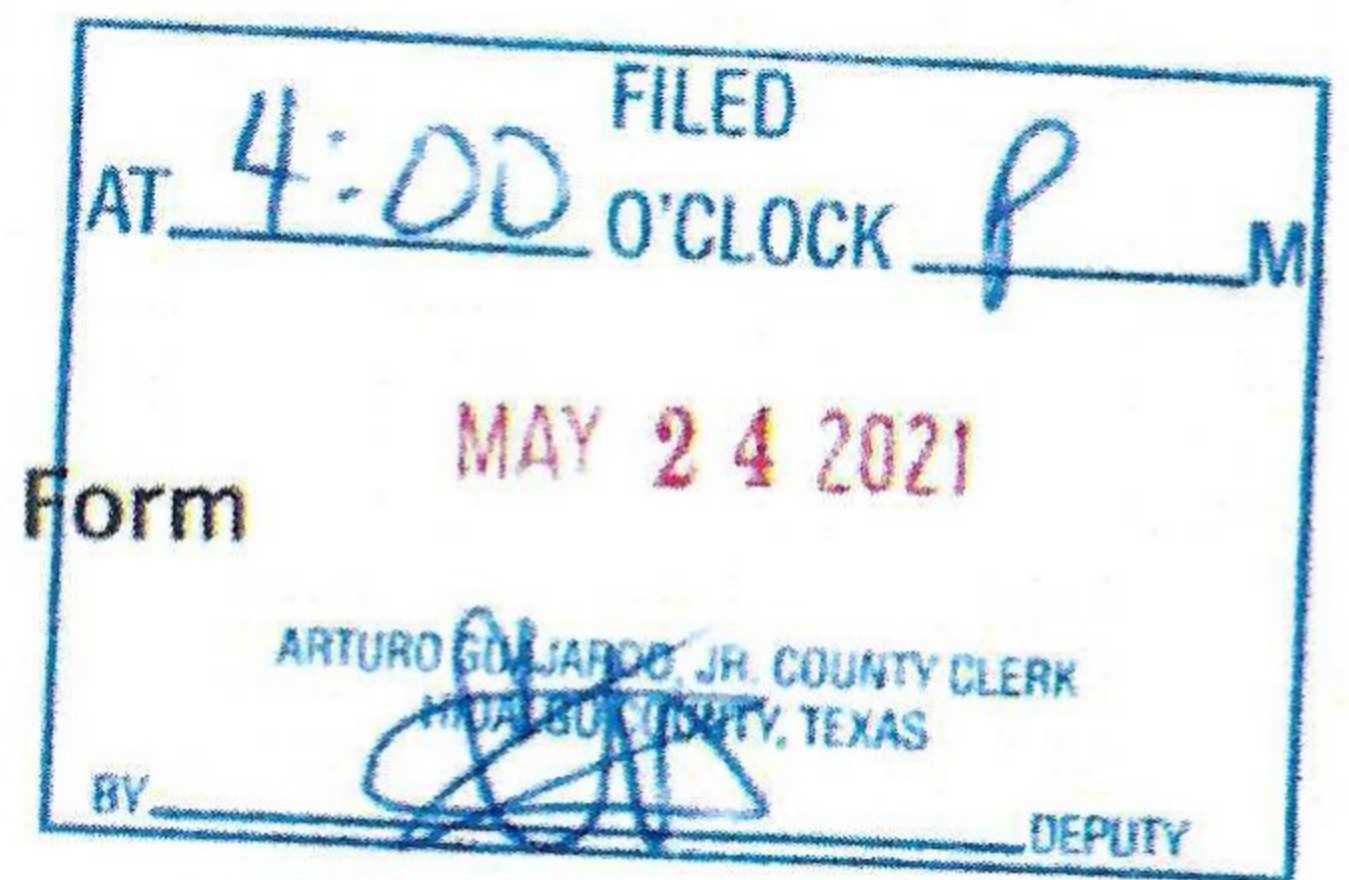


EXHIBIT A

EXHIBIT "C"
HIDALGO COUNTY, TEXAS
Agreement #C-18-220-09-25 Work Authorization Form

WORK AUTHORIZATION NO. 04



THIS WORK AUTHORIZATION is made pursuant to and in accordance with the terms and conditions of the Agreement between Hidalgo County, Texas ("County" or "Owner") and Terracon Consultants, Inc., a Delaware Corporation ("Laboratory"). Dated September 25, 2018 ("Agreement") for the Hidalgo County Courthouse Project ("Project").

PART 1. WORK DESCRIPTION

The purpose of this Work Authorization is for the Laboratory to provide under the Agreement Services, generally described as follows:

The Initial Microbial Assessment Services will include the following tasks:

Task 1: The initial assessment will be limited to a visual hygiene assessment within accessible areas of the indoor environment, visual inspection of a representative number of air handler units (AHUs), and measurements of temperature, relative humidity, and moisture content of suspect building materials. If suspect fungal growth is observed surface samples may be collected using non-destructive methods.

Task 2: Terracon will prepare a written report describing the sampling methods and the results of the initial microbial assessment evaluation. Terracon will compare sampling results and site measurements to TDLR regulations and consensus standards and guidelines and provide recommendations for additional assessment or remedial actions considered warranted by sampling results and site observations. Refer to attached Exhibit 1

PART 2. PRICE

The estimated not to exceed fee for all Services under this Work Authorization is \$ 24,280.00 ("Price"). This fee assumes up to 7 days onsite to complete the visual assessment. Refer to attached Exhibit 1

PART 3. PAYMENT

Payment to the Laboratory for the Services established under this Work Authorization that have been completely, properly and timely provided shall be made in accordance with the terms of the Agreement and any specific additional payment terms in the Proposal to which the Owner agrees.

PART 4. FUNDING

This Work Authorization No. 04 shall be funded through funding source:

Account No. _____

Requisition Number _____ (MUST BE INCLUDED AFTER CC APPROVAL)

PART 5. PERIOD OF SERVICE

The Services shall be provided according to Laboratory's Proposal dated July 23, 2018, **EXHIBIT "A"**. This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate upon the proper completion of the Services, unless the Services are terminated earlier by the County made with or without cause.

PART 6. RESPONSIBILITIES AND OBLIGATIONS

Laboratory shall be responsible for completely, properly and timely providing all Services. This Work Authorization and the Services are subject to all applicable terms and conditions of the Agreement. This Authorization does not waive the parties' responsibilities and obligations provided under the Agreement.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

The Program Manager for the Project has reviewed and recommends approval of this Work Authorization.

BY: _____

For: **Jacobs Project Management Co. (Program Manager)**

PART 8. LIMITATIONS, ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted and approved by Hidalgo County, Texas:

- a) Approval for Price of \$50,000.00 or less: by Owner's Designated Representatives Valde Guerra, Michael Leo and Sergio Cruz when acting jointly and unanimously on behalf of the Owner with respect to this Work Authorization or any such other County employee that the County shall designate with prior notice to the Laboratory; or
- b) Approval for Price greater than \$50,000.00: by Commissioners' Court on _____ as indicated below by signature of County Judge.

[Signature page follows.]

Effective Date: _____

THE LABORATORY:
Terracon Consultants, Inc.

By: Jorge A. Flores, Principal

THE OWNER:
Hidalgo County, Texas
(\$50,000.00 or less)

By: Valde Guerra
By: Isaac Sulemana
By: Sergio Cruz
By: Armando Garza Jr.

ATTEST:

By: Arturo Guajardo, Jr., County Clerk



THE OWNER:
Hidalgo County, Texas
(more than \$50,000.00)

By: Richard Cortez, County Judge

LIST OF ATTACHMENTS

Exhibit 1 - Proposal for Initial Microbial Assessment

APPROVED BY
COMMISSIONERS COURT
ON: 5/4/21 BJS

EXHIBIT 1



March 23, 2021

Jacobs Engineering
112 East Cano Street
Edinburg, Texas 78539

Attn: Mr. Oscar Garcia
P: (956) 357-4507
E: Oscar.garcia@jacobs.com

Re: Proposal for Microbial Assessment
New Hidalgo County Courthouse Building
1000 West McIntyre Street
Edinburg, Texas 78520
Terracon Proposal P88217071

Dear Mr. Garcia:

Terracon Consultants, Inc. (Terracon) is pleased to submit this proposal to Jacobs Engineering (Client) to conduct an initial site investigation and periodic follow up evaluations for fungal contamination at the above referenced facility.

A. Project Information

Terracon has been requested to conduct a Microbial Assessment within the New Hidalgo County Courthouse Building.

If the above information is inaccurate, or if Terracon should be aware of additional information, please contact us as soon as possible so that we may consider any necessary revisions to this proposal.

The Microbial Assessment will be conducted in general accordance with state regulations from the Texas Department of Licensing and Regulation (TDLR) in the *Mold Assessors and Remediators Administrative Rules, 2017 (MARAR)*, and consensus guidelines from the American Conference of Governmental Industrial Hygienist (ACGIH[®], *Bioaerosols: Assessment and Control, 1999*) and American Society of Testing and Materials (ASTM[®], *Standard Guide for Assessment of Fungal Growth in Buildings, Method D7338-10*).

Terracon has a 100% commitment to the safety of all its employees. As such, and in accordance with our Incident and Injury Free[®] safety culture, Terracon will develop a safety plan to be used by our personnel during field services. Prior to commencement of on-site activities, Terracon will

Terracon Consultants, Inc. 1506 Mid Cities Drive Pharr, Texas 78577
P [956] 283 8254 F [956] 283 8279 Texas Professional Engineers No. F-3272 terracon.com

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Materials

hold a meeting to review health and safety needs for this specific project. At this time, we anticipate performing fieldwork in modified OSHA Level D personal protective equipment (PPE) consisting of a hard hat (if required), high visibility vest, safety glasses, hearing protection (if required), and safety-toe boots. Because of COVID-19 concerns, Terracon staff will wear cloth face coverings and practice physical distancing during the industrial hygiene survey. If additional PPE is required by this facility, please let us know.

B. Scope of Services

The microbial assessment will be limited to a visual hygiene assessment within accessible areas of the indoor environment, visual inspection of a representative number of air handler units (AHUs), and measurements of temperature, relative humidity, and moisture content of suspect building materials. If suspect fungal growth is observed surface samples may be collected.

Methods

The visual evaluation will be conducted in accordance with regulations from the TDLR, and consensus standards and guidelines from ACGIH, ASTM. Building materials that exhibit suspect fungal growth will be sampled by transparent tape lift and analyzed by bright field microscopy in accordance with ACGIH recommended protocols. Up to 35 tape lift samples may be collected in the initial evaluation and up to 8 tape lift samples may be collected for each follow-up inspection. Sporulating fungi will be microscopically identified to genus or group based on morphology of reproductive structures. The samples will be submitted for analysis under chain of custody (COC) protocol to a TDLR-licensed Mold Analysis Laboratory.

Temperature and relative humidity will be measured with a TSI Q-Trak air quality monitor, or equivalent. Data will also be collected in the outdoor environment to provide comparison results.

Moisture content of suspect building materials will be confirmed with a digital moisture meter, Model DT-100, from Professional Equipment Company, or equivalent.

Schedule

The above scope of services may begin within three working days following receipt of the executed Agreement for Services.

Conditions

Items to be provided by the Client include:

- The legal right-of-entry to conduct the assessment.

- Any restrictions or special access requirements regarding the site shall be made known to Terracon prior to site mobilization.
- Any known environmental conditions at the site (i.e., hazardous materials or processes, specialized protective equipment requirements, unsound structural members, etc.) shall also be communicated to Terracon prior to site mobilization.
- Client will provide a point-of-contact during time on-site that will provide building access and assist in accessing AHUs for inspection as needed.

Report

Terracon will prepare a written report describing the sampling methods and the results of the initial microbial assessment evaluation and each follow up inspection. Terracon will compare sampling results and site measurements to TDLR regulations and consensus standards and guidelines and provide recommendations for additional assessment or remedial actions considered warranted by sampling results and site observations. The report will not contain information, data, or professional opinions that pertain to the relative degree of risk associated with individual personal exposure to fungi. Unless otherwise instructed, an electronic version of the final report will be submitted to the email address indicated herein. The final report will be submitted to the Client within 15 working days after receipt of the analytical results.

Reliance

The final report will be prepared for the exclusive use and reliance of the Jacobs Engineering. Reliance by any other party is prohibited without the written authorization of Jacobs Engineering and Terracon.

If the Client is aware of additional parties that will require reliance on the final report, the names, addresses and relationship of these parties should be provided for Terracon approval prior to the time of authorization to proceed. Terracon will grant reliance on the final report to those approved parties upon receipt of a fully executed Reliance Agreement (available upon request). If, in the future, the Client and Terracon consent to reliance on the Microbial Assessment report by a third party, Terracon will grant reliance upon receipt of a fully executed Reliance Agreement and receipt of an additional fee of \$400.00 per relying party. Reliance on the final report by the Client and all authorized parties will be subject to the terms; conditions and limitations stated in the Agreement for Services (and sections of this proposal incorporated therein), the Reliance Agreement, and the report.


C. COMPENSATION


The services described above will be performed for a lump sum fee as shown in the table below. This lump sum fee estimate includes mobilization, TDLR-licensed Mold Assessment Consultant professional labor, laboratory fees, shipping fees and report preparation.


TASK	Authorized Yes/No*	Lump Sum Fee
1 – Initial Microbial Assessment	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$24,280.00
2 – Periodic/Follow-up Microbial Assessment	<input type="checkbox"/> Yes <input type="checkbox"/> No	\$7,145.00 (each inspection)
Lump Sum Total		\$

If the Scope of Services meets with your approval, work may be initiated by returning a copy of the executed Agreement for Services to Eloy Palacios via electronic mail at Eloy.Palacios@terracon.com or fax at 956.283.8279. The terms, conditions and limitations stated in the Proposal for Services shall constitute the exclusive terms and conditions for services to be performed for this project. This proposal is valid only if authorized within 60 days from the proposal date.

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please give me a call.

Sincerely,


FOR 
Robert Garrison
Principal
Department Manager, Industrial Hygiene


Eloy Palacios
Project Manager

Attachments: Agreement for Services
TDLR Consumer Mold Information Sheet

Follow-Up Microbial Assessment

Hidalgo County Courthouse Building
100 North Closner Boulevard
Edinburg, Texas

October 18, 2021
Terracon Project No. 88217071



Prepared for:
Jacobs Engineering
Edinburg, Texas

Prepared by:
Terracon Consultants, Inc.
Pharr, Texas

terracon.com

Terracon

Environmental



Facilities



Geotechnical



Materials

October 18, 2021



Jacobs Engineering
112 East Cano Street
Edinburg, Texas 78539

Attn: Mr. Oscar Garcia
P: (956) 357-4507
E: oscar.garcia@jacobs.com

Re: Follow-Up Microbial Assessment
Hidalgo County Courthouse Building
100 North Closner Boulevard
Edinburg, Texas 78539
Terracon Project No. 88217071

Dear Mr. Garcia:

The purpose of this report is to present the results of the follow-up microbial assessment performed October 7, 2021, and October 8, 2021, in the Hidalgo County Courthouse Building located at 100 North Closner Boulevard in Edinburg, Texas.

Terracon appreciates the opportunity to provide this service to Jacobs Engineering (Client). If you have any questions regarding this report, please contact the undersigned at (956) 283-8254.

Sincerely,

Terracon

A handwritten signature in blue ink, appearing to read 'R. Garrison', is positioned above the printed name of Robert Garrison.

Robert Garrison
Principal
Department Manager, Industrial Hygiene
TDLR MAC0107

Tomas Cruz
Project Manager
TDLR MAC1690

Anyone who believes a company or individual has violated the rules in the MARAR can file a complaint with TDLR. For information on this process, call 1-800-803-9202, or complete the online complaint form at <https://www.tdlr.texas.gov/complaints/>

Terracon Consultants, Inc. 1506 Mid Cities Drive, Pharr, 78577
P [956] 328-7687 F [956] 283-8279 Texas Professional Engineers No. F-3272 terracon.com

Environmental



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APPENDIX A: Analytical Report

APPENDIX B: Photographs

FOLLOW-UP MICROBIAL ASSESSMENT
NEW HIDALGO COUNTY COURTHOUSE BUILDING
100 NORTH CLOSNER BOULEVARD
EDINBURG, TEXAS 78539
Terracon Project No. 88217071
October 18, 2021

1.0 PROJECT DESCRIPTION

Terracon Consultants, Inc. (Terracon) conducted a follow-up microbial assessment of the New Hidalgo County Courthouse Building located at 100 North Closner Boulevard in Edinburg, Texas. Terracon representative, Mr. Tomas Cruz, a Texas Department of Licensing and Regulation (TDLR)-licensed Mold Assessment Consultant (License MAC1690), and Mr. Guadalupe Torres, a TDLR trained Mold Assessment Technician, conducted the evaluations on October 7, 2021, and October 8, 2021. The evaluation was performed on behalf of Client and Hidalgo County in general accordance with Work Authorization No. 4 between Hidalgo County (“County” / “Owner”) and Terracon (“Laboratory”), dated September 25, 2018 (“Agreement”).

1.1 Scope of Work

The scope of work for the follow-up microbial assessment consisted of a visual hygiene assessment within accessible areas of the indoor environment as identified in Table 1.0. Surface samples were collected and thermal comfort (temperature and relative humidity), and moisture content of suspect building materials were measured in the field.

1.2 Regulatory Overview

The TDLR regulates fungal assessment and remediation activities under the Mold Assessors and Remediators Administrative Rules (MARAR). The MARAR requires that fungal assessments be performed by a TDLR-licensed Mold Assessment Technician (MAT) or Mold Assessment Consultant (MAC) following specified minimum work practices and procedures. Bulk, surface and air samples collected during a fungal assessment must be analyzed by a TDLR-licensed Mold Analysis Laboratory. Visible fungal growth that exceeds the regulatory threshold of 25 contiguous square feet is considered a regulated quantity and must be remediated by a TDLR-licensed Mold Remediation Contractor (MRC) following a site specific fungal remediation protocol prepared by a MAC.

1.3 Standard of Care

The evaluations were conducted at the facility on October 7, 2021, and October 8, 2021, based on information provided to Terracon regarding building conditions. 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. Terracon did not attempt to identify every potential exposure or hazard present in the subject building.

The results, findings, conclusions, and recommendations expressed in this report are based on conditions observed during our October 7, 2021, and October 8, 2021, assessments. Many factors such as weather conditions, building occupancy, ventilation patterns, and seasonal variations in fungal bioaerosol can affect the conditions observed. The information contained in this report should not be relied upon to represent conditions that existed previously or at a later date. 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.

1.4 Reliance

The report has been prepared on behalf of and exclusively for use by Jacobs Engineering for specific application to their project as discussed. No other individual or entity may rely on this report without written permission of Terracon and Jacobs Engineering. Reliance on this report by Jacobs Engineering and all authorized parties will be subject to the key understandings and limitations stated in the proposal, this report, and Terracon's Agreement for Services. The limitation of liability defined in Terracon's Agreement for Services is the aggregate limit of Terracon's liability to Jacobs Engineering and all relying parties.

2.0 METHODS

2.1 Visual Evaluation

The visual evaluation was conducted in general accordance with regulations from the TDLR (*Mold Assessors and Remediators Administrative Rules*, 2017), and consensus guidelines from the American Conference of Governmental Industrial Hygienist (ACGIH®, *Bioaerosols; Assessment and Control*, 1999) and American Society of Testing and Materials (ASTM®, *Method D7338-10, Standard Guide for Assessment of Fungal Growth in Building*). The indoor environment was evaluated for evidence of moisture intrusion, uncontrolled condensate formation, and visible fungal growth. Destructive sampling or disassembly of mechanical enclosures to evaluate hidden, interstitial spaces was not within the scope of work for the project. A total of two surface samples were collected on October 7, 2021. Criteria to establish fungal growth on the substrates sampled were microscopic confirmation of fungal somatic and reproductive structures. The surface samples were submitted under chain of custody protocol to Mycotech Biological Inc., a TDLR-licensed Mold Analysis Laboratory (License LAB0163).

2.2 Moisture Evaluation

Moisture content of building materials was evaluated with a factory calibrated digital moisture meter, Model MO-290, from Extech. Normal moisture content of building materials, such as gypsum

wallboard, was standardized at 10% relative by evaluating similar materials in the building that were not affected by atypical moisture conditions.

2.3 Thermal Comfort Parameters

Temperature and relative humidity were measured at representative indoor and outdoor locations using a factory calibrated digital psychrometer, Model MO-290, from Extech.

3.0 RESULTS

3.1 Visual Evaluation Criteria

Indoor air quality can be degraded due to multiple contaminant sources from within a building or from the outdoor environment. If contaminant sources are not controlled, indoor air quality issues that affect occupants can arise, even with well-maintained heating, ventilating, and air conditioning (HVAC) systems. Based on the multiple sources of potential indoor/outdoor contaminants that can affect indoor air quality, the visual evaluation is conducted to assess general indoor hygiene, building maintenance practices, HVAC system design and hygiene, moisture intrusion and uncontrolled condensate formation. Indoor air frequently contains a mixture of pollutants at low concentrations that are well below regulatory occupational exposure limits. The visual assessment focuses on collecting primarily observational data (i.e., information obtained by visual inspection of the building and interviews with the building management, owners, and occupants). The visual assessment can help to formulate plans for more in-depth investigation.

Since many building materials can provide a source of nutrients for fungal growth, moisture is the limiting factor in minimizing the potential for fungal growth. Therefore, visible fungal growth, excessive dirt and water-damaged building materials should not be observed. When these conditions are observed, it indicates a need to conduct additional assessment, cleaning, and/or remediation activities.

Building Description: The New Hidalgo County Courthouse Building is a seven-story structure that is currently under construction, and is built on concrete slab foundations. The building envelope consists of masonry, and glass window materials. The roof is a flat, built-up membrane system; however, the roof was not evaluated as part of this assessment. The building interiors are constructed of a variety of flooring materials, masonry and gypsum board walls, and gypsum board ceilings or suspended ceiling tile grid systems. The facility is supplied conditioned air by air handling units (AHUs) located in mechanical equipment areas of the building.

Mr. Justin Salinas, Project Engineer with Jacobs Engineering, reported to Terracon on May 12, 2021, during the initial microbial assessment, that the New Hidalgo County Courthouse Building construction began in September 2018. It was further reported that during construction activities, moisture intrusion from rain events has occurred on all seven floors of the building, which resulted in moisture impact and suspect fungal growth on interior floor, wall and ceiling construction materials.

Mr. Saman Sinai, Senior Construction Manager with Jacobs Engineering, reported to Terracon on October 7, 2021, during the follow-up microbial assessment, that the New Hidalgo County Courthouse Building is currently in the construction completion stages. Mr. Sinai further reported that gypsum board wall materials in several areas where moisture stains and/or fungal growth was observed in the building during the initial microbial assessment, have been removed and replaced, and no fungal growth was observed in wall cavities during the referenced activities. To his knowledge, the building has not recently experienced moisture intrusion from exterior weather conditions.

General Observations: The evaluation was conducted during business hours and the facility was under construction and occupied by a limited amount of trade workers during the evaluation. At the time of the evaluations, it was reported by Mr. Sinai that the AHUs were in operation, with conditioned air being supplied to all of the seven floors in the building. The observations of the individual locations assessed during the visual evaluation are summarized in Table 1.0. Representative photographs are included as Appendix A.

TABLE 1.0, NEW HIDALGO COUNTY COURTHOUSE BUILDING OBSERVATIONS

Location	Material	Moisture Content	Possible Source
First Floor - Electrical Room, 1A-158, northwest lower wall	Fungal growth on CMU block/concrete wall	N/A	No active moisture intrusion observed. Possible sources include standing water accumulation during construction activities
First Floor – Stair No. 1, ST-1A1, southeast lower wall	Gypsum wall board	11.2%	Previous moisture impacted gypsum wallboard, wall cut out observed, no moisture/fungal impact in wall cavity
Second Floor – Justice 4, 2B-134, north lower wall	Moisture stained and suspect fungal growth on gypsum wallboard	18.5%	No active moisture intrusion observed. Possible sources include standing water accumulation during construction activities
Second Floor – Electrical 2A-146 / Mechanical 2A-147, west lower wall	Gypsum wall board	N/A	Previous moisture impacted gypsum wallboard, wall cut out observed, no moisture/fungal impact in wall cavity
Third Floor – Public Circulation, 3A-001, near center ceiling area	Moisture stained suspended acoustical ceiling tile	9.3%	No active moisture intrusion observed. Possible sources include overhead HVAC duct condensation, fire sprinkler/plumbing pipes

Location	Material	Moisture Content	Possible Source
Third Floor – Corridor, 3C-003, south ceiling area	Moisture stained suspended acoustical ceiling tile	11.2%	No active moisture intrusion observed. Possible sources include overhead HVAC duct condensation, fire sprinkler/plumbing pipes
Third Floor – Attorney, 3C-026, south ceiling area	Moisture stained suspended acoustical ceiling tile	8.7%	No active moisture intrusion observed. Possible sources include overhead HVAC duct condensation, fire sprinkler/plumbing pipes
Third Floor – Attorney, 3C-027, center ceiling area	Moisture stained suspended acoustical ceiling tile	8.5%	No active moisture intrusion observed. Possible sources include overhead HVAC duct condensation, fire sprinkler/plumbing pipes
Seventh Floor – Public Circulation, 7A-001, center-west ceiling area	Moisture stained suspended acoustical ceiling tile	10.9%	No active moisture intrusion observed. Possible sources include overhead HVAC duct condensation, fire sprinkler/plumbing pipes
Seventh Floor – Attorney Consult, 7B-403, south ceiling area	Moisture stained suspended acoustical ceiling tile	8.4%	No active moisture intrusion observed. Possible sources include overhead HVAC duct condensation, fire sprinkler/plumbing pipes
Seventh Floor – Clerk, 7B-612, south lower wall	Gypsum wall board	9.7%	Previous moisture impacted gypsum wallboard, wall cut out observed, no moisture/fungal impact in wall cavity
Seventh Floor – Southeast Entrance to Courtroom 7B-600, west lower wall	Gypsum wall board	10.1%	Previous moisture impacted gypsum wallboard, wall cut out observed, no moisture/fungal impact in wall cavity

BOLD denotes moisture content above “dry” reference range of 10%

Two representative surface samples of suspected fungal growth were collected from gypsum wallboard located on the first and second floors. The surface sample findings are summarized in the following Table 2.0. Photographs depicting the assessment observations are included as Appendix A.

TABLE 2.0. SURFACE SAMPLE RESULTS

Location	Material	Laboratory Confirmed Fungal Growth	Possible Source
First Floor - Electrical Room, 1A-158, northwest lower wall	Fungal growth on CMU block/concrete wall	Cladosporium	No active moisture intrusion observed. Possible sources include standing water accumulation during construction activities
Second Floor – Justice 4, 2B-134, north lower wall	Suspect fungal growth on gypsum wallboard	Debris Fibers Fiberglass	No active moisture intrusion observed. Possible sources include standing water accumulation during construction activities

BOLD denotes confirmed presence of fungal growth

The fungal growth on the referenced building materials in Table 2.0 appeared to be related to moisture intrusion/impact from previous accumulation of standing water on the floor during construction activities (e.g., plumbing installations, floor cleaning, etc.). The quantity of visible fungal growth on the identified building material surface observed and sampled is estimated at two square feet, and did not exceed the regulatory threshold of 25 contiguous square feet as defined in the MARAR.

3.2 Moisture Evaluation

Elevated fungal bioaerosol concentrations in indoor environments can occur when excessive moisture and a nutrient source are present, especially in closed or concealed areas that trap moisture and have minimal air disturbance. The cellulose in the paper surfacing of drywall or gypsum wallboard provides an adequate food source for the growth of many fungal species. On-site moisture measurements are obtained using a direct-reading instrument or infrared thermography. Results from similar materials in non-suspect locations, such as non-impacted drywall walls or ceiling surfaces, are compared and used to assess the likelihood of fungal growth conditions in suspect or historically water-damaged materials. There are no current regulatory standards that limit moisture levels in walls or building materials, but the data can be valuable when results from different locations are compared.

Moisture content of construction materials within the building that were observed as moisture impacted and reported in Table 1.0, measured from 8.4% to 18.5%.

3.3 Thermal Comfort Parameters

Indoor air temperature and relative humidity are physical conditions important to the perception of comfort. The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) have published recommendations regarding thermal comfort. ASHRAE Standard 55-2017, Thermal Environmental Conditions for Human Occupancy, identifies six primary factors that affect comfort: metabolic rate (affected by the activity being performed), clothing insulation, air temperature, radiant temperature, air speed, and humidity.

Although the relationships are complex, a temperature range between 73 and 79 degrees Fahrenheit (°F) with relative humidity between roughly 20 and 60 percent (%) are recommended for persons performing “office” work and wearing light summer clothing. Higher temperatures require lower humidity for comfort. For persons in winter clothing, temperatures can range between 68 °F and 75 °F, with relative humidity between 30% and 60%.

The temperature and relative humidity results measured during each site visit, per floor, are presented in Table 3.0.

TABLE 3.0, THERMAL COMFORT

Floor	Average Temperature	Average Humidity
1 st Floor	71 °F	54 %
2 nd Floor	70 °F	56 %
3 rd Floor	70 °F	53 %
4 th Floor	71 °F	53 %
5 th Floor	72 °F	52 %
6 th Floor	70 °F	51 %
7 th Floor	71 °F	54 %

BOLD denotes outside recommended range for occupied building

Temperature and relative humidity were measured throughout each of the seven building floors, during each site visit. Temperature was below the referenced ASHRAE recommended range on all of the seven floors evaluated. Relative humidity was below 60%, within the referenced ASHRAE recommended range in of the seven floors evaluated.

4.0 SUMMARY

In summary, visible moisture stains were observed on suspended acoustical ceiling tile building materials in four locations on the third floor, and two locations on the seventh floor. Visible moisture stains were observed on gypsum board wall building materials in one location on the second floor. No active moisture intrusion was observed during the follow-up microbial assessment activities. The moisture stains observed on building materials appeared to be a result of previous construction activities.

Fungal growth was observed on CMU block/concrete wall building materials in one location on the first floor, and confirmed by surface sample collection and laboratory analysis. The fungal growth on the referenced building materials appeared to be related to moisture intrusion/impact from previous accumulation of standing water on the floor during construction activities (e.g., plumbing installations, floor cleaning, etc.). The quantity of visible fungal growth on the identified building material surface observed and sampled is estimated at two square feet, and did not exceed the regulatory threshold of 25 contiguous square feet as defined in the MARAR.

Moisture content of ceiling tile and gypsum board wall materials within the building that were observed as moisture impacted measured from 8.4% to 18.5% and appeared to be a result of previous moisture impact, where measured above 10%.

Temperature was below the referenced ASHRAE recommended range on all of the seven floors evaluated; however, the ASHRAE range applies to occupied buildings.

Relative humidity was below 60%, within the referenced ASHRAE recommended range in of the seven floors evaluated.

5.0 RECOMMENDATIONS

Based on the visual and analytical results of the visual evaluation, Terracon recommends the following:

- The porous, moisture impacted ceiling tile materials reported in Table 1.0 should be removed. The porous, moisture impacted gypsum wallboard materials reported in Table 1.0 should be removed, extending one foot horizontally and vertically past moisture damage.
- Non-porous CMU block/concrete wall materials where non-regulated fungal growth was observed as reported in Table 2.0 should be cleaned with a non-ionic detergent or household disinfectant and cleaned with a high efficiency particulate air (HEPA)-filtered vacuum. During cleaning procedures, polyethylene barriers should be installed over supply and return air vents in the areas where cleaning occurs.
- The individuals performing the remediation of non-regulated fungal growth should have adequate personal protective equipment and have experience in fungal remediation projects of a similar scope and size.
- HEPA-filtered air scrubbers should be operated in each work area during remediation activities and for 2-3 days after cleaning has been completed in order to remove disturbed or residual particulates from the indoor air.
- If additional fungal growth that exceeds 25 square feet is identified during the remedial process, the remediation should be stopped, and critical barriers installed. A TDLR-

licensed Mold Assessment Consultant should be contacted to further assess the area and provide additional fungal remediation protocols in accordance with MARAR.

- If a TDLR-licensed MRC is used for the remediation of fungal growth in quantities that are less than the regulatory threshold, the work must be conducted in general accordance with the MARAR. This would require that the MAC prepare a fungal remediation protocol and conduct a post remediation assessment. The licensed MRC would be required to prepare a mold remediation work plan and in general, follow the regulations presented in the MARAR with the exception of TDLR notification.
- Interior building temperature should be maintained within the recommended range of 73-79°F when the building is occupied.
- Interior building relative humidity be maintained within the recommended range of 20-60%.

APPENDIX A:
ANALYTICAL REPORT



Mycotech Biological, Inc.

Project :

TDLR LIC. NO: LAB0163

Terracon - Pharr
1506 Mid Cities Drive
Pharr , TX 78577
1TERRACOP1506

Analysis Type : Micro

Media : Tape

Report No: 21-1432
Received date: 10/11/2021
Report date: 10/12/2021

Sample No: (01)				Sample No: (02)			
Description: TL-1 1st Floor Electrical Room, 1A-158, West CMU Wall				Description: TL-2 2nd Floor, Justice, 2B-134, North DWC			
Sample Type: Pre				Sample Type: Pre			
Sample Date: 10/7/2021				Sample Date: 10/7/2021			
Matrix: Direct				Matrix: Direct			
Date Analyzed: 10/12/2021				Date Analyzed: 10/12/2021			
% Analyzed: Not Applicable				% Analyzed: Not Applicable			
Reporting Limit: N/A				Reporting Limit: N/A			
Observed	Raw Count	Results	Comments:	Observed	Raw Count	Results	Comments:
		Cladosporium spp.	1, 2, 129	debris		111	
		debris	111	fibers		112	
		fibers	112	fiberglass		113	
		fiberglass	113				

General Comment Reference Page

ONLY COMMENT NUMBERS INDICATED ON REPORT ARE RELEVANT.

Mycotech Biological is not responsible for any errors resulting from improper or incorrect sampling procedures, atmospheric conditions at the time of sampling or during shipment, or from shipping conditions or methods.

Results relate only to samples analyzed.

1. This is a known and documented aeroallergen. It may cause an allergic reaction to hypersensitive individuals at normal airborne concentrations. Chronic exposure, at above normal airborne concentrations, may also result in the sensitization and development of allergic disease in previously unaffected individuals.
2. This fungus is an opportunistic pathogen. Many factors affect host contraction; however, this fungus will typically infect only those who are immuno-compromised. Immuno-compromization may be a function of age, sex, race, state of health, or nutrition. Individuals exposed to immunotherapy, chemotherapy, radiotherapy, immunosuppressant drugs, or who have contracted an immunological disorder, are at greater risk of infection. As with other diseases, opportunistic infections may be contracted by a variety of potential routes including injection, ingestion, skin contact and/or respiration.
111. Amorphous particles having no discernible characteristics that can be distinguished by light microscopy; typically mineral deposits, carbon deposits (soot), fine dust, or sand.
112. Natural or man-made textile fibers (not including asbestos); typically from clothing, floor coverings (carpet), or upholstery.
113. Fragments of insulation material made from fine filaments of glass.
129. The identified organism revealed characteristics that are consistent with fungal growth.

Mycotech Biological, Inc.

100 Commons Road, Ste. 7354, Dripping Springs, Texas 78620 Tele: 512-264-9076

Field Data Sheet and Chain of Custody Sheet (PLEASE PRINT CLEARLY)

Company Name: TERRACON

Address: 1506 MID CITIES DRIVE

PHARR, TX 77577

Project Name: _____

Contact Name: Tomas Cruz

Phone: 956-802-4234

Email: Tomas.Guz@terracon.com

Sample Type: Pre Post Retest Clearance

Turn around time Same Day Next Day Third Day

21-1432

PLEASE COMPLETE THIS CHAIN OF CUSTODY AND INCLUDE WITH SAMPLES

Sample #	Sample Description or Location	Date	Method	Sample Duration	Flow Rate	Sample Volume	Analytical Request	Comments (Media)
TL-1	1ST FLOOR, ELECTRICAL ROOM, 1A-158, WEST CMU WALL	10-07-2021	TAPE LIFT				MB1-8	
TL-2	2ND FLOOR, JUSTICE 487C 2B-134, NORTH DWC	↓	↓				↓	

METHOD OF PAYMENT: Visa/MC/American Express Card# _____ Exp. Date: _____

Authorized Signature: _____ PO# (if applicable): 98217071

Released by: Tomas Cruz Date: 10-8-21 Received by: [Signature] Date: 10/11/21

Mycotech Biological, Inc. is not responsible for damaged samples received and/or samples with an incomplete chain of custody form.

Standard turn-around is 7-10 business days, and does not include weekends and/or holidays.
ALL SAMPLES RECEIVED AFTER 3:00 PM WILL BE PROCESSED AND MARKED AS RECEIVED THE NEXT BUSINESS DAY.

APPENDIX B:
PHOTOGRAPHS

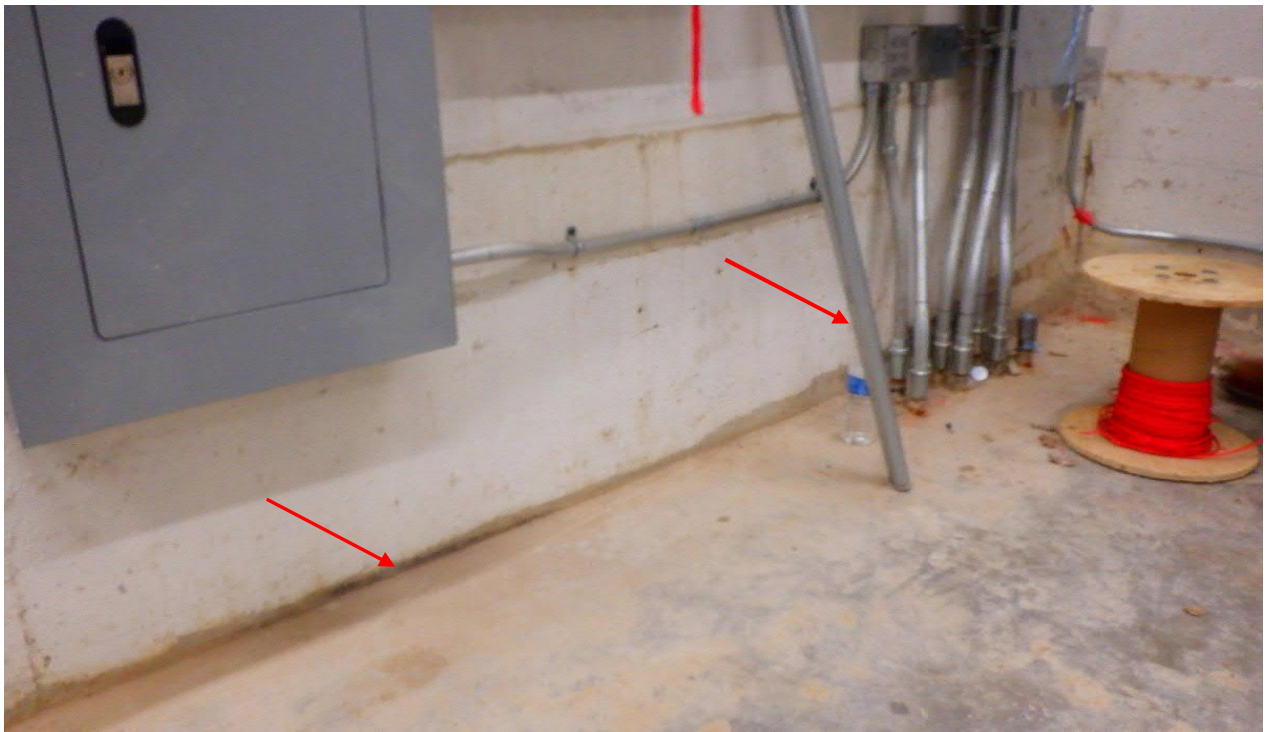


Photo #1 View of fungal growth locations observed on northwest lower CMU block/concrete wall in 1st Floor Electrical Room 1A-158.



Photo #2 Closer view of fungal growth locations observed on northwest lower CMU block/concrete wall in 1st Floor Electrical Room 1A-158.



Photo #3 View of area where moisture/fungal impacted gypsum wallboard was removed and replaced in the southeast portion of the 1st Floor Stair No.1 ST-1A1.



Photo #4 View of wall cavity for Photo #3 location. No moisture stains/fungal growth observed.



Photo #5 View of moisture impacted lower gypsum wallboard observed in the north portion of the 2nd Floor Justice 4, 2B-134. No fungal growth reported in surface sample TL-2.



Photo #6 View of area where moisture impacted gypsum wallboard was removed in the east portion of the 2nd Floor Electrical 2A-146 and Mechanical 2A-147.

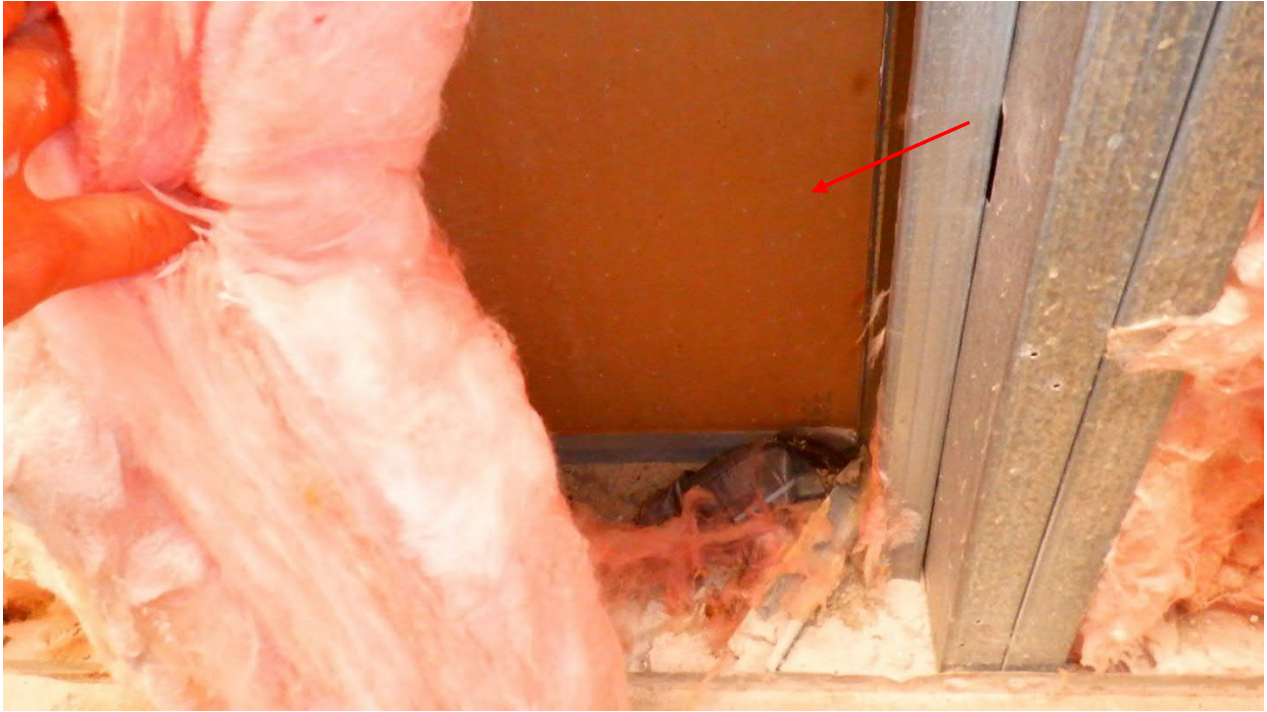


Photo #7 View of wall cavity for Photo #6 location. No moisture stains/fungal growth observed.



Photo #8 View of moisture stains on ceiling tile in the center area of the 3rd Floor Public Circulation 3A-001.



Photo #9 View of moisture stains on ceiling tile in the western area of the 7th Floor Public Circulation 7A-001.



Photo #10 View of moisture stains on ceiling tile in the center area of the 7th Floor Public Circulation 7A-001.



Photo #11 View of area where moisture/fungal impacted gypsum wallboard was removed and replaced, west wall of Entrance to 7th Floor Courtroom 7B-600.



Photo #12 View of wall cavity for Photo #6 location. No moisture stains/fungal growth observed.



INVOICE

Pharr, TX
956-283-8254

Project Mgr: Tomas Cruz

Project: New Hidalgo County Courthouse Building
1000 West McIntyre Street
Edinburg, TX 78520

To: Jacobs Engineering Group Inc
Attn: Oscar Garcia
112 East Cano
Edinburg, TX 78539

REMIT TO:
Invoice Number: TF80829
Terracon Consultants, Inc.
PO Box 959673
St Louis, MO 63195-9673
Federal E.I.N.: 42-1249917

Project Number:	88217071
Invoice Date:	10/11/2021
For Period:	6/20/2021 to 10/09/2021

Description	Total
Follow-up Microbial Assessment	\$7,145.00

Invoice Total	\$7,145.00
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