

ADDENDUM NO. 3

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

**Replace Roofs
Guhleman Forensic Complex
Fulton State Hospital
Fulton, Missouri
PROJECT NO.: M1906-01**

Bid Opening Date is: 1:30 PM, February 4, 2020

Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:

GENERAL COMMENTS:

1. Following the Pre-Bid Meeting, a mold test was performed on the underside of the roof on the eastern side of the Cremer Activity Center building, which is identified to be demolished. The purpose of the test was to determine if the mold required remediation prior to demolition.

SPECIFICATION CHANGES:

1. Section 024119– Selective Demolition
 - a. ADD Paragraph 1.5-E as follows:
 - E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 1. Appendix 1 – Asbestos Survey: No asbestos containing materials were identified.
 2. Appendix 3 – Limited Mold Sampling Report: Remediation is not required for removal of lower roof canopy. Adjacent remaining exterior material(s) shall be cleaned with soap and water.
2. Section 077100– Roof Specialties
 - a. ADD Paragraph 2.2-A.1.f as follows:
 - f. Metal-era, Inc; anchor-type fascia is an approved equal.
3. ADD Appendix 3 – Limited Mold Sampling Report by Terracon dated January 24, 2020

ATTACHMENTS:

1. Appendix 3 – Limited Mold Sampling Report

January 28, 2020

END ADDENDUM NO. 3

APPENDIX 3

Limited Mold Sampling Report

Guhleman Forensic Center
Cremer Activities Building
689 Route O
Fulton, Missouri

January 24, 2020

Terracon Project No. 09207000

Prepared for:

Simon Oswald Architecture, Inc.
Columbia, Missouri

Prepared by:

Terracon Consultants, Inc.
Columbia, MO

terracon.com

Terracon

Environmental ● Facilities ● Geotechnical ● Materials



January 24, 2020

Simon Oswald Architecture, Inc.
2801 Woodard Dr., Suite 103
Columbia, Missouri 65202

Attn: Bill Oswald
P: (573) 443-1407
E: oswald@soa-inc.com

Re: Limited Mold Survey
Guhleman Forensic Center
Cremer Activities Building
689 Route O
Fulton, Missouri 65251
Terracon Project No. 09197005

Dear Mr. Oswald:

Terracon Consultants, Inc. (Terracon) is pleased to submit the attached report for the above referenced site to Simon Oswald Architecture, Inc. The purpose of this report is to present the results of a limited mold survey of a roof that is due to be removed. The roof was suspected of containing mold on the underside. The survey was conducted on January 15, 2020. This survey was conducted in accordance with our proposal dated January 13, 2020. We understand that this survey was requested due to planned removal of an entrance roof overhang on the roof of the referenced building.

Terracon appreciates the opportunity to provide this service to Simon Oswald Architecture, Inc. If you have any questions regarding this report, please contact the undersigned at 573 214-2677.

Sincerely,
Terracon Consultants, Inc.

Chris L. Segafredo
Senior Staff Scientist

For:
Frank M. Reiber
Senior Industrial Hygienist

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**LIMITED MOLD SURVEY OF
CREMER ACTIVITIES BUILDING ENTRANCE ROOF
Guhleman Forensic Center
689 Route O, Fulton, Missouri**

**Terracon Project 09207000
January 23, 2020**

1.0 PROJECT DESCRIPTION

Terracon Consultants, Inc. (Terracon) conducted limited mold sampling at the Guhleman Forensic Center, Cremer Activities Building located at 689 Route O, Fulton, Missouri January 15, 2020. The evaluation was performed in accordance with our signed proposal, dated January 13, 2020. The purpose of this evaluation was to collect information about suspect mold growth on the lower side of a porch roof, scheduled for removal.

1.1 Scope of Services

Terracon conducted surface tape-lift samples to determine the presence or absence of microbial growth.

1.2 Standard of Care

This assessment was conducted on January 15, 2020, based on information provided to Terracon by Simon Oswald Architecture. Terracon did not attempt to identify potential exposures or hazards present in or around the building.

This assessment 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 assessment. 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 EVALUATION CRITERIA AND METHODS

2.1 Physical Inspection and Assessment

A physical assessment of the roof area was conducted to evaluate mold growth.

The physical assessment for the mold assessment included:

- Observation of the porch area revealed the outdoor area is exposed to the weather; and
- Identification of discoloration and microbial growth.

During the site visit, Mr. James Hosenfelt, maintenance worker at the Guhleman Forensic Center, led us to the location of the suspect mold growth, which was an L-shaped roof, against the building at a doorway. Significant growth of what appeared to be mold, was found over much of the underside of the porch roof.

2.2 Sampling

State or federal exposure limits have not been established for fungal aerosols. Regulatory standards, medically-based threshold limits, or dose-response relationships do not currently exist for exposure to airborne or surface concentrations of mold spores. Terracon relies upon experience, professional judgment, current scientific literature, guidelines and recommendations made by professional organizations and experts, and statistical methods in interpreting mold sampling results.

Terracon collected four tape-lift sample from the surfaces with suspect microbial growth. The samples were collected near the east end, the south end, the center-inner, and the center-outer sections of the underside of the roof. The samples were collected using sections of clear adhesive tape, which were then adhered to clean microscope slides, all provided by the laboratory and placed in a sealable plastic bag.

The samples were shipped under chain-of-custody (COC) protocol to EMSL Analytical (EMSL), St. Louis, MO. EMSL is accredited by the American Association for Laboratory Accreditation (A2LA) under Biological Testing ISO/IEC 17025:2005 (A2LA accreditation number 2845.10).

3.0 FINDINGS

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

3.1 Physical Assessment

Table 1 contains an overview of findings from the physical assessment. Significant findings are discussed in the section that follows.

Table 1. Physical Assessment Findings of Porch Area

Inspection Parameter	Observation Comments
Type of Occupancy	Forensic Center-State Hospital Facility
Floors Above/Below Grade	1/1 (basement)
Physical Observations (odors, housekeeping)	No major odors or housekeeping issues observed
Type of Enclosure	None, exterior porch area
Types of Finishes: ■ Ceilings	■ Paint over wood
Discoloration/Water Staining	Apparent mold growth over much of the ceiling (under side) of the roof.
Outside Temp. & Humidity	Temp: 34-37°F Relative Humidity: 78-64%

3.2 Mold Tape Lift Sampling

Terracon collected four tape-lift samples from the building. The samples were collected from under-side of the porch roof at the southeast L-shaped section of the building.

The table below depicts the results of the tape-lift sampling. The laboratory report is provided in Appendix A.

Table 3. Tape-Lift Sample Results

Sample #	Location	Results ¹	
1	Outer side of center of L-shaped roof ceiling, below roof.	<i>Cladosporium</i> Hyphal Fragment	High Low
2	East end of L-shaped roof ceiling, below roof.	<i>Cladosporium</i> Hyphal Fragment	High Low
3	South end of L-shaped roof ceiling, below roof.	<i>Cladosporium</i> Hyphal Fragment	High Low
4	Inner side of center of L-shaped roof ceiling, below roof.	<i>Cladosporium</i> Hyphal Fragment	High Low

The results of the tape-lift sampling are interpreted as follows:

¹ *Indicates that fruiting structures and/or hyphae were associated with the spores detected. An indication of active mold growth.

Limited Mold Sampling Report

Cremer Activities Building ■ Fulton, Missouri
January 24, 2020 ■ Terracon Project 09207000



- Rare – 1 to 10 spores per area analyzed
- Low – 11 to 100 spores per area analyzed
- Medium – 101 to 1,000 spores per area analyzed
- High – >1,000 spores per area analyzed

4.0 CONCLUSIONS AND RECOMMENDATIONS

The ceiling of the I-shaped roof at the southeast part of the Cremer Activities Building, Guhleman Forensic Center was observed to be impacted by microbial growth. Observation of the ceiling identified suspect microbial growth. Laboratory analysis of the tape lift samples indicated that the wall samples from the porch roof contained high levels of *Cladosporium* (with fruiting structures and/or hyphae).

Based on Terracon's January 15, 2020, observations of the building and the samples collected and analyzed, Terracon recommends the following:

- Remove moldy building materials where damaged beyond cleaning and clean any remaining substrate with soap and water.
- Reassess the area to determine the effectiveness of the cleaning or material removal.
- Consider hiring a remediation contractor to perform the work (not required by any regulation).

5.0 GENERAL COMMENTS

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, which may have been used in the preparation of this report. No warranty, express or implied is made.

This report is prepared for the exclusive use of Simon Oswald Architecture, Inc. for the specific application to the project discussed and has been prepared in accordance with generally accepted industrial hygiene practices.

APPENDIX A
LABORATORY REPORTS



EMSL Analytical, Inc.

100 Green Park Industrial Court Saint Louis, MO 63123
Tel/Fax: (314) 577-0150 / (314) 776-3313
<http://www.EMSL.com> / saintlouislab@emsl.com

Order ID: 392000508
Customer ID: TRCN25
Customer PO: 09207000
Project ID:

Attn: Chris Segafredo
Terracon Consultants, Inc.
3601 Mojave Court
Suite A
Columbia, MO 65202
Proj: 09207000

Phone: (573) 214-2677
Fax: (573) 214-2714
Collected:
Received: 01/16/2020
Analyzed: 01/20/2020

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

Lab Sample Number: Client Sample ID: Sample Location:	392000508-0001 #1 Crewer-Overhang-Center Ext	392000508-0002 #2 Crewer-Overhang- East	392000508-0003 #3 Crewer-Overhang-South	392000508-0004 #4 Crewer-Overhang-Center Int	
Spore Types	Category	Category	Category	Category	
Alternaria (Ulocladium)	-	-	-	-	
Ascospores	-	-	-	-	
Aspergillus/Penicillium	-	-	-	-	
Basidiospores	-	-	-	-	
Bipolaris++	-	-	-	-	
Chaetomium	-	-	-	-	
Cladosporium	High	High	High	High	
Curvularia	-	-	-	-	
Epicoccum	-	-	-	-	
Fusarium	-	-	-	-	
Ganoderma	-	-	-	-	
Myxomycetes++	-	-	-	-	
Pithomyces++	-	-	-	-	
Rust	-	-	-	-	
Scopulariopsis/Microascus	-	-	-	-	
Stachybotrys/Memnoniella	-	-	-	-	
Unidentifiable Spores	-	-	-	-	
Zygomycetes	-	-	-	-	
Hyphal Fragment	Low	Low	Low	Low	
Insect Fragment	-	-	-	-	
Pollen	-	-	-	-	

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000
- Denotes Not Detected.
++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.

Amber Stegmann, Micro Supervisor
or other Approved Signatory

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

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.
Samples analyzed by EMSL Analytical, Inc. Saint Louis, MO AIHA-LAP, LLC-EMLAP Accredited #102636

Initial report from: 01/20/2020 10:20 AM

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



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

392000508

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-0262

Company Name: Terracon Consultants, Inc
 Street: 6700 Stephens Station Rd. Suite 101
 City: Columbia State/Province: MO Zip/Postal Code: 65201 Country: USA
 Report To (Name): Chris L. Segorhedo Telephone #: 573-214-2677
 Email Address: Chris.Segorhedo@Terracon.com Fax #: 573-214-2714 Purchase Order:
 Project Name/Number: 09207000 Please Provide Results: Fax Email
 U.S. State Samples Taken: MO Project Zip Code: Connecticut Samples: Commercial Residential
 Sterile, Sodium Thiosulfate Preserved Bottle Used: Biocide Used in Source (specify):
 Public Water Supply Samples: Note: All results may automatically be reported to DOH if required by state.

Turnaround Time (TAT) Options - Please Check
 3 Hour 6 Hour 24 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

Microbiology Test Codes			
M001 Air-O-Cell	M174 MoldSnap	M012 Pseudomonas aeruginosa (P/A***)	M115 Sewage Screen - Water (P/A***)
M030 Micro 5	M032 Allergenco-D	M024 Pseudomonas aeruginosa (MFT*)	M116 Sewage Screen - Water (MPN**)
M041 Fungal Direct Examination		M015 Heterotrophic Plate Count	M117 Sewage Screen - Swab (P/A***)
M169 Pollen ID & Enumeration		M017 Total Coliform & E. coli (Colilert P/A***)	M013 Sewage Screen - Swab (MFT*)
M280 Dust Characterization Level-1		M018 Total Coliform & E. coli (MFT*)	M133 Methicillin-resistant Staph. aureus (MRSA)
M281 Dust Characterization Level-2		M114 Total Coliform & E. coli Enumeration (Colilert MPN**)	M031 Rapid-growing non-TB Mycobacteria Detection & Enumeration
M005 Viable Fungi- Air Samples (Genus ID & Count)		M019 Fecal Coliform (MFT*)	M014 Endotoxin Analysis
M006 Viable Fungi- Air Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M020 Fecal Streptococcus (MFT*)	M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite)
M007 Culturable fungi - Surface Samples (Genus ID & Count)		M029 Enterococci (MFT*)	Other See Analytical Price Guide
M008 Culturable fungi - Surface Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M129 Enterococci (Enterolert P/A***)	Legionella Analysis Please use EMSL Legionella COC
M009 Bacteria Culture Gram Stain & Count		M180 Real Time qPCR-ERMI 36 Panel	
M010 Bacteria Count & ID - 3 Most Prominent		M025 Sewage Screen -Water (MFT*)	
M011 Bacteria Count & ID - 5 Most Prominent			

M041 - Tape Left

*MFT= Membrane Filtration Technique
 **MPN= Most Probable Number
 ***P/A= Presence/Absence

Name of Sampler: Chris L Segorhedo Signature of Sampler: [Signature]

Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
Example A1	Kitchen Sink/Tap	Tape Left Water	<input checked="" type="checkbox"/> P <input type="checkbox"/> NP	M017	100 mL	9/1/13 4:00 PM	
#1	Cramer-Overhang Center Ext	M041	<input type="checkbox"/> P <input type="checkbox"/> NP	M041		1/14/2020 1325	
#2	Cramer-Overhang-East	M041	<input type="checkbox"/> P <input type="checkbox"/> NP	M041		1/14/2020 1327	
#3	Cramer Overhang South	M041	<input type="checkbox"/> P <input type="checkbox"/> NP	M041		1/14/2020 1328	
#4	Cramer Overhang Center Int	M041	<input type="checkbox"/> P <input type="checkbox"/> NP	M041		1/14/2020 733	

Client Sample # (s): - Total # of Samples: - Samples Received Chilled? - Yes / No (Lab Use Only)

Relinquished (Client): [Signature] Date: 1-16-20 Time: 9:55 P

Comments/Special Instructions:
Please Notice New Address (formerly on Mojave Court)
 777489727674

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

APPENDIX B
PHOTOGRAPHS



Photo 1 South End of Roof



Photo 2 East End of Roof



Photo 3 Center of Ceiling



Photo 4 South End of Ceiling



Photo 5 East End of Ceiling