

WEST 6TH STREET ASSESSMENT



Water Damage Scope of Work

West 6th Street Assessment

GENERAL PROJECT INFORMATION

Client Name	U.S. Small Business Administration Fresno Commercial Loan Service Center
Client Address	801 R. Street, Suite 101, Fresno, California
Project Location	50 West 6 th Avenue, Oshkosh
Project Date(s)	June 30, 2014
Report Date	July 1, 2014
Project Number	

1.0 PROJECT OVERVIEW

was retained to assess the facility located 50 West 6th Avenue in Oshkosh, Wisconsin. We completed this assessment for our client who is managing the property to assess water damage in the basement.

This report describes our observations, sample analyses, and recommendations. Additional or supplemental information is provided in *Section 6.0: Appendices* at the conclusion of this report.

2.0 BACKGROUND

This is a two-story, commercial facility with a basement. The basement experienced flooding, affecting most materials in that space. was retained to assess the basement, conduct testing, and produce a Scope of Work to address the water damage.

3.0 OBSERVATIONS AND SAMPLE RESULTS

3.1 Basement

We did not measure the basement space. Based on a visual assessment, the basement is segmented into three main rooms and partial crawlspace area that covers approximately 4,500 square feet (*Pictures 1 & 2*). Water appears to have been present on the concrete floors throughout the basement as the lower four feet of all wall finishes supported dense fungal growth (*Pictures 3 & 4*). The humidity released resulted in fungal growth on wood pillars, floor joists, and subfloor throughout the basement (*Pictures 5 & 6*). We collected samples from surfaces and analyzed those samples on-site with a microscope. Analyses of samples revealed that areas of subfloor and floor joists that were not visibly stained also supported fungal growth.

We observed two sump crocks that were both filled with water up to the top of the concrete floor (*Pictures 7 & 8*). One of the sump pumps was not functioning, while the other was attempting to run but was not removing water. With the crocks being filled with water, the concrete floor of the basement and the surrounding soils are likely saturated.

Water was also trickling through the foundation in several areas, likely the result of the landscaping around the building being relatively flat. A water spigot in the basement was also found to be dripping water onto the floor (*Picture 9*).

3.2 First and Second Floors

On the first floor, diffuse fungal growth was observed on the majority of the wood surfaces within the first five feet from the floor (*Pictures 10 & 11*). Fungal growth was also observed on the first floor carpeting and bench cushions and in minor areas of the second floor carpeting. There is approximately 4,500 square feet of carpeting. This growth appears to be the result of elevated humidity in the space, likely from moisture releasing from the basement.

We also observed four other areas of appreciable water damage due to other sources of water. These items included:

- Walk-in cooler. There is a walk-in cooler located directly adjacent to the larger bar. The gypsum board wall finishes behind some of the metal paneling in the cooler is supporting dense fungal

growth. However, the damage in the cooler is not impacting the facility in general (*Pictures 12 & 13*).

- Kitchen ceiling. A water release above the east wall of the kitchen damaged the ceiling (*Picture 14*)
- Hallway ceiling. A chronic water release damaged approximately 200 square feet of the ceiling finish of the hallway between the two bar areas (*Pictures 15 & 16*).
- Northeast stairwell by walk-in cooler. A chronic water release damaged approximately 200 square feet of the ceiling finish in the stairwell near the walk-in cooler.

4.0 SUMMARY & RECOMMENDATIONS

We completed a visual and sensory walk-through of the facility. The basement has experienced flooding with current and on-going water issues. Most wall and wood surfaces in the basement supported fungal growth. Elevated levels of humidity in the first and second levels have resulted in an appreciable presence of fungal growth on carpeting, seat cushions, and wall and cabinet surfaces within five feet of the floor on the first level. This humidity may be the result of the basement moisture issues with contributing moisture from four other areas of water damage observed from chronic water leaks on the first level.

The following recommendations address the areas requiring remediation discussed above. In addition to the recommendation below, consult with a contractor to install new sump pumps, grade landscaping to direct water away from the foundation, and identify and repair roof leaks.

Basement

- 1) Operate an adequate number of dehumidifiers to dry the concrete floors and stabilize the humidity to a dew point below 50°F. Instruct the building manager to purchase at least two high-end dehumidifiers, such as the Santa Fe models for continuous operation in the basement.
- 2) Remove all contents. Contain the basement at the top of each stairwell. Depressurize the basement in comparison to the first floor by exhaust air from the basement to the outdoors using HEPA-filtered negative-air machines.
- 3) Remove all basement wall and ceiling gypsum board and plastic with exception to the ceiling finish in the mechanical room. In the stairwells, continue removing the wall finish two feet past any water staining or fungal growth on the front or back side of the finish.
- 4) Clean all wall framing, floor joists, and subfloor with an aggressive cleaning process such as cry-blasting (“dry-ice blasting”) or soda-blasting.
- 5) Thoroughly clean dust and debris from horizontal surfaces throughout the basement. Use a leaf blower to remove loose dust from the stone foundation walls.
- 6) Following cleaning, operate eight HEPA-filtered air-filtration devices and twenty four fans in the basement for 48 hours.

First & Second Floors

- 1) Remove all loose contents.
- 2) Remove all carpeting and seat cushions.
- 3) Clean all walls, cabinetry, and all other surfaces within six feet of the floor on the first floor and in the stairwells.
- 4) Remove the damaged ceiling finish and insulation from the first floor hallway, damaged area of the kitchen, and the northeast stairwell. Clean all areas of framing that is newly exposed with nylon

brushes and a detergent solution remove the detergent using disposable rags dampened with an EPA-registered antimicrobial product.

- 5) If the client desires, remove the walls of the walk-in cooler and clean the exposed framing.
- 6) Thoroughly clean dust from horizontal surfaces throughout the first and second floors. Ladders or scaffolding will be needed to clean the top sides decorative beams (*Picture 17*). Cleaning of the top sides of cross-bracing between rafters of the second floor ceiling is desirable, but not mandatory.
- 7) Following cleaning, operate ten HEPA-filtered air-filtration devices and thirty fans on the first and second floors for 48 hours.

5.0 POST-REMEDATION VERIFICATION

Post-Remediation Verification (PRV) may be completed following the restoration activities. Contact _____ prior to commencing work to determine if PRV will be completed and to schedule a time for the assessment.

PRV is an assessment of the restoration work completed by a consultant independent of the remediation contractor. The purpose of PRV is to ensure the work was adequately completed and that non-work areas were not affected.

The PRV process consists of the following activities:

- Assessment of containment provisions.
- Determination if non-work areas were impacted.
- Assessment of work area to ensure all damaged materials were removed or cleaned
- Collection of air and/or surface samples for the analyses of fungi. Samples are analyzed on-site by a Graduate Microbiologist. Areas requiring additional cleaning may be immediately re-cleaned and re-sampled, depending on the level of work required.

For all projects, analyses of surface samples must reveal the presence of “Trace” or “Minor” levels of fungal debris to be acceptable. For this project, it is assumed that additional renovations by the next owner will occur prior to the building being occupied. For this reason, the levels of fungal debris that the restoration contractor will be somewhat higher than on typical projects.

- $\leq 10,000$ spores per cubic meter of all fungal genera (requirement may be waived depending on building design and operation of negative-air machines)
- $\leq 5,000$ spores per cubic meter of spores in the genera group *Aspergillus/Penicillium*-like
- $\leq 1,000$ spores per cubic meter of spores of water damage-associated fungi including, but not limited to, *Chaetomium*, *Stachybotrys*, and *Ulocladium*

6.0 CONDITIONS AND LIMITATIONS

The findings and recommendations presented in this document are our professional opinions and are only applicable to conditions present during our site visit. These conditions may change, requiring additional action. Any claim or dispute arising out of or related to work completed in this document must be reported to _____ within ten (10) business days of the discovery and within one (1) year of the report date. _____ must be allowed to re-inspect the claimed discrepancy prior to any alterations. The client waives all claims against _____ if alterations have been completed prior to re-inspection, with exception to emergency situations. _____ can only be held liable for 2 times the fee rendered for our services included in this document. Limitations apply to every type of claim or cause of action arising out of or in any way relating to the inspection or report, including but not limited to breach of contract, negligence, negligent misrepresentations, and violations of any unfair trade practices act.

Our findings are limited to observable defects and areas of damage. Any reference to potential damage in concealed areas is considered speculative. Additional areas of concealed damage may be present that is not included in this report.

We arrived at our findings and recommendations based on a degree of care and skill ordinarily exercised by a duly qualified Indoor Environmental Consultant. As allowed by state law, no warranties or guaranties, express or implied, are made with respect to services provided, and any implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed.

7.0 APPENDICES

With exception to sample results, the appendix supplies general instructions and is included in all Scopes of Work. Not all items in the appendix may be applicable to this project.

7.1 Applicable Laws

Work must be completed in a manner that fulfills both national and local regulations. The contractor is responsible for determining which regulations may apply to their work. Such regulations apply to renovations of buildings materials that contain asbestos, lead, and other hazards.

7.2 Industry Guidelines

Complete the remedial activities in general accordance with industry guidelines. The most pertinent guidelines in which to adhere are the following:

- Institute of Inspection, Cleaning, and Restoration Contractors (IICRC) S520, 2008, *Standard and Reference Guide for Professional Mold Remediation, 2nd Edition*
- New York City Department of Health and Mental Hygiene, 2008, *Guidelines on Assessment and Remediation of Fungi in Indoor Environments*

Environmental Protection Agency (EPA), 2001, *Remediation in Schools and Commercial Buildings*

7.3 Cleaning Solutions

The contractor may select the cleaning agents used for this project. Cleaning products must be detergents. If they include anti-microbial agents, the products must be EPA-registered for this specific use. All products must be used in strict accordance with their labeling.

7.4 Containment Procedures

7.4.1 Polyethylene Sheeting

The use of the terms “plastic” and “containment” refer to using 6-mil, fire-retardant polyethylene sheeting. The sheeting must be secured properly to not fall prior to project completion or PRV testing. For commercial facilities, fire-retardant plastic must be used. Strongly consider using black plastic for commercial facilities to deter passers-by from observing the work.

7.4.2 Signage

Post signage on all entrances to work areas that state similar to “Warning: Remediation of Water Damage in Progress. No Entrance.

7.4.3 Depressurization

Depressurize work spaces to -0.02 inches of water column (-5 Pascals) in comparison to non-work spaces. To depressurize the work space, use HEPA-filtered negative air machines (NAMs). Ensure NAMs are operating properly and that filters are set correctly. Measure and record the pressure differential at least three times per work shift. If the space is unable to be properly depressurized, contact

7.5 Air Washing

Air washing is completed following the bulk removal of damaged materials and the fine cleaning of debris from surfaces. First, a leaf blower is used to aerosolize debris from surfaces. The process starts on the side of the work area furthest from the negative air machine (NAM), if present, and continues towards the side where the NAM is located. The air is directed towards the AFDs and the NAM. A leaf blower or a comparable device is required to disturb debris from cracks and crevices. Relying on fans or air movers will likely not provide adequate air velocity. Once all surfaces have been disturbed, the AFDs are allowed to scrub the air for four air changes or approximately one hour in many situations. A particle counter can be used to determine the effectiveness of the air filtration. This process is repeated three times or until particle counts are similar to incoming make-up air levels. If the process is being completed properly, dust should no longer be seen in the air during the third round of disturbing surfaces. Following the last air washing round, clean horizontal surfaces again by wiping or using a properly functioning HEPA-filtered vacuum.

7.6 Surface Sample Collection and Analyses

Samples were collected from surfaces using clear cellophane tape. The tape is applied to a glass slide and viewed through a bright-field microscope. We analyze the samples for the presence of fungal structures and dust and mold mites. Analyses are completed by a trained staff member and reviewed by a Graduate Microbiologist with advanced training in fungal identification.

Analyses of samples are presented in the following table.

Sample Results

Sample Number	Location	Fungal Structures	Presumptive Identification
0630142C-01	Non-discolored floor joists in basement	Spores	Trace (normal background)
0630142C-02	Non-discolored floor joists in basement	Spores	Trace (normal background)
0630142C-03	Non-discolored subfloor in basement	Spores	Trace (normal background)
0630142C-04	Non-discolored subfloor in basement	Spores	Trace (normal background)

Sample Interpretative Guidelines

Level of Fungal Debris	Interpretation
Trace (Normal/Abnormal)	The finding of “trace” levels of fungal structures denotes a normal concentration of fungal debris. If the types or concentrations of fungal structures present are atypical, the sample results will be reported as “abnormal”. For purposes of PRV, results of “trace” suggest surfaces have been properly cleaned.
Minor	The finding of “minor” levels of fungal structures denotes a limited but elevated level of fungal structures. For purposes of PRV, results of “minor” indicate acceptable cleaning of materials that supported fungal growth. However, results of “minor” on surfaces that did not support fungal growth indicate improper cleaning of surfaces.
Moderate	The finding of “moderate” levels of fungal structures suggest that limited fungal growth has occurred on the sampled surface. This growth may not mature enough to be visible. For purposes of PRV, results of “moderate” indicate improper cleaning of surfaces.
Concentrated	The finding of “concentrated” levels of fungal structures only occurs when a sample is collected from mature fungal growth. This growth is likely visible. For purposes of PRV, results of “concentrated” indicate improper cleaning of surfaces.

PRV – Post-Remediation Verification (PRV) is the process of assessing work areas following remedial or cleaning efforts.



PICTURE 1: OVER OF SEVERAL BASEMENT ROOMS.



PICTURE 2: ONE OF SEVERAL BASEMENT ROOMS.



PICTURE 3: FUNGAL GROWTH FROM WATER SOAKING UP THE LOWER SHEET OF WALL FINISH.



PICTURE 4: FUNGAL GROWTH FROM WATER SOAKING UP THE LOWER SHEET OF WALL FINISH.



PICTURE 5: THE PILLARS AND OTHER SURFACES IN THE BASEMENT ARE COATED WITH FUNGAL GROWTH.



PICTURE 6: THE FLOOR JOISTS AND SUBFLOOR AND OTHER SURFACES THROUGHOUT BASEMENT ARE COATED WITH FUNGAL GROWTH.



PICTURE 7: SUMP CROCK FILLED WITH WATER.



PICTURE 8: SUMP CROCK FILLED WITH WATER.



PICTURE 9: WATER DRIPPING FROM A SPGOT IN THE BASEMENT.



PICTURE 10: THE WHITE SPECKLING IS FUNGAL GROWTH ON THE CABINET DOORS BELOW THE BAR.



PICTURE 11: THE WHITE DISCOLORATION IS FUNGAL GROWTH ON AN FIRST FLOOR DOOR.



PICTURE 12: WALK-IN COOLER NEAR THE BAR.



PICTURE 13: WALK-IN COOLER NEAR THE BAR.



PICTURE 14: DAMAGE TO KITCHEN CEILING.



PICTURE 15: DAMAGES TO CEILING OF HALLWAY.



PICTURE 16: CLOSE-UP OF CEILING SHOWN IN PREVIOUS PICTURE.



PICTURE 17: DECORATIVE BEAMS BETWEEN THE FIRST AND SECOND FLOORS.