 80,000 square feet (total estimate of all structures)

General building uses: Former YMCA facility / former transitional housing facility

Number of occupants: Vacant

Flooring structure:
- ☒ Slab on grade
- ☒ Wood/plank
- ☐ Concrete
- ☐ Other:

Flooring finishes:
- ☒ Carpet
- ☒ Ceramic
- ☒ Vinyl
- ☐ Other:
- ☐ Linoleum
- ☐ Terrazzo
- ☐ Unfinished

Main structure:
- ☐ Fireproofed
- ☐ Steel frame
- ☒ Concrete
- ☐ Grade: Above / On / Below
- ☐ Other:
- ☒ Wood frame
- ☐ Slab on slab

Building insulation:

	Walls	Ceiling
Fiberglass batt	☒	☒
Mineral wool	☐	
Spray-on	☐	☐
Other:		

Exterior walls:
- ☐ Stucco
- ☐ Wood
- ☒ Brick
- ☒ Concrete
- ☐ CMU block
- ☐ Hard plaster
- ☐ Steel
- ☐ Other:

Interior walls:
- ☐ Stucco
- ☐ Wood
- ☐ Brick
- ☐ Concrete
- ☐ CMU block
- ☒ Plaster / drywall
- ☐ Steel
- ☐ Other:

Interior wall finishes ☒ Paint ☐ Wallpaper ☐ Vinyl wallcovering ☐ Other:

Ceilings:

Lower	Upper
☒ Drop ceiling	☒ Steel
☐ Gypsum	☐ Gypsum
☐ Hard plaster	☐ Hard plaster
☐ Concrete	☒ Concrete
☐ Interlocking tiles	☐ Interlocking tiles
☐ Wood	☒ Wood
☐ Acoustical	☐ Acoustical
☐ Other:	

Roof:
- ☐ Built-up
- ☐ Asphalt shingle
- ☐ Wood shake
- ☐ Other:
- ☐ Ceramic tile
- ☒ Membrane
- ☐ Steel/tar

Roof type:
- ☐ Gable
- ☒ Flat
- ☐ Other:

Attic present? ☐ Yes ☒ No

Basement or crawlspace present? ☒ Yes (partial) ☐ No

Heating:
- ☐ Boiler
- ☐ Radiant
- ☐ Forced-air
- ☐ Return thru plenum
- ☐ Other:
- ☐ Ducted return
- ☐ Electric
- ☐ Natural gas
- ☐ Wood/coal

Cooling:
- ☐ Chiller
- ☐ Radiant
- ☐ Forced-air
- ☐ Other:
- ☐ Return thru plenum
- ☐ Ducted return
- ☐ Electric

Location of air handling units: Building is no longer fully enclosed or tempered

Locations served by individual air handlers: NA

Percent of air recycled: NA

SAMPLE #	ST-6 / 3483 3302	**ON**	09:37	**OFF**	09:42	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	75.3	°F		**RH:**	73.4	%	
LOCATION DESCRIPTION:	Main level, northwest portion of Room 6 near wall staining										

SAMPLE #	ST-7 / 3483 3301	**ON**	09:47	**OFF**	09:52	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	82.0	°F		**RH:**	57.4	%	
LOCATION DESCRIPTION:	Lower stairwell landing between main level and basement										

SAMPLE #	ST-8 / 3483 3287	**ON**	09:57	**OFF**	10:02	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	75.9	°F		**RH:**	66.9	%	
LOCATION DESCRIPTION:	Basement, approximate center of Room B1										

SAMPLE #	ST-9 / 3483 3289	**ON**	10:06	**OFF**	10:11	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	70.8	°F		**RH:**	84.7	%	
LOCATION DESCRIPTION:	Basement, entrance of Room B3										

SAMPLE #	ST-10 / 3483 3284	**ON**	10:06	**OFF**	10:11	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	70.8	°F		**RH:**	84.7	%	
LOCATION DESCRIPTION:	Basement, entrance of Room B3										

SAMPLE #	ST-11 / 3483 3303	**ON**	10:15	**OFF**	10:20	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	71.2	°F		**RH:**	84.6	%	
LOCATION DESCRIPTION:	Basement, southwest corner of Room B2										

SAMPLE #	ST-12 / 3483 3309	**ON**	10:23	**OFF**	10:28	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	70.7	°F		**RH:**	83.4	%	
LOCATION DESCRIPTION:	Basement, approximate center of Room B8										

SAMPLE #	ST-13 / 3483 3294	**ON**	10:30	**OFF**	10:35	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	74.4	°F		**RH:**	71.3	%	
LOCATION DESCRIPTION:	Basement, approximate center of Room B6										

SAMPLE #	ST-14 / 3483 3291	**ON**	10:42	**OFF**	10:47	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	78.8	°F		**RH:**	66.6	%	
LOCATION DESCRIPTION:	Stairwell landing between Main Level and second floor										

SAMPLE #	ST-15 / 3483 3574	**ON**	10:52	**OFF**	10:57	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	77.0	°F		**RH:**	73.8	%	
LOCATION DESCRIPTION:	Second floor, approximate center of Room 11										

SAMPLE #	ST-16 / 3483 3308	**ON**	11:00	**OFF**	11:05	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	78.0	°F		**RH:**	67.5	%	
LOCATION DESCRIPTION:	Second floor, approximate center of north hallway, near entrance to Room 8 (kitchen)										

SAMPLE #	ST-17 / 3483 3313	**ON**	11:08	**OFF**	11:13	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	83.4	°F		**RH:**	59.5	%	
LOCATION DESCRIPTION:	Second floor, south-center portion of Room 8 (former kitchen)										

SAMPLE #	ST-18 / 3483 3310	**ON**	11:18	**OFF**	11:23	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	80.4	°F		**RH:**	65.9	%	
LOCATION DESCRIPTION:	Second floor, Room 10, near the doorway to Room 9										

SAMPLE #	ST-19 / 3483 3685	**ON**	11:28	**OFF**	11:33	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	76.8	°F		**RH:**	77.0	%	
LOCATION DESCRIPTION:	Second floor, inside Unit 207										

SAMPLE #	ST-20 / 3483 3278	**ON**	11:35	**OFF**	11:40	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	77.5	°F		**RH:**	70.5	%	
LOCATION DESCRIPTION:	Second floor, inside Unit 205										

SAMPLE #	ST-21 / 3483 3306	**ON**	11:43	**OFF**	11:48	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	84.9	°F		**RH:**	66.6	%	
LOCATION DESCRIPTION:	Second floor, south portion of east hallway										

SAMPLE #	ST-22 / 3483 3296	**ON**	11:55	**OFF**	12:00	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	84.9	°F		**RH:**	66.6	%	
LOCATION DESCRIPTION:	Second floor, south portion of east hallway										

SAMPLE #	ST-23 / 3483 3300	**ON**	12:08	**OFF**	12:13	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	82.0	°F		**RH:**	61.2	%	
LOCATION DESCRIPTION:	Second floor, just inside entrance to south restroom										

SAMPLE #	ST-24 / 3483 3600	**ON**	12:15	**OFF**	12:20	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	80.2	°F		**RH:**	66.1	%	
LOCATION DESCRIPTION:	Second floor, inside Unit 201										

SAMPLE #	ST-25 / 3483 3658	**ON**	12:26	**OFF**	12:31	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	80.4	°F		**RH:**	68.3	%	
LOCATION DESCRIPTION:	Second floor, just inside north restroom										

SAMPLE #	ST-26 / 3483 3359	**ON**	12:37	**OFF**	12:42	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	81.8	°F		**RH:**	61.7	%	
LOCATION DESCRIPTION:	Stairwell between second floor and third floor										

SAMPLE #	ST-27 / 3483 3323	**ON**	12:45	**OFF**	12:50	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	80.4	°F		**RH:**	59.8	%	
LOCATION DESCRIPTION:	Third floor, inside Unit 328										

SAMPLE #	ST-28 / 3483 3326	**ON**	12:53	**OFF**	12:58	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	80.9	°F		**RH:**	64.0	%	
LOCATION DESCRIPTION:	Third floor, inside Unit 324										

SAMPLE #	ST-29 / 3483 3299	**ON**	13:03	**OFF**	13:08	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	80.7	°F		**RH:**	61.9	%	
LOCATION DESCRIPTION:	Third floor, inside Unit 320										

SAMPLE #	ST-30 / 3483 3311	**ON**	13:10	**OFF**	13:15	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	78.	°F		**RH:**	64.6	%	
LOCATION DESCRIPTION:	Third floor, inside Unit 318										

SAMPLE #	ST-31 / 3483 3593	**ON**	13:18	**OFF**	13:23	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	78.4	°F		**RH:**	73.4	%	
LOCATION DESCRIPTION:	Third floor, southwest corner of open/common area										

SAMPLE #	ST-32/ 3483 3327	**ON**	13:27	**OFF**	13:32	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	78.6	°F		**RH:**	73.1	%	
LOCATION DESCRIPTION:	Third floor, north-center portion of open/common area										

SAMPLE #	ST-33 / 3483 3325	**ON**	13:35	**OFF**	13:40	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	81.3	°F		**RH:**	64.4	%	
LOCATION DESCRIPTION:	Third floor, inside Unit 313										

SAMPLE #	ST-34 / 3483 3292	**ON**	13:45	**OFF**	13:50	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	82.5	°F		**RH:**	62.0	%	
LOCATION DESCRIPTION:	Third floor, inside Unit 309										

SAMPLE #	ST-35 / 3483 3312	**ON**	14:15	**OFF**	14:20	///	5	**MIN**	75	**L**	
LOCATION #		**PHOTO #:**		**TEMP:**	84.2	°F		**RH:**	47.4	%	
LOCATION DESCRIPTION:	Outside main entrance to 1905 building										

SAMPLE #	Tape Lift 1	**ON**	NA	**OFF**	NA	///	NA	**MIN**	NA	**L**	
LOCATION #	**TL1**	**PHOTO #:**		**TEMP:**	NA	°F		**RH:**	NA	%	
LOCATION DESCRIPTION:	Main level, east side counter, water damaged/stained area										

SAMPLE #	Tape Lift 2	**ON**	NA	**OFF**	NA	///	NA	**MIN**	NA	**L**	
LOCATION #	**TL2**	**PHOTO #:**		**TEMP:**	NA	°F		**RH:**	NA	%	
LOCATION DESCRIPTION:	Basement, ceiling tile located immediately at bottom of steps										

SAMPLE #	Tape Lift 3	**ON**	NA	**OFF**	NA	///	NA	**MIN**	NA	**L**	
LOCATION #	**TL3**	**PHOTO #:**		**TEMP:**	NA	°F		**RH:**	NA	%	
LOCATION DESCRIPTION:	Basement, southeast portion from lower water damaged brick wall										

SAMPLE #	Tape Lift 4	**ON**	NA	**OFF**	NA	///	NA	**MIN**	NA	**L**	
LOCATION #	**TL4**	**PHOTO #:**		**TEMP:**	NA	°F		**RH:**	NA	%	
LOCATION DESCRIPTION:	Second floor, east lower portion of north hallway wall										

SAMPLE #	Tape Lift 5	**ON**	NA	**OFF**	NA	///	NA	**MIN**	NA	**L**	
LOCATION #	**TL5**	**PHOTO #:**		**TEMP:**	NA	°F		**RH:**	NA	%	
LOCATION DESCRIPTION:	Third floor, wall-mounted shelf on north side of open common area										

SAMPLE #	Tape Lift 6	**ON**	NA	**OFF**	NA	///	NA	**MIN**	NA	**L**	
LOCATION #	**TL6**	**PHOTO #:**		**TEMP:**	NA	°F		**RH:**	NA	%	
LOCATION DESCRIPTION:	Stairwell between first floor and second floor, on south side hand rail near the lower set of steps										

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Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 8-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
North Entra stairwell	A wall between doors		Plaster	5'	5.2
stairwell	B wall behind granit		Plaster	4'	14.6
stairwell	B wall Above granit		Plaster	5'	14.5
stairwell	A wall on stairs abov granit		Plaster	6'	12.0
room 1	A wall south side		wood	3'	14.5
room 1	A wall south side		wood	6'	16.9
room 1	B wall west side		Wood	3'	15.0
room 1	B wall west side center		wood	3'	17.2
room 1	A wal center behind panel		Plaster	3'	11.7
room 1	A wall North side		wood	1'	17.6
room 1	B wall North End of room		wood	2'	17.4
room 1	C wall North end		wood	1	17.6
room 1	C wall center		Drywall	2'	15.5
room 1	D wall center		Drywall	1'	15.4
room 1	D wall center		Drywall	5'	9.9
rm 2	A wall center		Drywall	1'	16.1
rm 2	A wall center		Drywall	4'	11.7
rm 2	B wall center		Drywall	1'	16.2
2	B wall center		Drywall	3'	8.9
2	B wall center		Drywall	2	12.0
2	C wall center		Drywall	1	15.4
2	C wall center		Drywal	2	11.8
2	D wall center		Drywal	7'	11.6

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA

480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
rm 2	D wall center		Drywall	1'	11.5
rm 3	A wall center		Plaster	1'	8.8
.3	A wall center base		wood	1'	11.6
3	A wall center		Plaster	5'	9.3
3	B wall behind base board		Plaster	1	52.5
3	B wall center		Plaster	1	26.7
3	B wall center		Plaster	3	11.8
3	C wall center		Plaster	1	18.6
3	C wall center		Plaster	1	19.6
3	C wall center		Plaster	3	8.7
3	D wall North side		wood	1	17.4
3	D wall north side		Plaster	2	11.1
4	A wall center		wood	1	11.8
4	A wall behind Panel		Plaster	3	10.3
4	B wall North end		wood	1	9.4
4	B wall North end		Plaster	2	9.6
4	B wall center chase		wood	2	10.8
4	B wall center		wood	1	13.5
4	B wall center		wood	2	9.8
4	C wall center under window		wood	1	11.9
4	C wall window Seal		wood		9.3
4	D wall center at chase		Plaster	5	7.8
4	D wall center at chase		wood	2	10.3

is a chase wall

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA

480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
4	D wall center behind cove base		wood	1	10.2
4	D wall Northend visual mold		Drywall	1	19.8
4	D wall Northend		drywall	2	17.4
4	D wall Northend		Drywall	3½	16.8
4	D wall Northend		wood	4	10.6
5	A wall southend		wood	3"	19.3
5	A wall southend		wood	1'	16.0
5	A wall southend		wood	3	15.0
5	A wall southend		wood	5	9.8
	A wall center		wood	1	13.6
	A wall center		wood	2	13.8
	A wall center		wood	3	9.9
	B wall center		wood	1	12.0
	B wall center		W	3	9.0
	C wall center		W	1	8.6
	C wall center		W	2	7.3
5	C wall chase by door		wood	3	13.8
	D wall center by staining		wood	1	19.0
	D		W	2	16.5
	D		W	3	13.7
	D		W	5	15.3
5	D wall center by staining		wood	6	9.5
6	A wall		Drywall	1	34.2

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
6	A wall		Drywall	2	~~20~~ 20.4
6	A wall		D	M	17.4
6	B wall		D	1	20.6
6	B wall		D	2	15.3
6	B wall		D	4	17.4
6	C wall		Drywal	1	20.2
6	C wall		D	6	17.7
6	D wall		D	1	23.7
6	D D wall		D	4	~~25.3~~
6	ceiling tiles		fiberglass	ceiling	27.1
Stairwell	A wall behind Panel		wood	1	15.4
Stairwell	A A wall Panel		Wood	3	17.8
Stairwell	B wall center Panel		wood	4	13.6
Stairwell	B B wall window frame		wood	3	18.8
St	B wall base board		wood	3"	15.4
	C wall center stair		drywall	3	10.1
	C wall center base board		wood	3"	17.0
	D wall framing		wood	3'	9.2
Stairwell	D wall behind granite		Plaster	2"	16.8
Stairwell	center railing		wood	3	8.6
Stairwell	D wall seal window		wood	3	8.7
	A wall wood panel		wood	3	10.8
Stair	A wall hand rail		wood		17.0

Visual mold throughout rm 6

1 East Entrance 1st Floor

2nd Floor

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
2nd Floor East Stairs	Stairs	center hand rail	wood	3	20.6
	Stairs	B wall	wood	3	11.3
	Stairs	B wall door	wood	3	10.3
East Hallway 2nd Fl	East Hallway	A wall	Drywall	1'	8.9
	Eas	D wall	D	1'	9.2
	East	C wall	D	1'	9.3
	East	B wall	D	1'	8.7
	East hall	ceiling tile	ceiling tile		11.6
	201	A wall	Dry	1'	9.2
		B wall		1	8.8
		C		1	9.8
	201	C wall	Dry	6	7.0
	202	A wall	Dry	1'	7.5
		B wall		1'	7.8
		C wall		1'	8.6
	202	D wall	Drywall	1'	7.0
	203	A Awall	D	1	6.5
		B		1	7.3
		C		1	7.0
		D wall	drywall	1	6.8
	204	A wall	D	1	7.3
		B	D	1	7.1
	204	C wall	D	1	8.7

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA

480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
204	D wall		Drywall	1	8.0
205	A		D	1	7.3
205	B		D	1	12.1
205	C		D	1	7.1
205	D wall		Drywall	1	8.9
SR	D wall above tile	Plaster	~~Drywall~~	4'	17.1
	A wall		Plaster	4'	14.4
	C		Plaster	4'	16.9
SR	B wall		Plaster	4'	17.1
206	A wall		Dry	1'	6.6
	B		D	1'	7.2
	C		D	1'	8.6
206	D wall		Dry wall	1'	7.0
207	A wall		D	1	8.6
	B		D	1	8.6
	C		D	1	8.7
207	D wall		Dry	1	9.8
2F El	A wall		D	1	8.6
2F El	B		D	1	8.6
2F EL	C		D	1	8.6
2F EL	D wall		D ryvall	1	8.6
Rm 9	A wall		D	3'	15.3
Rm 9	A wall		drywall	1	15.7

Women's Restroom

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

2nd FL

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
Rm 9	A wall		Drywall	5'	15.1
Rm 9	B wall		D	1	16.5
9	B wall		D	3	15.7
9	B		Dry	6'	15.1
9	C		D	1	7.8
9	D wall		D	5	9.1
	D			2'	17.1
	D			3'	16.8
Rm 9	D wall		Plaster Drywall	5'	16.8
Rm 10	A wall		Plaster	1'	14.6
10	A		Plaster	3	10.1
10	B wall		Plaster	1	25
10	B wall		Plaster	3	20.5
10	B wall		Plaster	6	13.7
	C wall		Drywall	1	13.5
	C wall		Drywall	3	11.1
	C wall		Drywall	5	11.8
	D wall		Drywall	1'	14.4
	D wall		Dry	3	13.6
Rm 10	D wall		Dry	5'	10.3
Rm 8	A wall		D	2'	17.1
	B wall		D	3'	14.5
	K wall		Plast	3	10.9

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
Rm 6	D wall		Drywall	2	16.3
Rm 6	D wall		wood	2	14.9
North hall	C wall		Plaste	3	14.1
North hall	B wall		Plaster	3	9.0
North hall	D wall		Drywall	3	15.5
North hal	A wall		Plaster	3	14.9
Rm 11	D wall build out		Drywall	1	10.2
11	D wall		wood	3	13.9
11	C wall center		wood	1	9.4
11	B wall center		wood	3	17.0
11	AB wall center		wood	5	10.0
RM 11	A wall center		wood	2'	9.5
North Restroom	A wall		wood	3	7.4
North restroom	B wall window frame		wood	3	8.4
North restroom	B wall window seal		wood	3	8.6
East stair	D wall window frame		wood	2	7.8
East stair	D wall window seal		wood	2	7.2
East stair	A wall panel		wood	3	8.8
East stair	Banister railing		wood	3	8.4
East stair	hand rail		wood	3	9.9
East stair	A wall behind panel		Plastere	3	7.0

3rd FL East stair

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

3rd Floor

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
comm rm	D wall		Dry	1	10.2
	A wall			1	9.9
	B wall			1	8.9
comm rm	C wall		drywall	1	9.3
308	A		D	1	11.8
	B		D	1	7.9
	C		D	1	9.9
	D wall		Drywall	1	9.1
308	ceiling		ceiling tile	1	8.5
309	A		D	1	7.9
	B		D	1	7.8
	C		D	1	6.6
309	D wall		Drywall	1	8.3
310	A wall		D	1	8.6
	B		D	1	8.6
	C		D	1	8.1
310	D wall		Drywall	1	9.4
311	A wall		D	1	7.0
	B			1	7.2
	C			1	8.7
311	D wall		drywall	1	7.8
312	A wall		Dry	1	11.9
312	B wall		Dry	1	11.9

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
312	C wall		Drywall	1	11.9
312	D wall		Dry	1	11.3
313	A wall		D	1	11.8
	B wall		D	1	10.3
	C wall		D	1	10.3
313	D wall		Drywall	1	9.8
314	A wall		D	1	10.0
	B		D	1	9.8
	C		D	1	11.7
314	D wall		Drywall	1	9.2
3rd Elev	A wall		D	1	7.4
3rd El	B		D	1	7.6
3rd	C		D	1	9.8
3rd Elev	D wall		Drywall	1	11.8
315	A		D	1	7.5
	B		D	1	11.7
	C		D	1	8.7
315	D wall		Drywall	1	9.8
316	A wall		D	1	9.8
	B wall		D	1	11.3
	B wall window seal		wood		8.1
316	C wall		D	1	11.1
316	D wall		Drywall	1	11.8

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
317	A wall		Drywall	1	10.6
	B		D	1	11.5
	C		D	1	8.7
317	D wall		Drywall	1	11.6
318	A wall		D	1	8.7
	B		D	1	12.0
	C		D	1	8.1
318	D		Drywall	1	11.6
North corr	A wall		Drywall	1	8.8
|	B wall		Plaster	1	0.0
|	C wall		Drywall	1	11.1
North corr	D wall		Drywall	1	8.1
North Bathroom	A wall		Drywal	2	8.8
|	B		Dry	5	8.1
|	C		Dry	5	10.1
|	D wall		Dry	5	9.8
319	A		D	2	10.5
	B		D	2	11.7
	C		D	2	11.9
319	D wall		Drywall	2	11.8
320	A wall		D	1	7.9
	B		D	1	8.1
320	C		D	1	11.1

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 8-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
320	D wall		Drywall	1	7.9
320	ceiling tile		ceiling		8.9
321	A wall		Drywall	2	10.3
	B		D	2	10.5
	C		D	2	10.2
321	D wall		D	2	10.2
322	A		D	1	9.8
	B		D	1	9.9
	C		D	1	10.3
322	D wall		Drywall	1	10.5
323	A		D	2	9.9
	B		D	2	8.9
	C		D	2	10.2
323	D wall		D	2	9.3
324	A		D	2	9.8
	B		D	2	9.9
	C		D	2	9.8
324	D wall		Drywall	2	9.9
325	A wall		D	1	9.9
	B wall		D	1	10.5
	B window frame		wood	1	8.6
	C wall		Drywall	1	10.9
325	D wall		drywall	1	10.3

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
326	A wall		Drywall	1	10.3
	B		D	1	10.3
	C		D	1	11.1
326	D wall		D	1	11.9
327	A		D	2	11.8
	B		D	2	10.3
	C		D	2	10.9
327	D wall		Drywall	2	11.8
328	A		D	2	11.9
	B		D	2	11.7
	C		D	2	11.3
328	D wall		Drywall	2	11.3
B-1	A wall East side		BRICK	3	87.6
B-1	A wall west side		Brick	1	17.4
B-1	B wall south side		Drywall	1	20.4
B-1	B wall south side		BRICK	1	20.6
	B wall header		Drywall	1	49.8
	B side center column		Drywall	1	28.1
B-1	west side ceiling tile		ceiling tile		22.7
	C wall west end		Drywall	1	80.5
	C wall East end		BRICK	1	22.6
	D wall North end		CMU	1	18.8
B-1	D wall center		Brick	1	17.9

Basement

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
B-4	A		Brick	1	35.9
	B		Brick	1	19.2
	C		Drywall	1	20.1
B-4	D wall		Drywall	1	18.1
B-3	A wall		Brick	1	9.3
	B wall		Plaster	1	17.7
	B - wall		Stone	1	49.3
	D wall		Brick	1	17.8
B-3	C wall Brick		Brick	1	87.6
B-2	A wall		Brick	1	87.6
	B wall		Brick	1	87.6
	C wall	Drywall	Brick	1	20.6
B-2	D wall	Brick	Drywall	1	20.4
B-8	A		Drywall	4	87.6
	B		Drywall	4	87.6
	C		wood	4	33.4
B-8	D wall		Drywall	4	38.9
B-5	A		Dry	1	19.6
	B		D	1	17.9
	C		D	1	9.7
B-5	D wall		CMU	1	17.8
B-6	A wall		Brick	3	48.7
B-6	B wall		Brick	3	87.6

Terracon

Job # 07207086; Task 32

MOISTURE READINGS

LOCATION: Former Clinton YMCA
480 South 3rd Street, Clinton, Clinton County, Iowa

DATE: 08-18

Location	Description	IR camera indications	Substrate	Height above ground surface (inches)	Moisture meter reading (% WME)
B-6	C wall		Brick	2	58.7
B-6	D wall		Brick	2	19.7
B-7	D wall		Drywall	2	19.8
	A wall		CMU	2	15.8
B-7	C wall		CMU	2	14.7
Tunnel	A wall		Drywall	3	87.6
Tunnel	A wall		Brick	3	39.6
	ceiling		concrete		25.1
	C wall		Brick	3	40.9
	D wall		Brick	3	47.1
	B wall		Bondex	2	26.0
Tunnel	B wall		wood	2	24.2
	Door to tunnel		wood	1	43.1
Tunnel	A wall		Brick	2	68.8

APPENDIX C

Analytical Laboratory Reports and COC

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Report for:

James Baxter
Terracon - Bettendorf, IA
870 - 40th Avenue
Bettendorf, IA 52722

Regarding: Project: 07227086; Task 32; Former YMCA-1905 Building
EML ID: 3013585

Approved by:

Technical Manager
Ariunaa Jalsrai

Dates of Analysis:
Spore trap analysis: 08-27-2022

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #103005

Eurofins EMLab P&K
3000 Lincoln Drive East, Suite A, Marlton, NJ 08053
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-1 / 34833307: Outside Main Entrance to the 1905 Building			ST-2 / 34833298: Main Level Southwest Area near Hallway to the 1961 building		
Comments (see below)	None			A		
Lab ID-Version‡:	14512120-1			14512121-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria	8	100	110			
Ascospores	16	25	850			
Basidiospores	52	25	2,800			
Cercospora	2	100	27			
Chaetomium						
Chrysosporium-like						
Cladosporium	42	25	2,200			
Epicoccum	1	100	13			
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†						
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes	2	100	27			
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	27			< 13		
Pollen/m3	27			< 13		
Skin cells (1-4+)	< 1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			6,000			< 13

Comments: A) No spores detected.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-3 / 34833571: Main Level Southwest Area near hallway to the 1961 Building			ST-4 / 34833293: Main Level Approximate Center of Main Lobby Room 1		
Comments (see below)	None			None		
Lab ID-Version‡:	14512122-1			14512123-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores						
Basidiospores	4	25	210	2	25	110
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium				1	25	53
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†				4	25	210
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys				12	100	160
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			210			530

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-5 / 34833281: Main Level South Center Portion of Room 5 near entrance to Room 5			ST-6 / 34833302: Main level northwest portion of Room 6 near Wall Staining		
Comments (see below)	None			None		
Lab ID-Version‡:	14512124-1			14512125-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores	2	25	110			
Basidiospores	8	25	430	4	25	210
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium	1	25	53			
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	2	25	110	29	25	1,500
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	2+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			690			1,800

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-7 / 34833302: Lower Stairwell landing Between main level and basement			ST-8 / 34833287: Basement Approximate Center of Room B1		
Comments (see below)	None			None		
Lab ID-Version‡:	14512126-1			14512127-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				2	25	110
Basidiospores	1	25	53	7	25	370
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	1	25	53	16	25	850
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			110			1,300

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-9 / 34833289: Basement entrance to Room B3			ST-10 / 34833284: Basement entrance of Room B3		
Comments (see below)	None			None		
Lab ID-Version‡:	14512128-1			14512129-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores	2	25	110	2	25	110
Basidiospores	8	25	430	2	25	110
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium	3	25	160			
Epicoccum						
Myrothecium						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	48	25	2,600	122	25	6,500
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes				1	100	13
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			3,300			6,700

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-11 / 34833303: Basement Southwest Corner of Room B2			ST-12 / 34833309: Basement Approximate Center of Room B8		
Comments (see below)	None			None		
Lab ID-Version‡:	14512130-1			14512131-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores						
Basidiospores	4	25	210			
Cercospora						
Chaetomium						
Chrysosporium-like				164	7	31,000
Cladosporium						
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	2	25	110	482	3.5	180,000
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			320			210,000

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-13 / 34833294: Basement Approximate Center of Room B6			ST-14 / 34833291: Stairwell Landing Between main level and second Floor		
Comments (see below)	None			None		
Lab ID-Version‡:	14512132-1			14512133-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				2	25	110
Basidiospores	5	25	270	4	25	210
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	13	25	690	82	25	4,400
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			960			4,700

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-15 / 34833574: Second Floor Approximate Center of Room 11			ST-16 / 34833308: Second Floor, Approximate center of North Hallway near entrance to Room 8		
Comments (see below)	None			None		
Lab ID-Version‡:	14512134-1			14512135-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				1	25	53
Basidiospores	2	25	110	6	25	320
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum				1	100	13
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	14	25	750	190	25	10,000
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes				1	100	13
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			2+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			850			11,000

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
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§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-17 / 34833313: Second Floor south Center portion of Room 8 (kitchen)			ST-18 / 34833310: Second Floor Room 10 near the doorway to Room 9		
Comments (see below)	None			None		
Lab ID-Version‡:	14512136-1			14512137-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores						
Basidiospores				2	25	110
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	238	14	23,000	21	25	1,100
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			23,000			1,200

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-19 / 34833685: Second Floor inside Unit 207			ST-20 / 34833278: Second Floor Iside Unit 205		
Comments (see below)	None			None		
Lab ID-Version‡:	14512138-1			14512139-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores						
Basidiospores	2	25	110	2	25	110
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium	2	25	110			
Epicoccum						
Myrothecium						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	212	7	40,000	268	25	14,000
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			< 1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			41,000			14,000

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
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Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-21 / 34833306: Second Floor South portion of East Hallway			ST-22 / 34833296: Second Floor South Portion of East Hallway		
Comments (see below)	None			None		
Lab ID-Version‡:	14512140-1			14512141-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores						
Basidiospores	2	25	110			
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	68	25	3,600	67	25	3,600
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			3,700			3,600

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
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Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-23 / 34833300: Second Floor Just Inside entrance to South restroom			ST-24 / 34833600: Second Floor Inside Unit 201		
Comments (see below)	None			None		
Lab ID-Version‡:	14512142-1			14512143-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores	1	25	53	2	25	110
Basidiospores	2	25	110	3	25	160
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	59	25	3,100	118	25	6,300
Pithomyces				1	100	13
Rusts						
Smuts, Periconia, Myxomycetes				1	100	13
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			13		
Pollen/m3	< 13			13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			3,300			6,600

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-25 / 34833658: Second Floor Just inside north restroom			ST-26 / 34833359: Stairwell Between second and third floor		
Comments (see below)	None			None		
Lab ID-Version‡:	14512144-1			14512145-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				2	25	110
Basidiospores	7	25	370	2	25	110
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Myrothecium						
Nigrospora				1	100	13
Oidium						
Other colorless						
Penicillium/Aspergillus types†	30	25	1,600	204	25	11,000
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes				1	100	13
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			2,000			11,000

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
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††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-27 / 34833323: Third Floor inside Unit 328			ST-28 / 34833326: Third Floor Inside Unit 34		
Comments (see below)	None			None		
Lab ID-Version‡:	14512146-1			14512147-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria	1	100	13			
Ascospores				1	25	53
Basidiospores				1	25	53
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium				1	25	53
Epicoccum	1	100	13			
Myrothecium						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	118	25	6,300	16	25	850
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes	1	100	13			
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			6,300			1,000

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-29 / 34833299: Third Floor Inside Unit 320			ST-30 / 34833311: Third Floor Inside Unit 318		
Comments (see below)	None			None		
Lab ID-Version‡:	14512148-1			14512149-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria	1	100	13			
Ascospores	2	25	110			
Basidiospores	2	25	110	1	25	53
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Myrothecium						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	19	25	1,000	2	25	110
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes	1	100	13	1	100	13
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	13			13		
Pollen/m3	13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			1,300			170

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-31 / 34833593: Third Floor Southwest Corner of Open Common Area			ST-32 / 34833327: Third floor North-Center Portion of Open Common Area		
Comments (see below)	None			None		
Lab ID-Version‡:	14512150-1			14512151-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				1	25	53
Basidiospores	2	25	110	5	25	270
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	26	25	1,400	20	25	1,100
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			1,500			1,400

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

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Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-33 / 34833325: Thrid Floor Inside Unit 313			ST-34 / 34833292: Third Floor Inisde Unit 309		
Comments (see below)	None			None		
Lab ID-Version‡:	14512152-1			14512153-1		
Analysis Date:	08/27/2022			08/27/2022		
	raw ct.	% read	spores/m3	raw ct.	% read	spores/m3
Alternaria						
Ascospores				2	25	110
Basidiospores	3	25	160	3	25	160
Cercospora						
Chaetomium						
Chrysosporium-like						
Cladosporium						
Epicoccum						
Myrothecium						
Nigrospora						
Oidium						
Other colorless						
Penicillium/Aspergillus types†	2	25	110	66	25	3,500
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Zygomycetes						
Background debris (1-4+)††	1+			1+		
Hyphal fragments/m3	< 13			< 13		
Pollen/m3	< 13			< 13		
Skin cells (1-4+)	1+			1+		
Sample volume (liters)	75			75		
§ TOTAL SPORES/m3			270			3,800

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	ST-35 / 34833312: Outside Main entrance to 1905 Building		
Comments (see below)	None		
Lab ID-Version‡:	14512154-1		
Analysis Date:	08/27/2022		
	raw ct.	% read	spores/m3
Alternaria	11	100	150
Ascospores	20	25	1,100
Basidiospores	52	25	2,800
Cercospora	11	100	150
Chaetomium			
Chrysosporium-like			
Cladosporium	30	25	1,600
Epicoccum			
Myrothecium			
Nigrospora			
Oidium	1	100	13
Other colorless			
Penicillium/Aspergillus types†			
Pithomyces	2	100	27
Rusts	1	100	13
Smuts, Periconia, Myxomycetes	1	100	13
Stachybotrys			
Stemphylium			
Torula			
Ulocladium			
Zygomycetes			
Background debris (1-4+)††	2+		
Hyphal fragments/m3	27		
Pollen/m3	40		
Skin cells (1-4+)	< 1+		
Sample volume (liters)	75		
§ TOTAL SPORES/m3			5,800

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m^3 divided by the raw count, expressed in spores/m^3, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Outdoor Sample: ST-1 / 34833307 Outside Main Entrance to the 1905 Building

Fungi Identified	Outdoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3
Generally able to grow indoors*			
Alternaria		8	110
Bipolaris/Drechslera group		ND	< 13
Chaetomium		ND	< 13
Cladosporium		42	2,200
Curvularia		ND	< 13
Epicoccum		1	13
Nigrospora		ND	< 13
Penicillium/Aspergillus types†		ND	< 13
Stachybotrys		ND	< 13
Torula		ND	< 13
Seldom found growing indoors**			
Ascospores		16	850
Basidiospores		52	2,800
Cercospora		2	27
Rusts		ND	< 13
Smuts, Periconia, Myxomycetes		2	27
Total			**6,040**

Location: ST-2 / 34833298 Main Level Southwest Area near Hallway to the 1961 building

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		ND	< 13		100
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**N/A**	**Final MoldSCORE**	**100**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-3 / 34833571 Main Level Southwest Area near hallway to the 1961 Building

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		ND	< 13		100
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		4	210		112
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**213**	**Final MoldSCORE**	**112**

Location: ST-4 / 34833293 Main Level Approximate Center of Main Lobby Room 1

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		1	53		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		4	210		133
Stachybotrys		12	160		278
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**533**	**Final MoldSCORE**	**278**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-5 / 34833281 Main Level South Center Portion of Room 5 near entrance to Room 5

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		1	53		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		2	110		118
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		105
Basidiospores		8	430		112
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**693**	**Final MoldSCORE**	**118**

Location: ST-6 / 34833302 Main level northwest portion of Room 6 near Wall Staining

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		29	1,500		273
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		4	210		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**1,760**	**Final MoldSCORE**	**273**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-7 / 34833302 Lower Stairwell landing Between main level and basement

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		1	53		108
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		1	53		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**107**	**Final MoldSCORE**	**108**

Location: ST-8 / 34833287 Basement Approximate Center of Room B1

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		16	850		221
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		7	370		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**1,333**	**Final MoldSCORE**	**221**

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-9 / 34833289 Basement entrance to Room B3

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		3	160		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		48	2,600		298
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		8	430		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**3,253**	**Final MoldSCORE**	**298**

Location: ST-10 / 34833284 Basement entrance of Room B3

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		122	6,500		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		1	13		100
Total			**6,733**	**Final MoldSCORE**	**300**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-11 / 34833303 Basement Southwest Corner of Room B2

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		2	110		118
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		4	210		107
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**320**	**Final MoldSCORE**	**118**

Location: ST-12 / 34833309 Basement Approximate Center of Room B8

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Chrysosporium-like		164	31,000		300
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		482	180,000		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**214,853**	**Final MoldSCORE**	**300**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-13 / 34833294 Basement Approximate Center of Room B6

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		13	690		202
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		5	270		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**960**	**Final MoldSCORE**	**202**

Location: ST-14 / 34833291 Stairwell Landing Between main level and second Floor

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		82	4,400		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		4	210		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**4,693**	**Final MoldSCORE**	**300**

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-15 / 34833574 Second Floor Approximate Center of Room 11

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		14	750		209
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**853**	**Final MoldSCORE**	**209**

Location: ST-16 / 34833308 Second Floor, Approximate center of North Hallway near entrance to Room 8

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Epicoccum		1	13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		190	10,000		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		1	53		100
Basidiospores		6	320		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		1	13		100
Total			**10,533**	**Final MoldSCORE**	**300**

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-17 / 34833313 Second Floor south Center portion of Room 8 (kitchen)

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		238	23,000		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**22,667**	**Final MoldSCORE**	**300**

Location: ST-18 / 34833310 Second Floor Room 10 near the doorway to Room 9

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		21	1,100		246
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**1,227**	**Final MoldSCORE**	**246**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-19 / 34833685 Second Floor inside Unit 207

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		2	110		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		212	40,000		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**40,600**	**Final MoldSCORE**	**300**

Location: ST-20 / 34833278 Second Floor Iside Unit 205

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		268	14,000		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**14,400**	**Final MoldSCORE**	**300**

Eurofins EMLab P&K
3000 Lincoln Drive East, Suite A, Marlton, NJ 08053
(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-21 / 34833306 Second Floor South portion of East Hallway

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		68	3,600		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**3,733**	**Final MoldSCORE**	**300**

Location: ST-22 / 34833296 Second Floor South Portion of East Hallway

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		67	3,600		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**3,573**	**Final MoldSCORE**	**300**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-23 / 34833300 Second Floor Just Inside entrance to South restroom

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		59	3,100		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		1	53		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**3,307**	**Final MoldSCORE**	**300**

Location: ST-24 / 34833600 Second Floor Inside Unit 201

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		118	6,300		300
Pithomyces		1	13		105
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		3	160		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		1	13		100
Total			**6,587**	**Final MoldSCORE**	**300**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-25 / 34833658 Second Floor Just inside north restroom

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		30	1,600		278
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		7	370		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**1,973**	**Final MoldSCORE**	**278**

Location: ST-26 / 34833359 Stairwell Between second and third floor

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		1	13		105
Penicillium/Aspergillus types†		204	11,000		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		1	13		100
Total			**11,120**	**Final MoldSCORE**	**300**

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-27 / 34833323 Third Floor inside Unit 328

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		1	13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Epicoccum		1	13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		118	6,300		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		ND	< 13		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		1	13		100
Total			**6,333**	**Final MoldSCORE**	**300**

Location: ST-28 / 34833326 Third Floor Inside Unit 34

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		1	53		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		16	850		221
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		1	53		100
Basidiospores		1	53		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**1,013**	**Final MoldSCORE**	**221**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-29 / 34833299 Third Floor Inside Unit 320

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		1	13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		19	1,000		237
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		1	13		101
Total			**1,253**	**Final MoldSCORE**	**237**

Location: ST-30 / 34833311 Third Floor Inside Unit 318

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		2	110		118
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		1	53		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		1	13		102
Total			**173**	**Final MoldSCORE**	**118**

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Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-31 / 34833593 Third Floor Southwest Corner of Open Common Area

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		26	1,400		268
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		2	110		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**1,493**	**Final MoldSCORE**	**268**

Location: ST-32 / 34833327 Third floor North-Center Portion of Open Common Area

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		20	1,100		246
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		1	53		100
Basidiospores		5	270		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**1,387**	**Final MoldSCORE**	**246**

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

Location: ST-33 / 34833325 Thrid Floor Inside Unit 313

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		2	110		118
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		ND	< 13		100
Basidiospores		3	160		104
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**267**	**Final MoldSCORE**	**118**

Location: ST-34 / 34833292 Third Floor Inisde Unit 309

Fungi Identified	Indoor sample spores/m3 <100 1K 10K >100K	Raw count	Spores/ m3	MoldSCORE‡ 100 200 300	Score
Generally able to grow indoors*					
Alternaria		ND	< 13		100
Bipolaris/Drechslera group		ND	< 13		100
Chaetomium		ND	< 13		100
Cladosporium		ND	< 13		100
Curvularia		ND	< 13		100
Nigrospora		ND	< 13		100
Penicillium/Aspergillus types†		66	3,500		300
Stachybotrys		ND	< 13		100
Torula		ND	< 13		100
Seldom found growing indoors**					
Ascospores		2	110		100
Basidiospores		3	160		100
Rusts		ND	< 13		100
Smuts, Periconia, Myxomycetes		ND	< 13		100
Total			**3,787**	**Final MoldSCORE**	**300**

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 09-27-2022

MoldSCORE™: Spore Trap Report

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

†The spores of Aspergillus and Penicillium (and others such as Acremonium, Paecilomyces) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods.

‡Rated on a scale from 100 to 300. A rating less than 150 is low and indicates a low probability of spores originating inside. A rating greater than 250 is high and indicates a high probability that the spores originated from inside, presumably from indoor mold growth. A rating between 150 and 250 indicates a moderate likelihood of indoor fungal growth. MoldSCORE is NOT intended for wall cavity samples. It is intended for ambient air samples in residences. Using the analysis on other samples (like wall cavity samples) will lead to misleading results.

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

MoldRANGE™, Local Climate; Extended Outdoor Comparison

Outdoor Location: ST-1 / 34833307, Outside Main Entrance to the 1905 Building

Fungi Identified	Outdoor data	Typical Outdoor Data for: August in East North Central† EMLab Regional Climate code¹ B Annual Temp, B Elev., A Rain, B Temp. Range (n‡=201)						Typical Outdoor Data for: The entire year in East North Central† EMLab Regional Climate code¹ B Annual Temp, B Elev., A Rain, B Temp. Range (n‡=1661)					
Project zip code 52732	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	110	21	40	110	310	440	90	13	27	80	210	360	56
Bipolaris/Drechslera group	-	7	11	13	27	110	15	7	7	13	27	53	9
Chaetomium	-	-	-	-	-	-	4	7	11	13	26	36	3
Chrysosporium-like	-	-	-	-	-	-	< 1	-	-	-	-	-	< 1
Cladosporium	2,200	600	1,100	2,500	6,700	10,000	99	80	160	1,100	3,600	6,300	86
Curvularia	-	7	13	24	40	67	30	7	13	13	33	53	11
Epicoccum	13	13	13	40	110	200	75	13	13	40	120	250	49
Nigrospora	-	7	13	22	53	110	39	7	13	26	67	130	22
Penicillium/Aspergillus types	-	53	82	210	440	960	57	40	53	160	370	690	42
Pithomyces	-	13	13	53	190	400	73	13	13	27	93	210	28
Stachybotrys	-	-	-	-	-	-	< 1	-	-	-	-	-	< 1
Torula	-	13	13	27	34	67	16	9	13	20	34	53	7
Seldom found growing indoors**													
Ascospores	850	230	400	1,100	2,700	3,500	98	53	130	640	2,300	4,200	80
Basidiospores	2,800	750	1,500	3,700	7,600	12,000	99	68	180	1,400	5,000	8,200	92
Cercospora	27	13	27	53	170	290	48	13	13	44	170	300	23
Oidium	-	7	8	27	53	66	10	7	13	14	53	81	8
Rusts	-	13	13	40	110	210	55	13	13	33	93	160	29
Smuts, Periconia, Myxomycetes	27	13	13	27	100	170	64	13	13	40	120	240	58
§ TOTAL SPORES/m3	6,000												

¹EMLab Regional Climate codes are a climate classification scheme for regional geographic areas containing multiple states. The MoldRANGE™ Local Climate report uses the sampling location zip code to identify the EMLab Regional Climate code in that area. Using information available from the NOAA weather database, the EMLab Regional Climate code sharpens the precision of the MoldRANGE™reporting system, providing more reliable estimates of the range and average concentrations of the different airborne fungal spore types for each region. Additional information on the EMLab Regional Climate code system can be found on the last page of this report.

†The Typical Outdoor Data represents the typical outdoor spore levels across the region's group of states for the time period and EMLab Regional Climate code indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically and if not enough data is available to make a statistically meaningful assessment, it is indicated with a dash.

‡ n is the sample size used to calculate the MoldRANGE™ Local Climate data summarized in the table.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

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C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

MoldRANGE™, Local Climate; Extended Outdoor Comparison

Outdoor Location: ST-35 / 34833312, Outside Main entrance to 1905 Building

Fungi Identified	Outdoor data	Typical Outdoor Data for: August in East North Central† EMLab Regional Climate code¹ B Annual Temp, B Elev., A Rain, B Temp. Range (n‡=201)						Typical Outdoor Data for: The entire year in East North Central† EMLab Regional Climate code¹ B Annual Temp, B Elev., A Rain, B Temp. Range (n‡=1661)					
Project zip code 52732	spores/m3	very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Generally able to grow indoors*													
Alternaria	150	21	40	110	310	440	90	13	27	80	210	360	56
Bipolaris/Drechslera group	-	7	11	13	27	110	15	7	7	13	27	53	9
Chaetomium	-	-	-	-	-	-	4	7	11	13	26	36	3
Chrysosporium-like	-	-	-	-	-	-	< 1	-	-	-	-	-	< 1
Cladosporium	1,600	600	1,100	2,500	6,700	10,000	99	80	160	1,100	3,600	6,300	86
Curvularia	-	7	13	24	40	67	30	7	13	13	33	53	11
Epicoccum	-	13	13	40	110	200	75	13	13	40	120	250	49
Nigrospora	-	7	13	22	53	110	39	7	13	26	67	130	22
Penicillium/Aspergillus types	-	53	82	210	440	960	57	40	53	160	370	690	42
Pithomyces	27	13	13	53	190	400	73	13	13	27	93	210	28
Stachybotrys	-	-	-	-	-	-	< 1	-	-	-	-	-	< 1
Torula	-	13	13	27	34	67	16	9	13	20	34	53	7
Seldom found growing indoors**													
Ascospores	1,100	230	400	1,100	2,700	3,500	98	53	130	640	2,300	4,200	80
Basidiospores	2,800	750	1,500	3,700	7,600	12,000	99	68	180	1,400	5,000	8,200	92
Cercospora	150	13	27	53	170	290	48	13	13	44	170	300	23
Oidium	13	7	8	27	53	66	10	7	13	14	53	81	8
Rusts	13	13	13	40	110	210	55	13	13	33	93	160	29
Smuts, Periconia, Myxomycetes	13	13	13	27	100	170	64	13	13	40	120	240	58
§ TOTAL SPORES/m3	5,800												

¹EMLab Regional Climate codes are a climate classification scheme for regional geographic areas containing multiple states. The MoldRANGE™ Local Climate report uses the sampling location zip code to identify the EMLab Regional Climate code in that area. Using information available from the NOAA weather database, the EMLab Regional Climate code sharpens the precision of the MoldRANGE™reporting system, providing more reliable estimates of the range and average concentrations of the different airborne fungal spore types for each region. Additional information on the EMLab Regional Climate code system can be found on the last page of this report.

†The Typical Outdoor Data represents the typical outdoor spore levels across the region's group of states for the time period and EMLab Regional Climate code indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically and if not enough data is available to make a statistically meaningful assessment, it is indicated with a dash.

‡ n is the sample size used to calculate the MoldRANGE™ Local Climate data summarized in the table.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Eurofins EMLab P&K
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(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

Understanding EMLab Regional Climate Codes

Outdoor airborne spore concentrations are strongly influenced by climate and weather patterns, often resulting in pronounced seasonal and diurnal cycles (Burge 1995). The seasonal climatic changes directly affect the growth cycle of plants, thereby influencing fungal growth, spore maturation, and release cycles. By evaluating outdoor spore concentrations across similar climatic zones rather than for the state as a whole, it is possible to provide a more representative estimate of typical outdoor spore levels and frequency of occurrence for different airborne fungal spore types in a given area.

The EMLab Regional Climate code system is a novel classification system that uses data from the NOAA - National Oceanic and Atmospheric Administration database to define unique climate zones. The following climate variables, for each regional zip code, are obtained from NOAA and assigned a letter code of A (above the regional average for that variable) or B (below the regional average for that variable):

1. Annual High Temperature
2. Elevation
3. Rainfall/Precipitation
4. Monthly Temperature Range

The result is a 4-character code assigned to each statewide zip code, referred to as the Regional Climate Code. Below are some examples of decoded Regional Climate Codes:

AAAA = Above avg. Annual High Temperature, Above avg. Elevation, Above avg. Rainfall/Precipitation, Above avg. Monthly Temperature Range
AABB = Above avg. Annual High Temperature, Above avg. Elevation, Below avg. Rainfall/Precipitation, Below avg. Monthly Temperature Range
BBAA = Below avg. Annual High Temperature, Below avg. Elevation, Above avg. Rainfall/Precipitation, Above avg. Monthly Temperature Range

The actual outdoor air sample data from matching regional climate codes in each group of states are then compiled in a manner relating typical spore concentrations and frequency of occurrence.

The data presented in this report is from the East North Central Region which includes the states of: IA, MI, MN, and WI

The NOAA regional climate variables were selected by mapping data points from a subset of approximately 145,000 weather and geographic database entries to over 80,000 outdoor spore trap samples with known zip codes and assessing them using orthogonal array experimental design techniques. The results were then compared to the typical ranges of spore types found when grouping zip codes using the Koppen-Geiger climatic classification system; a commonly used climatic system that provides an objective numerical definition in terms of climatic elements such as temperature, rainfall, and other seasonal characteristics . The EMLab Regional Climate codes showed improved granularity and refinement of the zip code groupings, implying a better representation of the expected range of spore types to be found within an individual zip code.

The values on this report were calculated by obtaining the four variables listed above from the over 585 million data points of weather and geographic information available in the NOAA database, and determining the frequencies and percentile values of spore types by utilizing over 180,000 Eurofins EMLab P&K outdoor spore trap samples with known zip codes.

This report groups regional zip codes in relation to these EMLab Regional Climate codes and summarizes MoldRANGE™ data by month and year within each EMLab Regional Climate code.

References:

Burge, Harriet, A. Bioaerosols: Boca Raton: Lewis Publishers, pp. 163-171, 1995.

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Report for:

James Baxter
Terracon - Bettendorf, IA
870 - 40th Avenue
Bettendorf, IA 52722

Regarding: Project: 07227086; Task 32; Former YMCA-1905 Building
EML ID: 3013585

Approved by:

Technical Manager
Ariunaa Jalsrai

Dates of Analysis:
Direct microscopic exam (Qualitative): 08-26-2022

Service SOPs: Direct microscopic exam (Qualitative) (EM-MY-S-1039)
AIHA-LAP, LLC accredited service, Lab ID #103005

Eurofins EMLab P&K
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(866) 871-1984 Fax (856) 334-1040 www.emlab.com

Client: Terracon - Bettendorf, IA
C/O: James Baxter
Re: 07227086; Task 32; Former YMCA-1905 Building

Date of Sampling: 08-22-2022
Date of Receipt: 08-25-2022
Date of Report: 08-29-2022

DIRECT MICROSCOPIC EXAMINATION REPORT

Background Debris and/or Description	Miscellaneous Spores Present*	MOLD GROWTH: Molds seen with underlying mycelial and/or sporulating structures†	Other Comments††	General Impression
Lab ID-Version‡: 14512181-1, Analysis Date: 08/26/2022: Tape sample Tape Lift 1: Main Level East side of counter water damaged Stain Area				
Moderate	Very few	None	None	Normal trapping
Lab ID-Version: 14512182-1, Analysis Date: 08/26/2022: Tape sample Tape Lift 2: Basement Ceiling Tile Located immediately at bottom of Steps				
Moderate	Very few	4+ *Ascotricha* species (ascospores, ascomata, hyphae)	None	Mold growth
Lab ID-Version: 14512183-1, Analysis Date: 08/26/2022: Tape sample Tape Lift 3: Basement Southeast Portion from lower water damaged brick wall				
Moderate	Very few	None	None	Normal trapping
Lab ID-Version: 14512184-1, Analysis Date: 08/26/2022: Tape sample Tape Lift 4: Second Floor, East Lower Portion of north Hallway Wall				
Moderate	Very few	None	None	Normal trapping
Lab ID-Version: 14512185-1, Analysis Date: 08/26/2022: Tape sample Tape Lift 5: Third Floor, Wall-Mounted Shelf on North Side of Open/Common Area				
Moderate	Very few	None	None	Normal trapping
Lab ID-Version: 14512186-1, Analysis Date: 08/26/2022: Tape sample Tape Lift 6: Stairwell Between first Floor And Second Floor on South side Hand Rail Near the Lower Set of Steps				
Moderate	Very few	4+ *Aspergillus* species (spores, hyphae, conidiophores)	None	Mold growth

* Indicative of normal conditions, i.e. seen on surfaces everywhere. Includes basidiospores (mushroom spores), myxomycetes, plant pathogens such as ascospores, rusts and smuts, and a mix of saprophytic genera with no particular spore type predominating. Distribution of spore types seen mirrors that usually seen outdoors.

† Quantities of molds seen growing are listed in the MOLD GROWTH column and are graded <1+ to 4+, with 4+ denoting the highest numbers.

†† Some comments may refer to the following: Most surfaces collect a mix of spores which are normally present in the outdoor environment. At times it is possible to note a skewing of the distribution of spore types, and also to note "marker" genera which may indicate indoor mold growth. Marker genera are those spore types which are present normally in very small numbers, but which multiply indoors when conditions are favorable for growth.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".
The limit of detection is < 1+ when mold growth is detected.

For additional information necessary for the interpretation of the results, all readers are advised to refer to the document "Direct Exam Details Page" which is available on our website at:
www.emlab.com/services/mold-testing/direct-microscopic-exam-qualitative/

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San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
Level: None	☐	☐	☐	☐	☐
Light	☐	☐	☐	☐	
Moderate	☐	☐	☐	☐	
Heavy	☐	☐	☐	☐	

CONTACT INFORMATION

Company:	Terracon Consultants Inc.	Address:	870 - 40th Avenue Bettendorf, Iowa 52722
Contact:	James R. Baxter	Special Instructions:	Email results to: James.Baxter@terracon.com
Phone:	(563) 468 - 4271		

PROJECT INFORMATION

Project ID:	07227086; Task 32		
Project Description:	Former YMCA - 1905 Building		
Project Zip Code:	52732	Sampling Date & Time:	08-22-22 / 09:00-15:00
PO Number:		Sampled By:	James Baxter

TURN AROUND TIME CODES (TAT)

- **STD** – Standard (DEFAULT)
- **ND** – Next Business Day
- **SD** – Same Business Day Rush
- **WH** – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

REQUESTED SERVICES
(Use checkboxes below)

Non-Culturable: Spore Trap; Tape Swab Bulk. Culturable: BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates. Other Requests.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)	Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	*Legionella* culture	Total Coliform, *E. coli (Presence/Absence)*	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	
ST-1/ 3483 3307	Outside main entrance to the 1905 building	ST	STD	75L		X																	
ST-2/ 3483 3298	Main level, southwest area near hallway to the 1961 building	ST	STD	75L		X																	
ST-3/ 3483 3571	Main level, southwest area near hallway to the 1961 building	ST	STD	75L		X																	
ST-4/ 3483 3293	Main level, approximate center of main lobby/Room 1	ST	STD	75L		X																	
ST-5/ 3483 3281	Main level, south-center portion of Room 5, near entrance to Room 6	ST	STD	75L		X																	
ST-6/ 3483 3302	Main level, northwest portion of Room 6 near wall staining	ST	STD	75L		X																	
ST-7/ 3483 3301	Lower stairwell landing between main level and basement	ST	STD	75L		X																	
ST-8/ 3483 3287	Basement, approximate center of Room B1	ST	STD	75L		X																	
ST-9/ 3483 3289	Basement, entrance of Room B3	ST	STD	75L		X																	
ST-10/ 3483 3284	Basement, entrance of Room B3	ST	STD	75L		X																	
ST-11/ 3483 3303	Basement, southwest corner of Room B2	ST	STD	75L		X																	

SAMPLE TYPE CODES				RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust	James Baxter/	08/24/22 - 17:00		
A1S – Anderson		SW – Swab	SO – Soil				
SAS – Surface Air Sampler	P – Potable Water	B – Bulk					
CP – Contact Plate	NP – Non-Potable Water	O – Other:					

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San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * (866) 888-6653

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☐	☐	☐	☐	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

CONTACT INFORMATION

Company:	Terracon Consultants Inc.	Address:	870 - 40th Avenue Bettendorf, Iowa 52722
Contact:	James R. Baxter	Special Instructions:	Email results to: James.Baxter@terracon.com
Phone:	(563) 468 - 4271		

PROJECT INFORMATION

Project ID:	07227086; Task 32		
Project Description:	Former YMCA - 1905 Building		
Project Zip Code:	52732	Sampling Date & Time:	08-22-22 / 09:00-15:00
PO Number:		Sampled By:	James Baxter

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

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Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
ST-12/ 3483 3309	Basement, approximate center of Room B8	ST	STD	75L	
ST-13/ 3483 3294	Basement, approximate center of Room B6	ST	STD	75L	
ST-14/ 3483 3291	Stairwell landing between main level and second floor	ST	STD	75L	
ST-15/ 3483 3574	Second floor, approximate center of Room 11	ST	STD	75L	
ST-16/ 3483 3308	Second floor, approximate center of north hallway, near entrance to Room 8	ST	STD	75L	
ST-17/ 3483 3313	Second floor, south-center portion of Room 8 (kitchen)	ST	STD	75L	
ST-18/ 3483 3310	Second floor, Room 10, near the doorway to Room 9	ST	STD	75L	
ST-19/ 3483 3685	Second floor, inside Unit 207	ST	STD	75L	
ST-20/ 3483 3278	Second floor, inside Unit 205	ST	STD	75L	
ST-21/ 3483 3306	Second floor, south portion of east hallway	ST	STD	75L	
ST-22/ 3483 3296	Second floor, south portion of east hallway	ST	STD	75L	

REQUESTED SERVICES
(Use checkboxes below)

Sample ID	Non-Culturable: Spore Trap: Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Tape Swab Bulk: Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	Culturable (BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates): 1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	*Legionella* culture	Total Coliform, *E. coli* (*Presence/Absence*)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Other Requests: Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	
ST-12/ 3483 3309	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-13/ 3483 3294	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-14/ 3483 3291	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-15/ 3483 3574	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-16/ 3483 3308	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-17/ 3483 3313	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-18/ 3483 3310	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-19/ 3483 3685	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-20/ 3483 3278	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-21/ 3483 3306	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ST-22/ 3483 3296	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

SAMPLE TYPE CODES			
BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
A1S – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
James Baxter/	08/24/22 - 17:00		

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San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * (866) 888-6653

Weather	Level	Fog	Rain	Snow	Wind	Clear
	None	☐	☐	☐	☐	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

CONTACT INFORMATION

Company:	Terracon Consultants Inc.	Address:	870 - 40th Avenue Bettendorf, Iowa 52722
Contact:	James R. Baxter	Special Instructions:	Email results to: James.Baxter@terracon.com
Phone:	(563) 468 - 4271		

PROJECT INFORMATION

Project ID:	07227086; Task 32		
Project Description:	Former YMCA - 1905 Building		
Project Zip Code:	52732	Sampling Date & Time:	08-22-22 / 09:00-15:00
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TURN AROUND TIME CODES (TAT)

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Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
ST-23/ 3483 3300	Second floor, just inside entrance to south restroom	ST	STD	75L	
ST-24/ 3483 3600	Second floor, inside Unit 201	ST	STD	75L	
ST-25/ 3483 3658	Second floor, just inside north restroom	ST	STD	75L	
ST-26/ 3483 3359	Stairwell between second and third floor	ST	STD	75L	
ST-27/ 3483 3323	Third floor, inside Unit 328	ST	STD	75L	
ST-28/ 3483 3326	Third floor, inside Unit 324	ST	STD	75L	
ST-29/ 3483 3299	Third floor, inside Unit 320	ST	STD	75L	
ST-30/ 3483 3311	Third floor, inside Unit 318	ST	STD	75L	
ST-31/ 3483 3593	Third floor, southwest corner of open/common area	ST	STD	75L	
ST-32/ 3483 3327	Third floor, north-center portion of open/common area	ST	STD	75L	
ST-33/ 3483 3325	Third floor, inside Unit 313	ST	STD	75L	

REQUESTED SERVICES
(Use checkboxes below)

Sample ID	Non-Culturable: Spore Trap: Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Tape Swab Bulk: Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	Culturable (BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates): 1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	*Legionella* culture	Total Coliform, *E. coli* (Presence/Absence)	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Other Requests: Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	
ST-23	X																	
ST-24	X																	
ST-25	X																	
ST-26	X																	
ST-27	X																	
ST-28	X																	
ST-29	X																	
ST-30	X																	
ST-31	X																	
ST-32	X																	
ST-33	X																	

SAMPLE TYPE CODES			
BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
A1S – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
James Baxter/	08/24/22 - 17:00		

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San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * (866) 888-6653

Weather	Fog	Rain	Snow	Wind	Clear
Level: None	☐	☐	☐	☐	☐
Light	☐	☐	☐	☐	
Moderate	☐	☐	☐	☐	
Heavy	☐	☐	☐	☐	

CONTACT INFORMATION

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PROJECT INFORMATION

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Project Description:	Former YMCA - 1905 Building		
Project Zip Code:	52732	Sampling Date & Time:	08-22-22 / 09:00-15:00
PO Number:		Sampled By:	James Baxter

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD – Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2 pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume / Area (as applicable)	Notes (Time of day, Temp, RH, etc.)
ST-34/ 3483 3292	Third floor, inside Unit 309	ST	STD	75L	
ST-35/ 3483 3312	Outside main entrance to 1905 building	ST	STD	75L	
Tape Lift 1	Main level, east side counter, water damaged/stained area	T	STD	NA	
Tape Lift 2	Basement, ceiling tile located immediately at bottom of steps	T	STD	NA	
Tape Lift 3	Basement, southeast portion from lower water damaged brick wall	T	STD	NA	
Tape Lift 4	Second floor, east lower portion of north hallway wall	T	STD	NA	
Tape Lift 5	Third floor, wall-mounted shelf on north side of open/common area	T	STD	NA	
Tape Lift 6	Stairwell between first floor and second floor, on south side hand rail near the lower set of steps	T	STD	NA	

REQUESTED SERVICES
(Use checkboxes below)

Non-Culturable: Spore Trap; Tape Swab Bulk
Culturable: BioCassette™ , Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plates
Other Requests

Sample ID	Fungi – Spore Trap Analysis	Spore Trap Analysis – Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain & Counts (Culturable Air & Surface Bacteria)	*Legionella* culture	Total Coliform, *E. coli (Presence/Absence)*	Membrane Filtration (specify organism):	MPN Bacteria (specify organism):	QuantiTray – Sewage Screen	Asbestos Analysis – PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis – PLM (EPA method 600/R-93-116)	PCR (specify test):	
ST-34/ 3483 3292	X																	
ST-35/ 3483 3312	X																	
Tape Lift 1																		
Tape Lift 2																		
Tape Lift 3																		
Tape Lift 4																		
Tape Lift 5																		
Tape Lift 6																		

SAMPLE TYPE CODES			
BC – BioCassette ™	ST – Spore Trap: Zefon, Allergenco, Burkard ...	T – Tape	D – Dust
A1S – Anderson		SW – Swab	SO – Soil
SAS – Surface Air Sampler	P – Potable Water	B – Bulk	
CP – Contact Plate	NP – Non-Potable Water	O – Other:	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
James Baxter/	08/24/22 - 17:00		

APPENDIX D

Photographic Documentation

Photo 1: View of spore trap samples 2 and 3 on first floor

Photo 2: Area of view of spore trap sample number 6 in stairwell leading to basement

Photo 3: General view of spore trap sample number 8 in approximate center of basement

Photo 4: General view of spore trap sample number 15 in Room 11 on second floor

Photo 5: General view of spore trap sample number 18 in Room 10 on second floor

Photo 6: General view of spore trap sample number 25 in North Restroom on second floor

Photo 7: General view of spore trap sampe number 33 in Unit 313 on third floor

Photo 8: View of observed microbial growth along the north portion of the west wall in Room 4, first floor

Photo 9: View of water stained flooring on first floor near Room 3/behind the counter

Photo 10: View of Room 3 on first floor with water stained ceiling and floor tiles

Photo 11: View near southeast corner of Room 5 on first floor with water damaged flooring and water staining on wood paneling

Photo 12: View of Room 6 on the first floor with water damaged materials and delaminated plaster on floor in room

Photo 13: View of handrail leading from first floor to second floor with water damage and suspect microbial growth

Photo 14: View of moisture-impaced ceiling tiles and rushet ceiling tile grid inside Unit 201 on second floor

Photo 15: View of second floor north hallway showing significant water damage and staining to various materials

Photo 16: Alternate view of second floor north hallway area near Room 10 and significant water damaged materials

Photo 17: View of water damaged ceiling tiles at southwest corner of Room 11 on second floor

Photo 18 View of water damaged flooring in Unit 323 on third floor

Photo 19: View of water damaged flooring in Unit 318 on third floor

Photo 20: View of significant moisture damage on south wall of basement

Photo 21: View of significant water damage in Room B8 in the basement

Photo 22: View of water damage and suspect microbial growth in northwest portion of basement

APPENDIX C

Structure Identification Map

APPENDIX C - STRUCTURE IDENTIFICATION MAP

North

Structure Identification Map

City of Clinton / ECIA
Fromer YMCA – 480 South 3rd Street
Clinton, Iowa 52732

IMPACT7G