ENVIRONMENTAL
CONSULTING LLC

September 13, 2013

Ms. Massy Mehdipour
1170 Signal Hill Road
Pebble Beach, California 93953
650.380.3187

Via email:
massy@jotter.com

Subject: Mold Inspection of the Single Family Home Located at 1170 Signal Hill Road in Pebble Beach, California
M^3 Project Number: 13444.0 Task 1

Dear Ms. Mehdipour:

At your request, M^3 Environmental Consulting (M^3) conducted an initial inspection for microbial growth in the single family home located at 1170 Signal Hill Road in Pebble Beach, California. M^3 understands the request for this investigation was to ascertain indoor mold spore concentrations in the master bedroom on the lower level following a water intrusion event from the upper deck. The residence was not occupied but was furnished at the time of the inspection.

This report presents the results of a visual inspection, moisture mapping, and air sampling for total mold spore concentrations conducted on September 4, 2013 by Mr. Chris Gatward, Council-certified Microbial Consultant (CMC), and Principal of M^3.

Observations

On the day of the investigation the weather was clear with a light breeze. There had been no rain over the past several months. The outdoor temperature was 70 degrees Fahrenheit (ºF) with a relative humidity of 67% as measured with a Fluke® 971 Temperature Humidity Meter. The subject building was a two story, wood-framed, residence built slab on grade. The area of concern was the lower master bedroom which was located under a deck. The lower level interior finishes consisted of carpeting over vinyl floor tile and wallboard/joint compound (WB/JC) with texturing. Mr. Gatward utilized a Tramex® Moisture Encounter Plus pad moisture meter and Delmhorst® BD2100 pin moisture meter to map moisture levels in the residence.

Mr. Gatward made the following observations:

- No unusual odor was noted upon entry into the residence. The residence appeared clean.

Master bedroom

- There was a moldy odor noted upon entry to the lower level of the home.
- The indoor temperature was 73 ºF with a relative humidity of 59%
- The exterior sliding glass door in the master bedroom was open upon arrival and the screen was closed. M^3 closed the door for testing.
- The door glass was broken and there was a hole in the window that had been taped up.
- The carpet in the room was wet to the touch.
- The moisture content (MC) of the wood baseboard was saturated at greater than 40 percent (>40%). Normal MC for wood is <16%.
- Mold growth was noted on the wood baseboards.
- The MC of the wallboard ceiling and walls was up to 2.1%. Normal MC for wallboard is <0.5%.
- The mattress base was damp to the touch.
- There was visible suspect mold growth around the perimeter eave of the deck.

Sampling

Non-Viable Mold Air Sampling

Mr. Gatward collected a total of three bioaerosol air samples to be analyzed for total (non-viable) mold spores using Zefon Air-O-Cell© microbial spore trap cassettes.

Of the three samples collected, one was collected in the master bedroom, one was collected in the adjacent hallway, and one was collected outdoors (ambient) for comparison.

Air was drawn through the cassettes at a flow rate of approximately 15 liters per minute (lpm) for ten minutes using a Bio-Pump® with a flow rate measured with a calibrated rotameter. Results are reported in spores per cubic meter (spores/m^3) of air.

Swab Sampling

M^3 collected one swab sample to be analyzed for mold growth and density from the wood baseboard in the master bedroom. The swab sample was collected on a sterile Venturi Transystem© Transport swab over an area of approximately 40 square centimeters. Results are reported as relative density of mold (1+ to 4+)

Samples were submitted to EMLab P&K in San Bruno, California for analysis. Laboratory results are presented in Appendix A. Photographs are presented in Appendix B.

Results

Non-Viable Mold Air Sampling

Total non-viable spore concentrations found inside the areas tested were significantly higher than the outdoor total non-viable spore concentrations, with different relative concentrations of mold species dominating the samples. The indoor samples had high concentrations of *Aspergillus/Penicillium* present.

In a well-maintained building, indoor airborne fungal concentrations will be lower than outdoor concentrations and the type and relative concentrations of fungi will be similar, indicating that indoor fungal reservoirs and/or amplification (growth) sites are not present.

Results for the samples collected were as follows:

Sample	Location	Spores/m^3	Predominant Spore Types
19622184	Downstairs master bedroom	1,900	*Aspergillus/Penicillium* – 82% *Cladosporium* – 15%
19622212	Downstairs Hallway	64,000	*Aspergillus/Penicillium* – 100%
19623966	Outdoors (ambient)	2,200	*Aspergillus/ Penicillium* – 83% *Cladosporium* – 11%

The additional fungi detected in the air samples were of a type and/or a concentration that was low and not remarkable.

Swab Sampling

Results for the sample collected was as follows:

Sample	Location	Spore types and density
S-1	Master bedroom - baseboard	*Cladosporium* – 4+ *Penicillium* – 2+

Conclusions

Analytical results of the bioaerosol sampling conducted during this evaluation as well as a visual inspection do suggest an indoor fungal reservoir or amplification site is present inside the lower level of the residence. The lower spore count in the main area of concern (master bedroom) is assumed to be as a result of having the sliding glass door left open.

Recommendations

- The deck, sliding door and window should be repaired.
- The wallboard walls and ceiling in the master bedroom should be removed and the cavities inspected for water damage and mold growth. Any damage or growth should be removed.
- The carpet should be removed from the master bedroom.
- The vinyl floor tile should be removed from the master bedroom.
- The suspect mold growth on the building exterior should be cleaned with a soap and water solution.
- The remaining areas on the lower level of the home interior areas of the residence should be cleaned with a soap and water solution and high efficiency particulate air (HEPA) vacuumed.
- HEPA-filtered air scrubbers should be run inside the lower level of the home to lower the ambient spore concentration.
- The heating duct system should be cleaned.
- All work should be performed by an experienced mold remediation contractor using appropriate engineering controls such polyethylene containments and HEPA – filtered equipment.
- Prior to removal of any materials (such as wallboard or floor tiles) these materials must be tested for the presence of asbestos.
- Following completion of cleaning activities a visual inspection and air sampling should be performed by M^3 or another qualified third party microbial consulting professional to determine remediation effectiveness.

Limitations

M^3 provided these services consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions. This report is intended for the sole use of Ms. Mehdipour. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user. The intent of the report is to aid the building owner, architect, construction manager, general contractors, and potential demolition and abatement contractors in locating fungi growth (mold). This report is not intended to serve as a bidding document nor as a project specification document and actual site conditions and quantities should be field-verified. Although a reasonable attempt has been made to identify suspect microbial contamination in the areas identified, the inspection techniques used are inherently limited in the sense that only full demolition procedures will reveal all building materials of a structure and therefore all areas of contamination.

Additionally, the passage of time may result in a change in the environmental characteristics at this site. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions, and recommendations expressed in this report are based only on conditions that were observed at the time of M^3's inspection of the site.

Thank you for the opportunity to perform these services for you. Please call our office at 831.649.4623 with any questions.

Sincerely,
M[3] Environmental Consulting LLC

Chris G. Gatward, CMC, CAC
Principal

Appendix A – Mold Laboratory Results and Chain of Custody
Appendix B – Photographs

EMLab P&K
A TestAmerica Company

Report for:

Mr. Chris Gatward
M3 Environmental Consulting, LLC.
9821 Blue Larkspur Lane, Ste 100
Monterey, CA 93940

Regarding: Project: 13444.0; Medopour-1170 Signal Hill, P.B
EML ID: 1109227

Approved by:

Technical Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Spore trap analysis: 09-09-2013

Service SOPs: Spore trap analysis (1038)
AIHA-LAP, LLC accredited service, Lab ID #102856

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: M3 Environmental Consulting, LLC.
C/O: Mr. Chris Gatward
Re: 13444.0; Medopour-1170 Signal Hill, P.B

Date of Sampling: 09-04-2013
Date of Receipt: 09-05-2013
Date of Report: 09-09-2013

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	19622184: Downstairs corner bedroom		19622212: Downstairs hall		19623966: Outdoors	
Comments (see below)	A		None		None	
Lab ID-Version‡:	5003402-1		5003403-1		5003404-1	
Analysis Date:	09/09/2013		09/09/2013		09/09/2013	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria			1	7		
Ascospores	1	27			2	53
Basidiospores						
Chaetomium						
Cladosporium	11	290	2	110	9	240
Curvularia						
Epicoccum	1	7				
Fusarium						
Myrothecium						
Nigrospora						
Other brown	1	7	1	7	4	27
Other colorless						
Penicillium/Aspergillus types†	79	1,600	1,146	64,000	69	1,800
Pithomyces						
Rusts						
Smuts, Periconia, Myxomycetes	1	7			4	27
Stachybotrys						
Stemphylium					1	7
Torula	2	13				
Ulocladium					2	13
Background debris (1-4+)††	2+		4+		2+	
Hyphal fragments/m3	13		20		20	
Pollen/m3	< 7		< 7		< 7	
Skin cells (1-4+)	1+		2+		< 1+	
Sample volume (liters)	150		150		150	
§ TOTAL SPORES/m3		1,900		64,000		2,200

Comments: A) 27 of the raw count *Penicillium/Aspergillus* type spores were present as a single clump.

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample.
† 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 then reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m3 divided by the raw count. The limit of detection is the analytical sensitivity multiplied by the sample volume divided by 1000.

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: M3 Environmental Consulting, LLC.
C/O: Mr. Chris Gatward
Re: 13444.0; Medopour-1170 Signal Hill, P.B

Date of Sampling: 09-04-2013
Date of Receipt: 09-05-2013
Date of Report: 09-09-2013

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‡: 5003401-1, Analysis Date: 09/09/2013: Swab sample S-1: Downstairs corner bedroom-wood baseboard				
Moderate	Very few	4+ *Cladosporium* species 2+ *Penicillium* species	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".

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Re: 13444.0; Medopour-1170 Signal Hill, P.B

Date of Sampling: 09-04-2013
Date of Receipt: 09-05-2013
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MoldSTAT™: Supplementary Statistical Spore Trap Report

Outdoor Summary: 19623966: Outdoors

Species detected	Outdoor sample spores/m3 <100 1K 10K >100K	Typical outdoor ranges (North America)	Freq. %
Ascospores	53	13 - 200 - 5,700	76
Basidiospores	< 7	13 - 450 - 23,000	92
Cladosporium	240	27 - 480 - 10,000	91
Other brown	27	7 - 13 - 120	24
Penicillium/Aspergillus types	1,800	13 - 170 - 2,700	68
Smuts, Periconia, Myxomycetes	27	7 - 53 - 960	64
Stemphylium	7	7 - 13 - 85	3
Ulocladium	13	7 - 13 - 93	4
Total	2,200		

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

Indoor Samples

Location: 19622184: Downstairs corner bedroom

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 90%	dF: 1 Result: 1.1250 Critical value: 3.8415 Inside Similar: Yes	Result: 0.7143	dF: 9 Result: 0.6708 Critical value: 0.5833 Outside Similar: Yes	Score: 108 Result: Low

Species Detected	Spores/m3 <100 1K 10K >100K
Ascospores	27
Cladosporium	290
Epicoccum	7
Other brown	7
Penicillium/Aspergillus types	1,600
Smuts, Periconia, Myxomycetes	7
Torula	13
Total	1,900

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Date of Sampling: 09-04-2013
Date of Receipt: 09-05-2013
Date of Report: 09-09-2013

MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 19622212: Downstairs hall

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: 2959%	dF: 1 Result: 1.1250 Critical value: 3.8415 Inside Similar: Yes	Result: 0.5455	dF: 8 Result: 0.5476 Critical value: 0.6190 Outside Similar: No	Score: 300 Result: High

Species Detected	Spores/m3 (<100 / 1K / 10K / >100K)
Alternaria	7
Cladosporium	110
Other brown	7
Penicillium/Aspergillus types	64,000
Total	64,000

* The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

** An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

*** The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

**** MoldSCORE™ is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. EMLab P&Kreserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

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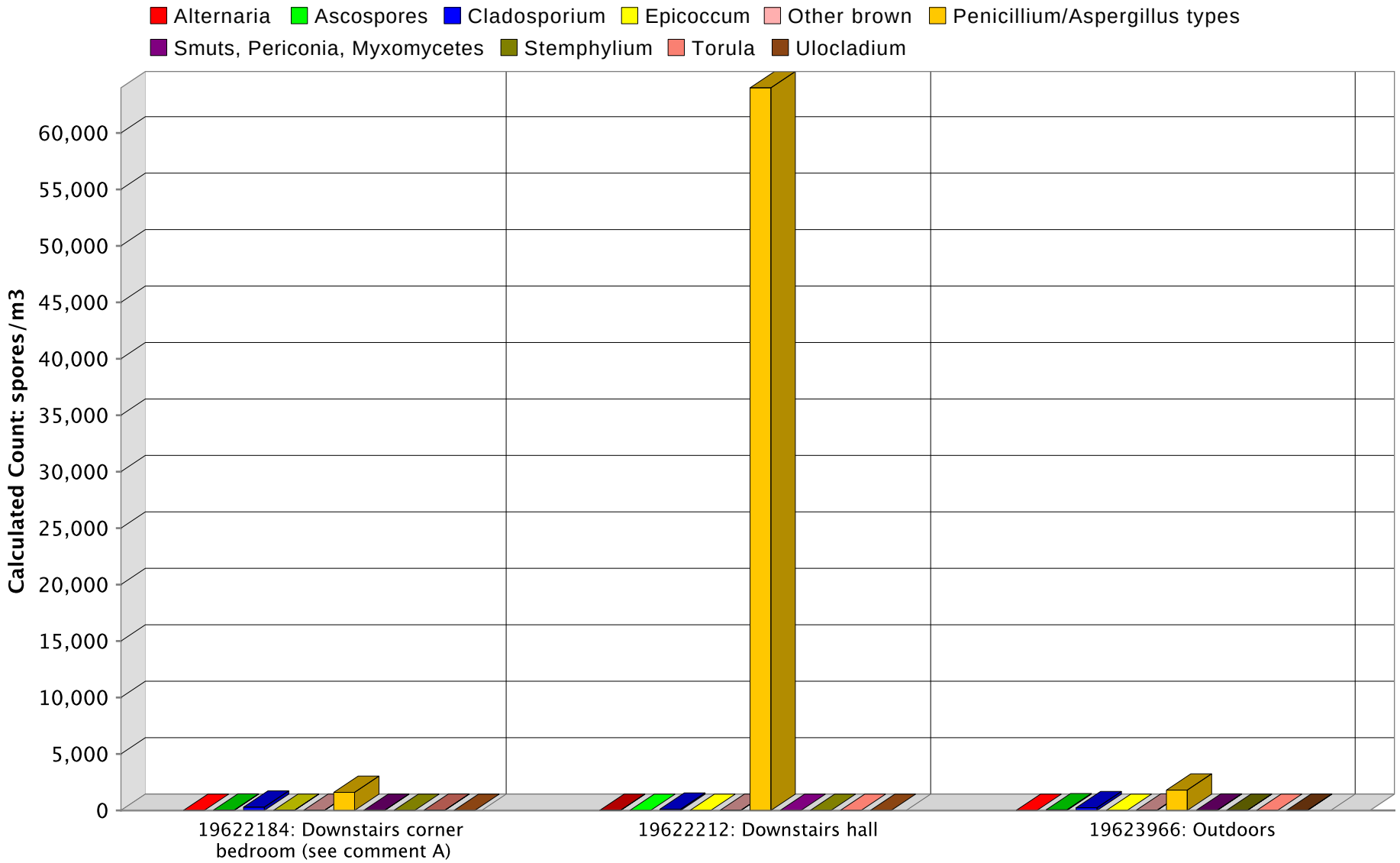
SPORE TRAP REPORT: NON-VIABLE METHODOLOGY



Comments: A) 27 of the raw count *Penicillium/Aspergillus* type spores were present as a single clump.

Note: Graphical output may understate the importance of certain "marker" genera.

Appendix A

Laboratory Results
and
Chain of Custody

CHAIN OF CUSTODY — EMLab P&K

www.EMLabPK.com

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08003 • (866) 871-1984
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 • (800) 651-4802
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 • (866) 888-6653

WEATHER	Fog	Rain	Snow	Wind	Clear
LEVEL: None	X	X	X		
Light				X	X
Moderate					
Heavy					

001109227

CONTACT INFORMATION

Company: M3 Environmental Consulting
Address: 9821 Blue Larkspur Ln, #100 Monterey
Contact: Chris Gatward
Special Instructions: e-mail Chris@m3environmental.com
Phone: 831.649.4623

PROJECT INFORMATION

Project ID: ~~13438-0~~ 13447.0
Project Desc.: Medspour – 1170 Signal Hill, PB
Project Zip Code:
Sampling Date & Time: 9/4/13
PO Number:

TURN AROUND TIME CODES - (TAT)

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

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

REQUESTED SERVICES

Non-Culturable: Spore Trap; Tape; Swab; Bulk
Culturable: BioCassette™; Andersen; SAS; Water; Bulk; Dust; Soil; Contact Plate

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 and Counts (Culturable Air and Surface Bacteria)	Legionella culture	Total Coliform, E.coli (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism)	QuantiTray - Sewage Screen	Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)
19622184	Downstairs corner bedroom	ST	STD	150 L	1310/73°/57% RH	X																
S-1	" " "	SW	STD	40cm²	wood baseboard			X														
19622212	Downstairs hall	ST	↓	150		X																
19623966	outdoors	ST	↓	150	1345 70°/67% RH	X																

SAMPLE TYPE CODES

BC - BioCassette™	ST - Spore Trap: Zefon, Allergenco, Burkard...	T - Tape	D - Dust
A1S - Andersen		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
[signature]	9/4/13

RECEIVED BY	DATE & TIME
[signature]	9-5-13 920AM

Appendix B

Photographs

Air sampling in the downstairs master bedroom

Floor tile under carpet in master bedroom

Mold growth on baseboard in master bedroom

Air sampling in lower hallway

Suspect mold growth on outside of bedroom wall

Master bedroom (under deck)