PRO-LAB®
1675 North Commerce Parkway, Weston, FL 33326 (954) 384-4446

SOLUTIONS FOR HEALTHY BREATHING
PO BOX 10918
FAIRBANKS, AK 99710

Certificate of Mold Analysis

Prepared for:	SOLUTIONS FOR HEALTHY BREATHING
Phone Number:	(907) 378-4108
Fax Number:	(907) 457-4568
Project Name:	RICE, COREY
Test Location:	3614 OLD RICHARDSON HWY.
	MOOSE CR., AK 99714
Chain of Custody #:	602344
Received Date:	August 23, 2012
Report Date:	August 24, 2012

John D. Shane Ph.D., Technical Manager

Currently there are no Federal regulations for evaluating potential health effects of fungal contamination and remediation. This information is subject to change as more information regarding fungal contaminants becomes available. For more information visit http://www.epa.gov/mold or www.nyc.gov/html/doh/html/epi/mold.shtml. This document was designed to follow currently known industry guidelines for the interpretation of microbial sampling, analysis, and remediation. Since interpretation of mold analysis reports is a scientific work in progress, it may as such be changed at any time without notice. The client is solely responsible for the use or interpretation. PRO-LAB/SSPTM Inc. makes no express or implied warranties as to health of a property from only the samples sent to their laboratory for analysis. The Client is hereby notified that due to the subjective nature of fungal analysis and the mold growth process, laboratory samples can and do change over time relative to the originally sampled material. PRO-LAB/SSPTM Inc. reserves the right to properly dispose of all samples after the testing of such samples are sufficiently completed or after a 7 day period, whichever is greater.

AIHA LAP, LLC
ACCREDITED LABORATORY
ENVIRONMENTAL MICROBIOLOGY
ISO/IEC 17025:2005
WWW.ABLAACCREDITEDLABS.ORG
LAB # 163230

For more information please contact PRO-LAB at (954) 384-4446 or email info@prolabinc.com

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Prepared for : SOLUTIONS FOR HEALTHY BREATHING **Test Address :** RICE, COREY
3614 OLD RICHARDSON HWY.
MOOSE CR., AK 99714

ANALYSIS METHOD	Spore trap analysis	Spore trap analysis	Spore trap analysis	Spore trap analysis
LOCATION	Outdoor/ Control	Dining Room/ Kitchen	Basement	Living Area
COC / LINE #	602344-1	602344-2	602344-3	602344-4
SAMPLE TYPE & VOLUME	Z5 - 25L	Z5 - 25L	Z5 - 25L	Z5 - 25L
SERIAL NUMBER	Z749053	Z753163	Z749055	Z733493
COLLECTION DATE	Aug 21, 2012	Aug 21, 2012	Aug 21, 2012	Aug 21, 2012
ANALYSIS DATE	Aug 24, 2012	Aug 24, 2012	Aug 24, 2012	Aug 24, 2012
CONCLUSION	**CONTROL**	**NOT ELEVATED**	**ELEVATED**	**ELEVATED**

IDENTIFICATION	Raw Count	Spores per m^3	Percent of Total	Raw Count	Spores per m^3	Percent of Total	Raw Count	Spores per m^3	Percent of Total	Raw Count	Spores per m^3	Percent of Total
Alternaria							1	40	1			
Chaetomium							1	40	1	2	80	2
Cladosporium	50	2,000	44	20	800	35	16	640	9	10	400	9
Ganoderma				1	40	2	2	80	1			
Hyphae	1	40	1				4	160	2	2	80	2
Oidium/Erysiphe	8	320	7									
Other Ascospores	3	120	3	3	120	5						
Other Basidiospores	15	600	13	3	120	5	2	80	1	5	200	5
Penicillium/Aspergillus	10	400	9	22	880	39	155	6,200	83	85	3,400	77
Pithomyces	1	40	1	3	120	5				1	40	1
Pyricularia										1	40	1
Rusts	25	1,000	22	4	160	7	2	80	1	2	80	2
Smuts, myxomycetes	1	40	1	1	40	2				1	40	1
Spegazzinia							3	120	2			
Stachybotrys							1	40	1			
Torula										1	40	1
TOTAL SPORES	114	4,560	100	57	2,280	100	187	7,480	100	110	4,400	100
MINIMUM DETECTION LIMIT	1	40		1	40		1	40		1	40	
BACKGROUND DEBRIS	Moderate			Heavy			too heavy for accurate count.			Heavy		
Cellulose Fiber										1	40	
Insect Fragments							1	40				
Plant Fragments				2	80		2	80		2	80	
OBSERVATIONS & COMMENTS							Counts are estimated. Actual numbers of spores probably much higher. Pen/Asp too heavy for accurate count. Counts are estimated. Actual numbers of spores probably much higher. Stachybotrys confirmed by second a					

Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.
Minimum Detection Limit. Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample. **NA** = Not Applicable.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

Interpretation Guidelines: A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.
CONTROL is a baseline sample showing what the spore count and diversity is at the time of sampling. The control sample(s) is usually collected outside of the structure being tested and used to determine if this sample(s) is similar in diversity and abundance to the inside sample(s).
ELEVATED means that the amount and/or diversity of spores, as compared to the control sample(s), and other samples in our database, are higher than expected. This can indicate that fungi have grown because of a water leak or water intrusion. Fungi that are considered to be indicators of water damage include, but are not limited to: *Chaetomium, Fusarium, Memnoniella, Stachybotrys, Ulocladium.*
NOT ELEVATED means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth.
UNUSUAL means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.
NORMAL means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.

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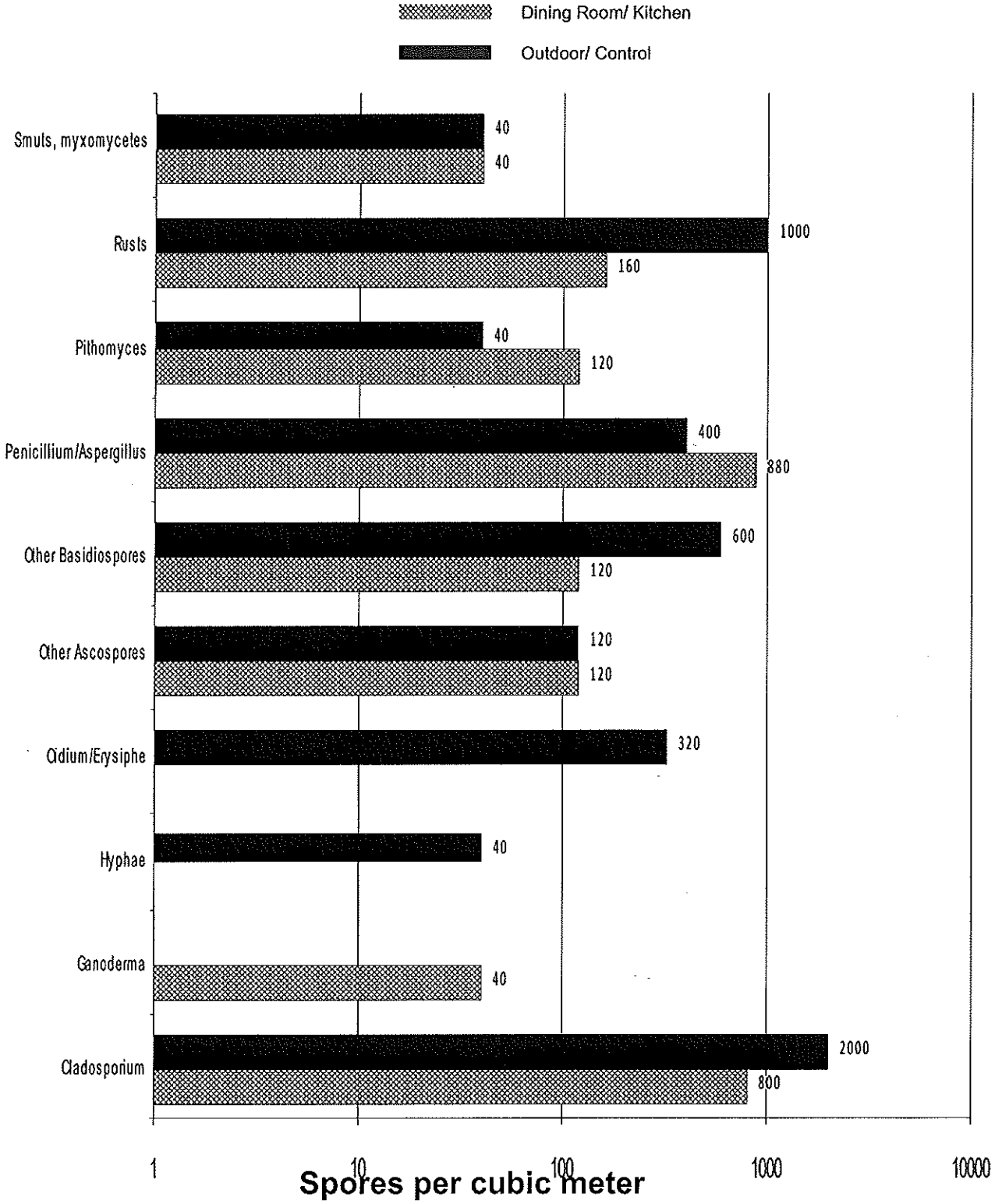
Chain of Custody # 602344



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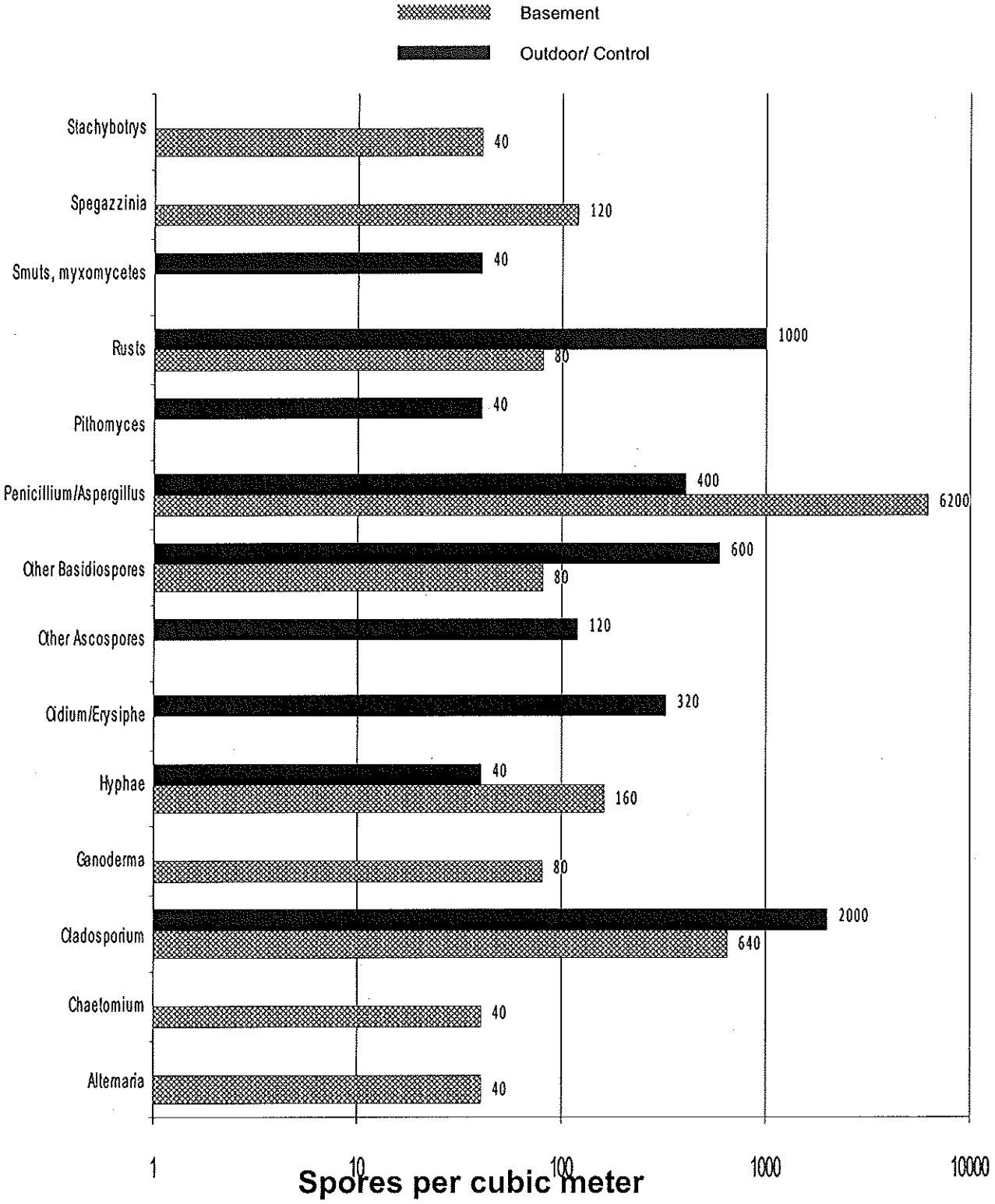

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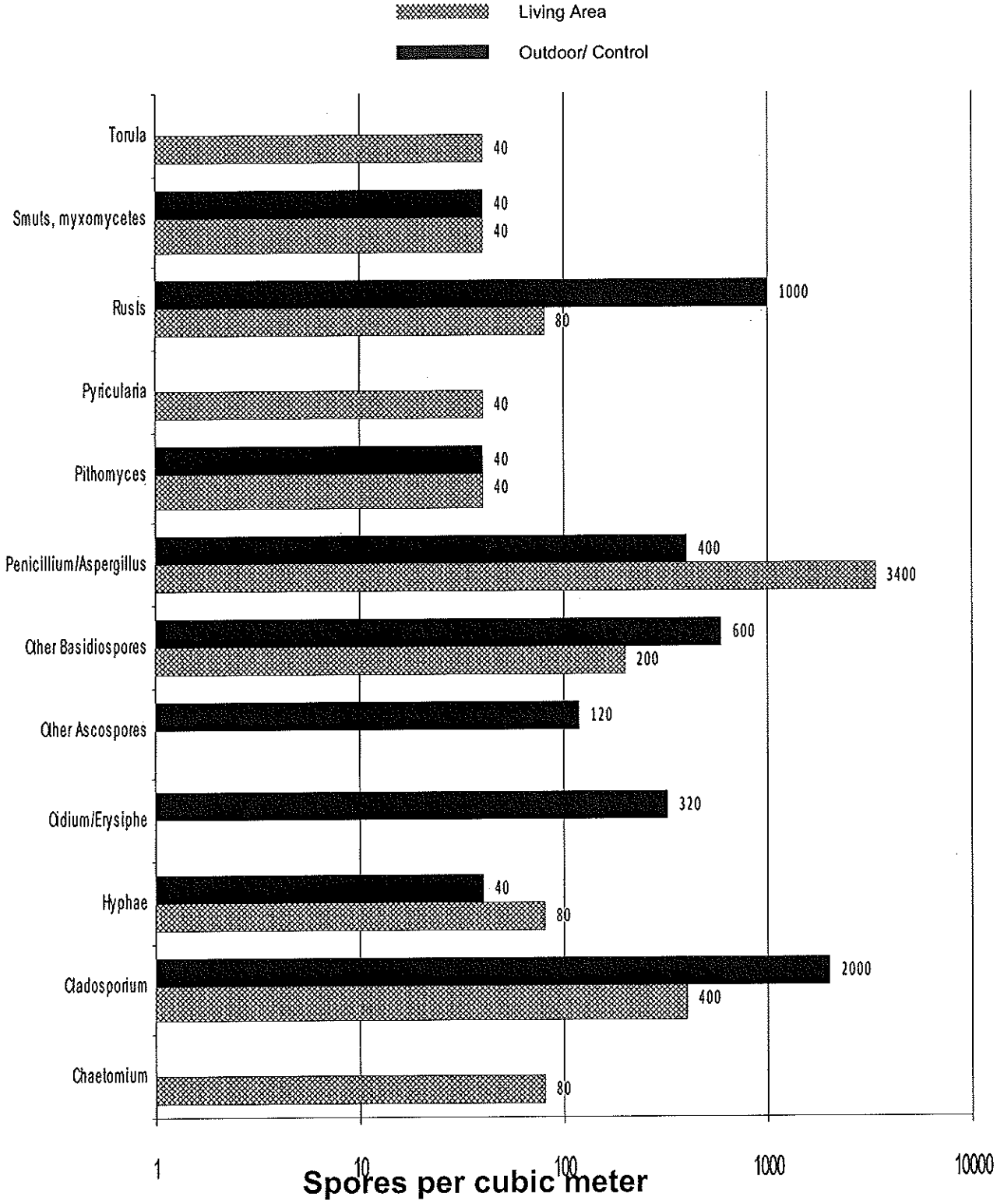

SOLUTIONS
For Healthy Breathing

P.O. 10918 Fairbanks Alaska 99710
907-457-4568 subsistencepro@aol.com

Client Information Rice , Corey
Address 3614 Old Richardson Hwy.
Phone 388-1301

Solutions for Healthy Breathing was requested to conduct an Indoor Air Quality inspection at the above residence.
The assessment included mold, moisture, and general indoor air quality issues.

House Particulars: Three sided log main building on a full block basement with attached frame kitchen and attached frame living quarters on a shallow crawl space.

Heater(s): HWBB heats main structure. Boiler in basement. Attached living quarters appear to have had auxiliary heat from "monitor" type furnace.

Ventilation: The only mechanical ventilation at the time of inspection was two bathroom fans that were tested at less thatn10cfm each.

Mold and Mold Sampling: Mold and mold staining were visible in the kitchen, basement, and living quarters.
Air samples indicated "non elevated" spore levels in the main log portion but spore levels in the basement and living quarters were significantly "elevated".

VOC sampling: None detected.

Carbon Monoxide: None detected.

Crawl Space: There is a crswl space under the living quarters. It is shallow (18") and has no vapor barrier. It appears to be insulated with sawdust boxes that are in disrepair.

Observations and Comments:

- Main log structure and attached kitchen is generally dry. Staining is visible on the logs and floors as well as the ceiling.
- Kitchen area is very dirty.
- Basement has visible mold in many areas and has water standing on the floors.
- Basement has open floor drains.
- Basement has damp carpets on some floors.
- Living quarters are in poor condition. Sheetrock is damaged and broken in several areas. Mold and moisture staining is visible on the ceilings.
- Many windows are damaged.
- Outside entrance to basement is poorly graded and promotes runoff from adjacent lot into the basement.

Recommendations:

1. This structure has been poorly maintained for some time. Indoor air Quality is poor due to high mold spore levels and high background debris levels. Before any significant repairs or occupation the structure needs to be dried out and sanitized. I suggest heavy clod fogging with Concrobium Mold Control.
2. Much of the flooring and sheetrock are damaged beyond repair and will need to be replaced.
3. Walls should be opened in many places to determine the extent of damage and the amounts of insulation.
4. The crawl space needs a good vapor barrier.
5. Sawdust boxes around the living quarters should be replaced with conventional insulation.

6. Outside entry to basement should be landscaped and covered to direct snow melt and rain away from the basement.
7. This is an air quality assessment and a structural assessment should be done to determine the integrity of the structure before major repairs are attempted.

The preceding information is true and correct to the best of my knowledge.

This Air Quality Assessment in no way implies health or medical advice or any solicitation for additional services. We advise contacting your health care provider for medical assistance. We recommend you contact professional contractors to assist in correcting any deficiencies.

Karl Hough - Indoor Air Quality Consultant

SOLUTIONS
For Healthy Breathing

INVOICE

PO Box 10918
Fairbanks, Akaska 99710
907-457-4568

DATE:	8/21/2012
Invoice #	A81026

CLIENT INFORMATION

Rice, Corey
3614 Old Richardson Hwy.
388-1301

DESCRIPTION of SERVICES	AMOUNT
Indoor Air Quality inspection of building and crawl space.	$225.00
4 air samples @ $65.00 ea.	$260.00
TOTAL	$485.00

1. Total payment due upon receipt of report
2. Please include the invoice number on your check

Make all checks payable to
Karl Hough

If you have any questions about this invoice, please contact
Karl Hough, 907-457-4568

Thank You For Your Business!

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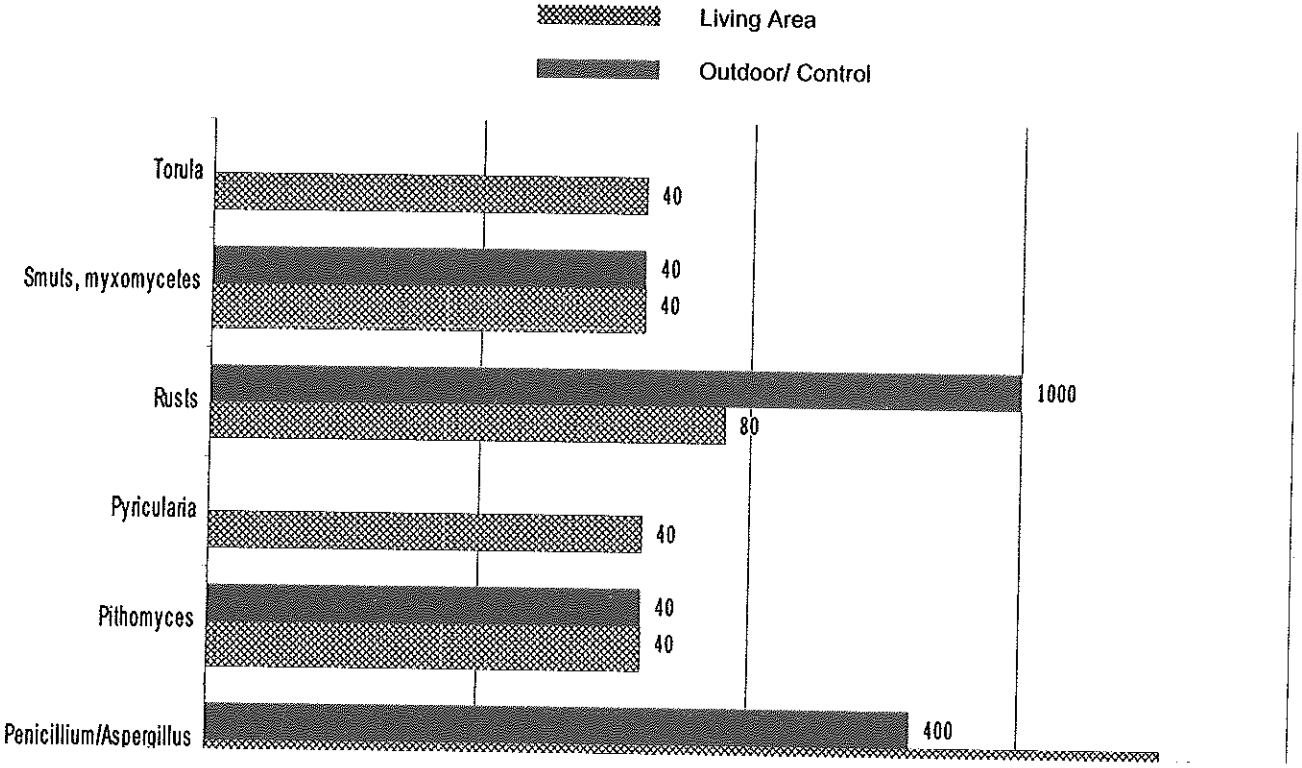

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Identification	Outdoor Habitat	Indoor Habitat	Allergic Potential	Comments
Alternaria	One of the most commonly reported airborne spores worldwide; Soil, dead or dying plants, foodstuffs, textiles	Wallboard paper backing, wood, other various cellulose-containing materials. Common in settled dust on carpets, drapes, textiles, etc.	Common allergen. Type I allergies (hay fever and asthma); Type III hypersensitivty pneumonitis. Common cause of extrinsic asthma.	Alternaria is commonly found in elevated numbers on wet-intruded building materials and in higher spore numbers in the air with respect to the outside when growth on wet building materials occurs.
Chaetomium	Growing on dung, dead leaves, wood.	Cellulose substrates, especially wallboard and wood. Not normally seen growing indoors unless the building material has been wetted. Unusual / Not Normal to be growing indoors.	Type I (hay fever and asthma) allergies.	Chaetomium is a water-indicating mold. Spores of this type of mold should not be observed in significantly higher numbers in the air above background/control. If growth and/or significantly higher than backgroud/control spore numbers are reported, corrective action should be considered to reduce the source of water, moisture levels and/or spore numbers in the living space.
Cladosporium	The most common spore type reported in the air worldwide. Found on dead and dying plant litter, and soil.	Commonly found on wood and wallboard. Commonly grows on window sills, textiles and foods.	Type I (hay fever and asthma), Type III (hypersensitivity pneumonitis) allergies.	A very common and important allergen source both outdoors and indoors.
Ganoderma	Common everywhere growing on hardwood trees.	None known.	None known.	
Hyphae	Common everywhere.	All substrates.	None known.	Hyphae are the "root-like" food absorption strands common to nearly all fungi. They sometimes can become airborne.
Oidium/Erysiphe	Common everywhere in the air, especially in the summer. Plant pathogen on the leaves and stems of many kinds of plants, especially lilacs, grasses, phlox.	None known.	None known.	This is a combination group. Oidium is the non-sexual state of the powdery mildew genus called Erysiphe. They need a living host to grow.
Ascospores	Common everywhere. Constitutes a large part of the airspora outside. Can reach very high numbers in the air outside during the spring and summer. Can increase in numbers during and after rainfalls.	Very few of this group grow inside. The notable exception is Chaetomium and Ascotricha.	Little known for most of this group of fungi. Dependent on the type (see Chaetomium and Ascotricha).	
Basidiospores	Commonly found everywhere, especially in the late summer and fall.	Not normally found growing indoors. Can grow on wet lumber, especially in crawlspaces.	Some allergenicity reported. Type I (hay fever, asthma) and Type III (hypersensitivity pneumonitis).	Among this group are dry rot fungi Serpula and Poria that are particularly destructive to buildings.
Penicillium/Aspergillus	Common everywhere. Normally found in the air in small amounts in outdoor air. Grows on nearly everything.	Wetted wallboard, wood, food, leather, etc. Able to grow on many substrates indoors.	Type I (hay fever and asthma) allergies and Type III (hypersensitivity pneumonitis) allergies.	This is a combination group of Penicillium and Aspergillus and is used when only the spores are seen. The spores are so similar that they cannot be reliably separated into their respective genera.
Pithomyces	Commonly seen everywhere growing dead leaves, soil and grasses.	Not normally found growing indoors, sometimes on wallboard.	None known.	

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Identification	Outdoor Habitat	Indoor Habitat	Allergic Potential	Comments
Pyricularia	Common everywhere. Grows on grass leaves.	Not known to grow indoors.	None known.	
Rusts	Common everywhere growing on grasses, trees and other living plants.	Does not grow indoors.	Type I (hay fever and asthma) allergies.	Rust requires a living plant host to complete part of its lifecycle and thus, is not normally found growing indoors except perhaps on an infected house plant.
Smuts, myxomycetes	Commonly found everywhere, espcially on logs, grasses and weeds.	Smuts don't normally grow indoors, but can occasionally be found on things brought from outside and stored in the house. Myxomycetes can occasionally grow indoors, but need lots of water to be established.	Type I (hay fever and asthma) allergies.	Smuts and myxomycetes are a combined group of organisms because their spores look so similar and cannot be reliably distinquished from each other.
Spegazzinia	Not commonly observed, but widely distributed.	Not known to grow indoors.	None known.	Frequently seen especially in southern United States.
Stachybotrys	Grows in the soil and decaying plant material.	Wallboards and other paper products that are wetted. Needs high water content in the substrate to grow. Not normally seen growing indoors unless the building material has been wetted. Unusual / Not Normal to be growing indoors.	Type I (hay fever and asthma) allergies.	Wet spored mold that generally must be dried out and disturbed before spores can be found in the air. Spores of this type of mold should not be observed in significant numbers in the air above background/control. If growth and/or significantly higher than background/control spore numbers are reported, corrective action should be considered to eliminate the water source, reduce moisture levels and/or spore numbers in the living space.
Torula	Common everywhere growing on soil, decaying and dead leaves, and grasses.	Wallboard and other cellulose-based materials.	Type I (hay fever and asthma) allergies.	