

April 4, 2012

Mr. Alan Miller, Maintenance Director School Administrative Unit No. 28, Pelham Windham School District 59 Marsh Road Pelham, New Hampshire 03076

Re: IAQ Evaluation at Windham High School - March 2012 SLGL File Number 12-1227

Dear Mr. Miller:

#### **EXECUTIVE SUMMARY**

From March 14 to March 22, 2012, Patrick Guglielmo, Safety & Health Technician with *The Scott Lawson Group, Ltd. (SLGL)*, conducted an Indoor Air Quality (IAQ) Survey at Windham High School and the modular unit of the High School, located in Pelham, New Hampshire. The survey was performed in response to air quality concerns throughout the building.

The IAQ Survey included the collection of seven (7) Air-O-Cell<sup>®</sup> cassettes screening for viable and non-viable airborne fungal spore concentrations. In addition, a sample was collected from outside the building for comparative purposes as well as an analytical field blank. Also, three (3) samples were collected to evaluate airborne Radon levels in the High School and the modular classroom unit. Finally, data logging instruments were used to obtain readings for Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), ambient temperature, and relative humidity (RH) over several days.

Based on the survey results, viable and non-viable airborne fungal spore concentrations were within recommended guidelines. The radon levels in the High School and modular unit ranged from < 0.2 pCi/l - 1.0 pCi/l, which is well below the EPA Action Level of 4.0 pCi/l. In general, the results from the data logging were within comfort guidelines with the exception of the modular classroom and English Room #12. Based on the IAQ Survey results, the indoor environment does not present a significant health concern to building occupants. Recommendations to enhance indoor air quality are located at the end of this report.

### DISCUSSION

The IAQ Survey was conducted in response to concerns with air quality throughout the building.

Using data logging instruments CO, CO<sub>2</sub>, RH, and temperature readings were collected over several days. The results are summarized below.

Carbon dioxide  $(CO_2)$ :

Studies indicate that  $CO_2$  is an excellent surrogate indicator of indoor air quality. Since  $CO_2$  is given off by humans when exhaling, its levels in the air provide a good indication of the quality of air circulation and how effectively the ventilation system, if present, is diluting and removing pollutants from the air. It must be noted that it is (generally) not necessarily the concentration of  $CO_2$  itself that is of concern in non-industrial settings, but rather it is the levels of  $CO_2$  exceeding 1,000 parts per million (1,000 ppm), which are indicative of inadequate fresh/outdoor air introduction -- or under-ventilation.

ANSI/ASHRAE standard 62-1989 recommends that 1,000 ppm of CO<sub>2</sub> be utilized as a value not to be exceeded, to ensure adequate fresh/outdoor air introduction and dilution of indoor air pollutants.

During the survey, the  $CO_2$  levels recorded ranged from 264 to 2,011 ppm. The  $CO_2$  levels generally peaked between 10:00 AM and 2:00 PM. On the data logging results for the Home Economics Room, there was a spike in the  $CO_2$  level, where it went up to just above 4,000 ppm. We believe this may have been from breathing directly into the instrument, as there was a class in session at that time. The results are presented in Appendix B, in graph form.

CO<sub>2</sub> levels were generally within the ASHRAE guideline of 1,000 ppm in the areas included in the survey. These levels of CO<sub>2</sub> are below the OSHA PEL, ACGIH TLV, and NIOSH REL of 5,000 ppm, which is set for industrial settings. <u>These results indicate an adequate amount of fresh/outdoor air is being introduced into the building during peak occupancy levels, except in the modular unit where CO<sub>2</sub> levels peaked to 2.011 ppm after noon time, and also in the English Room #12, where levels were at or above 1.000 ppm from 8:30 AM to 2:30 PM.</u>

### Carbon monoxide (CO):

CO is not a natural component of indoor air and is considered an indoor air pollutant. Overexposure to CO can deprive the body of Oxygen-carrying hemoglobin and cause immediate or chronic health effects to those individuals exposed to elevated levels. CO levels were well within the guidelines during the survey, as they were generally less than 2 ppm, which is within the instruments normal fluctuation range. Therefore levels are below the OSHA PEL of 50 ppm, as well as within the ACGIH TLV of 25 ppm, and the NIOSH REL of 35 ppm. WHO uses 9 ppm as a "concentration of concern" and notes that indoor concentrations of CO should not exceed those found outdoors by more than 3 ppm. Even with the instruments +/-3 ppm, CO does not appear to be a significant concern with regard to indoor air quality.

### Relative humidity:

In an environment in which occupants are engaged in light, primarily sedentary activity (such as a home or office environment), ANSI/ASHRAE standard 55-1992 recommends that RH be controlled to a range of 30% to 60%. These are the upper and lower limits based on considerations of dry skin, eye irritation, respiratory health, microbial growth, and moisture-related phenomena. When RH levels are below 30%, the mucous membranes of the upper respiratory system begin to dry out, possibly rendering nasal passages and the throat, as well as the eyes, more susceptible to irritation and/or infection from indoor air pollutants. RH levels exceeding 60% may cause condensation problems, and as a result, fungal and Fungi infestations are common.

The data logging instruments reveal average RH levels ranged from 21.4 to 61.6%. All rooms had average RH levels within the recommended guidelines during the sampling period. It should also be noted that it was unusually warm during the sampling period. It could be expected that RH levels would be below the recommended limits in the drier winter months.

### Temperature:

ANSI/ASHRAE standard 55-1992 recommends an optimum operative temperature of 71 degrees Fahrenheit (71°F) be maintained during the winter months, with a comfort range of 68°F to 75°F. An optimum summer temperature of 76°F is also recommended, with a comfort range of 73°F to 79°F. The temperature should be set toward the lower end in the winter when people wear heavier clothing and toward the upper end in the summer when people wear lighter clothing.

Ambient temperatures ranged from 66.9 to 82.6°F, during the sampling period. Temperatures peaked from 12:00 PM to 4:00 PM in the sampling locations. It should be noted that the outdoor temperatures were unusually high for March, and were in the high 70s or low 80s during the sampling time. Based on the data collected, temperature should not be a significant concern to building occupancy at this time.

### Air Samples - Total Spore Counts with Predominant Genus Identification:

*SLGL* collected seven (7) Spore Trap samples within the facility and one (1) outside the facility for the evaluation of total airborne fungal spore concentrations (viable and non-viable) from within each unit. In addition, one (1) analytical blank was collected for quality control purposes. It should be noted that this visual identification includes both viable and non-viable spores (i.e., spores that have the ability to grow and those that do not).

Each sample was collected by drawing air through an Air-O-Cell<sup>®</sup> sampling cassette. Air was drawn through the cassette at a flow rate of approximately fifteen liters per minute (15-lpm) as established by pre- and post-sampling calibration, for approximately five (5) minutes. Upon the completion of each sample, the cassette was sealed, issued a unique sample identification number, and its location documented.

Analysis of the Air-O-Cell<sup>®</sup> cassettes (with count and identification by Predominant Genus) was used to determine total airborne viable and non-viable Fungi spores. All Fungi are considered to be potentially allergenic. (The term "genus" refers to the particular "family" of Fungi or Bacteria, and there are individual species within each genus.)

Sampling Location	Fungi Concentration (Ct/m <sup>3</sup> )	Predominant Genus
Gymnasium	< 53	None Detected
Science Lab, Room #21	53	Basidiospores
Library	53	Cladosporium
Administration Area	53	Cladosporium
Upper Level, Home Economics, Room #34	53	Basidiospores
English Room #12	747	Ascospores
Modular Unit, Room #42	< 53	None Detected
Outside Building by Maintenance Garage	> 15,787	Ascospores

 Table – Air Sample Results for Total Fungus Spores

The levels noted inside the High School are within the normal/background category. They are less than the levels found outside, which is the preferred result. As such, total fungal spores do not present a significant IAQ concern at this time.

### Radon Testing:

The radon levels in the High School and modular unit ranged from < 0.2 pCi/l - 1.0 pCi/l, which are well below the EPA Action Level of 4.0 pCi/l.

<b>General Location</b>	Concentration	EPA Action Level	Pass/Fail
Lower Level, Transformer Room	1.0-0.7 pCi/L*	4.0 pCi/L	Pass
Art Room, Room #1	< 0.2 – 0.3 pCi/L	4.0 pCi/L	Pass
Modular, Room #43	0.2-0.3 pCi/L	4.0 pCi/L	Pass

**TABLE I – RADON TESTING RESULTS** 

It should be noted that the EPA Action Level is based on a "yearly average", and the type of testing performed during this survey is only a short-term (2 day) result.

Note: pCi/L = pico curies per liter of air. \* EPA sampling protocol for Radon requires a duplicate(QA) sample be collected at each location

## CONCLUSION

Based on the survey results, viable and non-viable airborne Fungal spore concentrations were within recommended guidelines, and Radon levels were below the EPA guidelines. In general, the results from the data logging were within comfort guidelines with the exception of the modular classroom and English Room #12. Based on the IAQ Survey results, the indoor environment does not present a significant health concern to building occupants.

## RECOMMENDATION

- 1. SAU #28 should focus on introducing more fresh/outdoor air into the modular unit and into the English Room (if feasible) during peak occupancy levels to increase the comfort levels of the students and SAU #28 employees.
- 2. SAU #28 should continue to monitor building spaces for signs of potential IAQ issues. This would include observing for any signs of water intrusions, strange odors, and/or activities such as construction/renovation operations that could adversely impact the air quality. Any and all occurrences should be documented to include the dates, times, and weather conditions. This will assist with any subsequent evaluations that occur in the future.

Thank you for utilizing the services of *The Scott Lawson Group, Ltd.* We enjoyed working with you on this project and would welcome the opportunity to work with you on future projects. We trust that you will find everything in order; however, should you have any questions or comments, please feel free to contact me at your earliest convenience.

Sincerely,

The Scott Lawson Group, Ltd.

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Patrick L. Guglielmo, B.S. Safety & Health Technician

Enclosures

#### WARRANTY

The conclusions and recommendations contained in this report are based on information available to *SLGL* as of March 22, 2012. *SLGL* provides no warranties on information provided by third parties and contained herein. Data compiled were in accordance with *SLGL's* approved scope of services and should not be construed beyond their limitations. Any interpretations or use of this report other than those expressed herein are not warranted. The use, partial use, or duplication of this report without the expressed written consent of *The Scott Lawson Group, Ltd.*, is strictly prohibited.

# APPENDIX A

ANALYTICAL RESULTS



Post Office Box 3304, Concord, NH 03302-3304 (603) 228~3610 / (800) 645~7674 / Fax (603) 228~3871

**Analytical Results** 

Client: SAU #28, Windham School District 19 Haverhill Road Windham, NH 03087 SLGL Job #: 12-1227

Client Project: IAQ-Windham High School and Modular Report Date: March 19, 2012 Date Sampled: March 14, 2012 Date Received: March 15, 2012

Collected by: PLG Analyzed by: NEF, #01040036 PAACB Certified Sparre Analyse

Lab Number:	295908	295909	295910	
Sample Identification:	031412-1227-A01, Area, Gymnasium, center of room	031412-1227-A02, Area, Science Lab, тоот #21	031412-1227-A03, Area, Library, center of room	
Analysis:	Fungi Enumeration & Identification - Direct Examination	Fungi Enumeration & Identification - Direct Examination	Fungl Enumeration & Identification - Direct Examination	
Methodology:	SLGL-3067	SLGL-3067	SLGL-3067	
Sample Media:	Air-O-Cell	Air-O-Cell	Air-O-Cell	
Debris Rating:	2	2	2	
Air Volume (L):	75.0	75.0	75.0	
Minutes:	5	5	5	
Date Analyzed:	March 16, 2012	March 16, 2012	March 16, 2012	

Mold/Fungi Type	Raw Connt	Count/m <sup>3</sup>	Raw Count	Count/m <sup>3</sup>	Raw Count	Count/m <sup>3</sup>
Alternaria						
Ascospores						
**Aspergillus Penicillium-like						
Basidiospores			1	53		
Bipolaris Drechslera-like						
Botrytis						4
Chaetomium						
Cladosporium					1	53
Curvularia						
Epicoceum						
Fusatium						
Myxomycetes Periconia/smuts				7		
Nigrospora						
Oidium Erysiphe Peronospora						
Phoma						
Philangwes						
iusts						
Spegazzinia						
Stachybotrys			(			
Stempliylium						
Torula						
Ulocladium						
unknown/unidentified					1	
hyphal fragments						
				·		
1						
1						
					1	
Total fungal spores and fragments:	< 1	< 53	1	53	1	53
Limit of Detection:	1	53	I	53	1	53

TNTC: Too numerous to count

<: Less Than

>: Greater Than

Count/m3: Count per meter cubed

PAACB: Pan-American Acrobiology Certification Board

Detection Limit: The detection limit is equal to one fungal spore or hyphal fragment.

 \*\*: Aspergillus and Penicillium spores (and others such as Precilomyces) are small and round with few distinguishing characteristics. They cannot be distinguished by this method

\*: No analytical field blank submitted with associated sample(s).

Reviewed by: HELEN M Erzun

Background Debris: Background debris is an indication of the amount of non-microbial debris present on the slide and is rated on a scale of 1 to 5:

Debris Load of 1: <10% debris present Counts not alfected

Debris Load of 2: 11-25% debris present. Counts not allected.

Debris Load of 3: 25-75% debris present Counts may be underestimated

Debris Load of 4: 76-90% debris present Counts underestimated

Debris Load of 5: >90% debris present Counts could not be determined\_sample overloaded

Approved By: Norman E Flitchen Norman Fletcher, Lab Manager



Post Office Box 3304, Concord, NH 03302-3304 (603) 228~3610 / (800) 645~7674 / Fax (603) 228~3871

**Analytical Results** 

Client: SAU #28, Windham School District 19 Haverhill Road Windham, NH 03087 SLGL Job #: 12-1227 Client Project: JAQ-Windham High School and Modular Report Date: March 19, 2012 Date Sampled: March 14, 2012

Collected by: PLG Analyzed by: NEF, #01040036



Lab Number:	295911	295912	295913	
Sample Identification:	031412-1227-A04, Area, Adminstration Area, main office by front door	031412-1227-A05, Area, upper level, Home Economics Room, room #34	031412-1227-A06, Area, English Room, room #12	
Analysis:	Fungi Enumeration & Identification - Direct Examination	Fungi Enumeration & Identification - Direct Examination	Fungi Enumeration & Identification - Direct Examination	
Methodology:	SLGL-3067	SLGL-3067	SLGL-3067	
Sample Media:	Air-O-Cell	Air-O-Cell	Air-O-Cell	
Debris Rating:	2	3	2	
Air Volume (L):	75.0	75,0	75,0	
Minutes:	5	5	5	
Date Analyzed:	March 16, 2012	March 16, 2012	March 16, 2012	

Mold/Fungi Type	Raw Count	Count/m <sup>3</sup>	Raw Count	Count/m <sup>3</sup>	Raw Count	Count/m <sup>3</sup>
Alternaria						
Ascospores					8	427
**Aspergillus Penicillium-like						
Basidiospores			I I	53	1	
Bipolaris Drechslera-like						
Botrytis						
Chaetomium						
Cladosporium	- L	53			6	320
Curvalaria						
Epicoccum						
Fusarium			· · · · · · · · · · · · · · · · · · ·			
MyxomycetesePericonia/smuts						
Nigrospora						
Oidium Erysiphe Peronospora	_					
Phoma						
Pithomyces						
rusts						
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
unknown/unidentified						
hyphal fragments						
Total fungal spores and fragments:	1	53		53	14	747
Limit of Detection:	1	53	i i	53	, , , , , , , , , , , , , , , , , , ,	53
Limit of Detection: Comments:	1	53	Ì	53	, , ,	İ

TNTC: Too numerous to count

<: Less Than

>: Greater Than

Count/m3: Count per meter cubed

PAACB: Pan-American Acrobiology Certification Board

Detection Limit: The detection limit is equal to one fungal spore or hyphal fragment.

\*\*: Ispergillus and Penicillium spores (and others such as Paecilomyces) are small and round with few distinguishing characteristics. They cannot be distinguished by this method.

\*: No analytical field blank submitted with associated sample(s),

Helon MEAZL Reviewed by:

Background Debris: Background debris is an indication of the amount of non-microbial debris present on the slide aud is rated on a scale of 1 to 5;

Debris Load of 1: <10% debris present. Counts not affected.

Debris Load of 2: 11-25% debris present. Counts uot affected

Debris Load of 3: 25-75% debris present. Counts may be underestimated,

Debris Load of 4: 76-90% debris present, Counts underestimated,

Debris Load of 5: >90% debris present. Counts could not be determined, sample overloaded.

Approved By: Mouman E Hitchien Norman Fletcher, Lab Manager

1.0



(603) 228~3610 / (800) 645~7674 / Fax (603) 228~3871

**Analytical Results** 

Client: SAU #28, Windham School District 19 Haverhill Road

Windham, NH 03087

SLGL Job #: 12-1227 Client Project: IAQ-Windham High School and Modular

Report Date: March 19, 2012

Date Sampled: March 14, 2012

Date Received: March 15, 2012

Collected by: PLG Analyzed by: NEF, #01040036



Lab Number: 295914		295915	295916	
Sample Identification:	031412-1227-A07, Area, modular unit, room #42	031412-1227-A08, Area, outside, parking lot by Maintenance Garage	031412-1227-A09, Analytical field blank	
Analysis:	Fungi Enumeration & Identification - Direct Examination	Fungi Enumeration & Identification - Direct Examination	Fungi Enumeration & Identification - Direct Examination	
Methodology:	SLGL-3067	SLGL-3067	SLGL-3067	
Sample Media:	Air-O-Cell	Air-O-Cell	Air-O-Cell	
Debris Rating:	1	2	1	
Air Volume (1.):	75 0	75,0	0.0	
Minutes:	5	5	0	
Date Analyzed:	March 19, 2012	March 19, 2012	March 19, 2012	

Mold/Fungi Type	Raw Count	Count/m <sup>3</sup>				
Allemaria						
Ascospores			> 250	> 13,333		
**Aspergillus Penicillium-like						
Basidiospores			45	2,400		
Bipolaris Drechslera-like						
Bottytis						
Chaetomium						
Cladosporium						
Carvulana				1		
Epicoceum						
Fusarium						
Myxomycetes Periconia/smuts						
Nigrospora						
Oidium Erysiphe Peronospora						
Muma						
Pithomyces						-
rusts						
Spegazzinia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
unknown/unidentified			1	53		
hyphal fragments						
Total fungal spores and fragments:	<	< 53	> 296	> 15,787	< 1	
Limit of Detection:	Г	53	1	53	1	
Comments: No	one detected				None detected	

TNTC: Too numerous to count

<: Less Than

>: Greater Than

Count/m3: Count per meter cubed

PAACB: PauAmerican Acrobiology Certification Board

Detection Limit: The detection limit is equal to one fungal spore or hyphal fragment

\*•: Aspergillus and Penicillium spores (and others such as Procilomyces) are small and round with few distinguishing characteristics. They cannot be distinguished by this method.

\*: No analytical field blank submitted with associated sample(s).

Plen HErzh Reviewed by:

Background Debris: Background debris is an indicatiou of the amount of non-microbial debris present on the stide and is rated on a scate of 1 to 5:

Debris Load of 1: <10% debris present Counts not affected

Debris Load of 2: 11-25% debris present Counts not affected

Debris Load of 3: 25-75% debrispresent Counts may be underestimated

Debris Load of 4: 76-90% debris present Counts underestimated

Debris Load of 5: >90% debris present Counts could not be determined, sample overloaded.

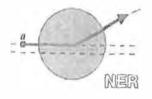
E Flitcher Approved By: Reuman Norman Fletcher, Lab Manager

Environm Turnaround T (select one)	ime	20 Chenell I Concord, New Ham : (603) 228-3610, Fax www.sigl.com email: []24 hours* []48 h ] Weekend []0th	Addres pshire 03301 : (603) 228-3871 Lab@slgi.com  ours* []72 hours* Phone:	s: cn:	PE	ham/Wi	<u>Abam</u>	SLG. Client Pr <u>IAQ</u> Client P Samplec email:	Z-122 -Windham Ha	7 ghSchool \$N	lalulaz
Sample Matrix (select one	Type [ ] Aqueous [ ] Agar (biostrip) [ ] Agar (plate)	[ ] Bulk [ ] Oil [ ] Paint [ ] Sludge	[ ] Soil [ ] Solid [ ] Swab [ ] Tape Lift E matrix type. Use additional	[ ] V [ ] V [ ] V	Wipe Wipe compo Dther:	ing or waste osite		Comme	nts: es received in go	ad condition?	I TYPE I INC
SLGL Lab #	Sample Identification	4 7 N N	Analysis	Date Sampled	Time	Media/ Container	Preservative	4°C	Swab/Wipe Area	Air Volume (L)	Minutes
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A Note to Customer: by signing and relinquishing your samples to the laboratory, you agree with the terms and conditions found on the back of this Chain of Custody Form.

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## NEW ENGLAND RADON, LTD.

11A Industrial Way, Unit 3 Salem, New Hampshire 03079 LTD. 603-893-4260 Fax: 603-893- 8163 Email: <u>despinat@newenglandradon.com</u> Website: www.newenglandradon.com

RADON ANALYSIS

DATE: 03/20/2012

THE SCOTT LAWSON GROUP 20 CHENELL DR CONCORD, NH 03301

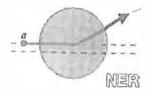
TEST SITE: A01 -A02

E POSURE START: 20120314 AT 06:15 EXPOSURE STOP: 20120316 AT 06:15

	· *	
1 7508 127509	1.0	1ST TRANSFORMER 1ST TRANSFORMER

I IS READING IS BELOW THE EPA ACTION GUIDE LEVEL OF 4.0 pCi/L, A READING BELOW 4.0 pCi/L FOR YOUR SCREENING MEASUREMENT, IF MADE WITH THE HOUSE OR E SEMENT CLOSED-UP PRIOR TO AND DURING THE TESTING PERIOD (AS SPECIFIED IN I E INSTRUCTIONS) INDICATES THAT THERE IS RELATIVELY LITTLE CHANCE THAT INE RADON CONCENTRATION, IN THE LIVING AREAS, WILL BE GREATER THAN 4 pCi/L A^ AN ANNUAL AVERAGE DUE TO AIRBORNE RADON SEEPING THROUGH THE BASEMENT.

( HIS READING IS VALID ONLY IF HOUSE CONDITIONS ARE MAINTAINED AS SPECIFIED FOR THE DURATION OF THE TEST. NEW ENGLAND RADON, LTD. CANNOT BE H LD LIABLE FOR ERRONEOUS READINGS IF APPROPRIATE HOUSE CONDITIONS ARE NOT M INTAINED.)



TEST SITE:

## NEW ENGLAND RADON, LTD.

11A Industrial Way, Unit 3 Salem, New Hampshire 03079 603-893-4260 Fax: 603-893- 8163

Email: despinal@newenglandradon.com

Website: www.newenglandradon.com

RADON ANALYSIS

DATE: 03/20/2012

THE SCOTT LAWSON GROUP 20 CHENELL DRIVE CONCORD, NH 03301

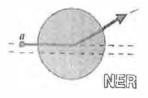
A03-A04

EXPOSURE START: 20120314 AT 06:50 EXPOSURE STOP: 20120316 AT 06:50

CODE NUMBER	TEST RESULTS (pC/L)	TEST LOCATION
127574 127574	<0.2	1ST ART RM 1ST ART RM

THIS READING IS BELOW THE EPA ACTION GUIDE LEVEL OF 4.0 pCi/L, A READING BELOW 4.0 pCi/L FOR YOUR SCREENING MEASUREMENT, IF MADE WITH THE HOUSE OR BASEMENT CLOSED-UP PRIOR TO AND DURING THE TESTING PERIOD (AS SPECIFIED IN THE INSTRUCTIONS) INDICATES THAT THERE IS RELATIVELY LITTLE CHANCE THAT THE RADON CONCENTRATION, IN THE LIVING AREAS, WILL BE GREATER THAN 4 pCi/L AS AN ANNUAL AVERAGE DUE TO AIRBORNE RADON SEEPING THROUGH THE BASEMENT.

(THIS READING IS VALID ONLY IF HOUSE CONDITIONS ARE MAINTAINED AS SPECIFIED FOR THE DURATION OF THE TEST. NEW ENGLAND RADON, LTD. CANNOT BE HELD LIABLE FOR ERRONEOUS READINGS IF APPROPRIATE HOUSE CONDITIONS ARE NOT MAINTAINED.)



## NEW ENGLAND RADON, LTD.

11A Industrial Way, Unit 3 Salem, New Hampshire 03079 LID. 603-893-4260 Fax: 603-893- 8163 Email: <u>despinal@newenglandradon.com</u> Website: www.newenglandradon.com

RADON ANALYSIS

DATE: 03/20/2012

THE SCOTT LAWSON GROUP 20 CHENELL DR CONCORD, NH

TEST SITE: A05-A06

LXPOSURE START: 20120314 AT 07:10 EXPOSURE STOP: 20120316 AT 07:15

CODE NUMBER	TEST RESULTS (pC/L)	TEST LOCATION
127493 127492	0.2	1ST MODULAR RM 43 1ST MODULAR RM 43

1 IIS READING IS BELOW THE EPA ACTION GUIDE LEVEL OF 4.0 pCi/L, A READING BELOW 4.0 pCi/L FOR YOUR SCREENING MEASUREMENT, IF MADE WITH THE HOUSE OR I SEMENT CLOSED-UP PRIOR TO AND DURING THE TESTING PERIOD (AS SPECIFIED IN 1 (E INSTRUCTIONS) INDICATES THAT THERE IS RELATIVELY LITTLE CHANCE THAT THE RADON CONCENTRATION, IN THE LIVING AREAS, WILL BE GREATER THAN 4 pCi/L AS AN ANNUAL AVERAGE DUE TO AIRBORNE RADON SEEPING THROUGH THE BASEMENT.

(.HIS READING IS VALID ONLY IF HOUSE CONDITIONS ARE MAINTAINED AS SPECIFIED FOR THE DURATION OF THE TEST. NEW ENGLAND RADON, LTD. CANNOT BE E LD LIABLE FOR ERRONEOUS READINGS IF APPROPRIATE HOUSE CONDITIONS ARE NOT M INTAINED.)

20 Chenell Drive Concord, New Hampshire 03301 Ph: (603) 228-3610, Fax: (603) 228-3871 www.slgl.com email: Lab@slgl.com Attention:					AL # 28				Star room Client Project: IMG - Which have High So heal Client PO: Sampled By:			
Turnaround Time (select one)         [] 3 hours*         [] 6-8 hours*         [] 24 hours*         [] 48 hours*         [] 72 hours*           [] 5 days         [y] 10 days         [] Weekend         [] Other:			Phone: Fax:					email:				
*No	ot available for all tests. Schedule rush											
Sample Matrix Ty (select one)	[ ] Agar (biostrip) [ ] Agar (plate)	<ul> <li>[ ] Water, drinking or waste</li> <li>[ ] Wipe</li> <li>[ ] Wipe composite</li> <li>[ ] Other:</li></ul>					Comments:					
ranista	All samples on this form	n should be of the SAME matrix type. Use add	litional forms as ne	eded.			Sample	s received in go	od condition?	[ ]Yes [ ]No		
SLGL Lab #	Sample Identification	Analysis	Date Sampled	Time	Media/ Container	Preservative	4°C	Swab/Wipe Area	Air Volume (L)	Minutes		
127508	051412-1277 - AGE	Radon	5.19.12 -	¥ (	Contra		41 1	-	9 <b>4</b> 9	4) 		
127509	Acz							Į				
187574	AC3											
127575	AOY											
1274938	A05											
127492	3 J A06	+	fran		J	for me a	1			X		
Sample Collection and Custody Information         Samples Shipped Via: [] FedEx [] UPS [] DHL [] US Mail [] Drop Box [] Drop Off [] Other           Relinquished By:         Date/Time:         Received By:         Date/Time:												
T	· Lecentique					310/12 92						
Relinquished By: Date/Time: / Received By: Date/Timé:												

A Note to Customer: by signing and relinquishing your samples to the laboratory, you agree with the terms and conditions found on the back of this Chain of Custody Form.

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20 Chenell Drive Concord, New Hampshire 03301 Ph: (603) 228-3610, Fax: (603) 228-3871 www.slgl.com email: Lab@slgl.com				Submitting Co.:				Client Project:					
Turnaround Time (select one)         [] 3 hours*         [] 6-8 hours*         [] 24 hours*         [] 48 hours*         [] 72 h           [] 5 days         [] 10 days         [] Weekend         [] Other:				Attention: Phone: Fax:					Sampled By:				
*Not Sample Matrix Ty (select one)	pe [ ] Aqueous [ ] Agar (biostrip) [ ] Agar (plate)	[ ] Bulk [ ] Soil [ ] Oil [ ] Solid [ ] Paint [ ] Swab [ ] Sludge [ ] Tape Lift		/[] /[] /[]	Wipe compos Other:			Comme					
SLGL Lab#	All samples on this form	n should be of the SAME matrix type. Use an Analysis	lditional j	forms as nee Date Sampled	ded. Time	Media/ Container	Preservative	Sample 4°C	s received in go Swab/Wipe Area Units:	od condition? Air Volume (L)	[ ]Yes [ ]No Minutes		
127508	AD12-12-12 - AG1	Toplan	ł	5000 1	-	1	1	i	i	1			
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571943	1 -16				-	in the second se	*	5	~	2			
Sa Relinquished By:	mple Collection and Custody Inform	Date/Time:		Received By			[ ] US Mail	[ ] Dr	op Box [] Dro Date/Tim	nc:			
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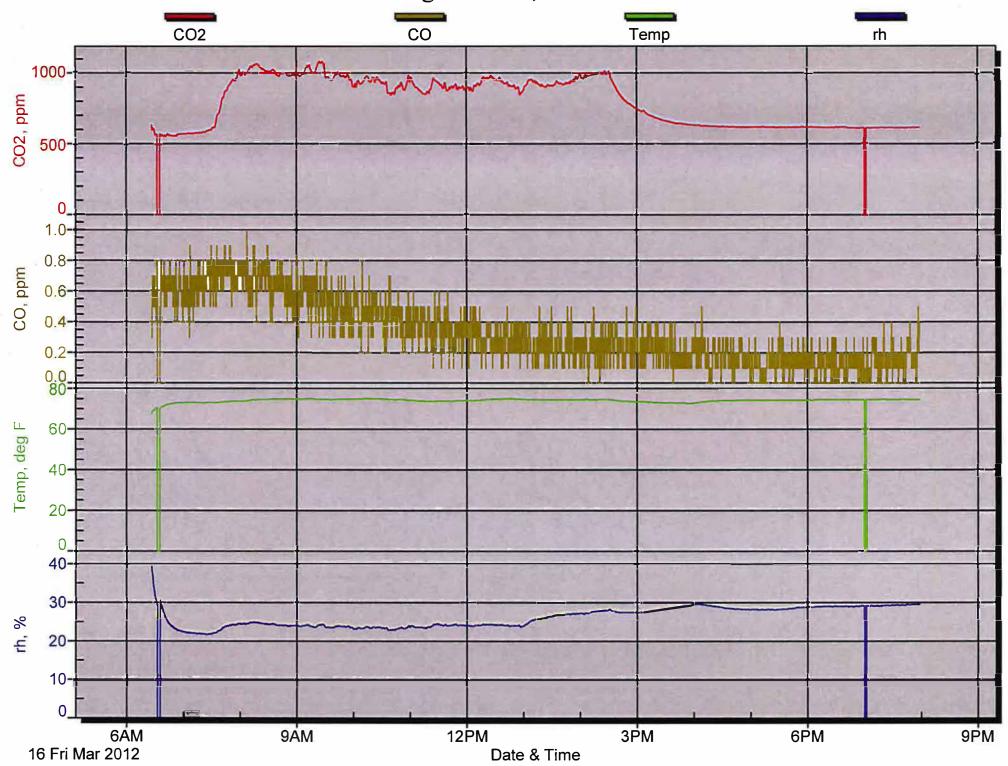
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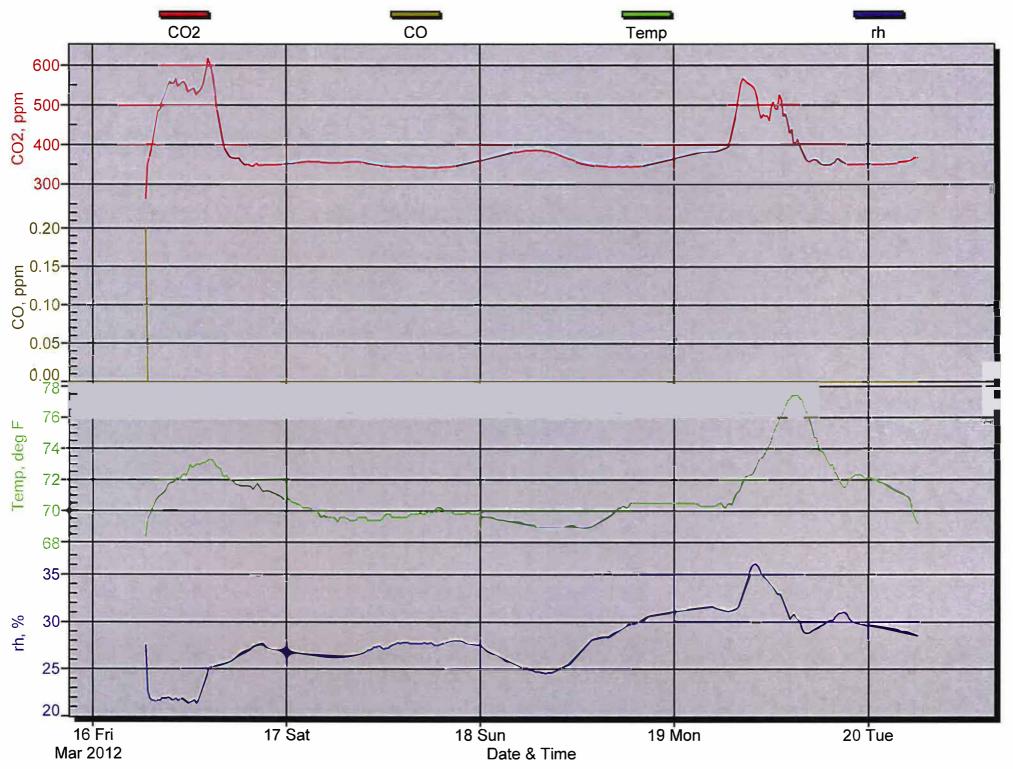
## **APPENDIX** B

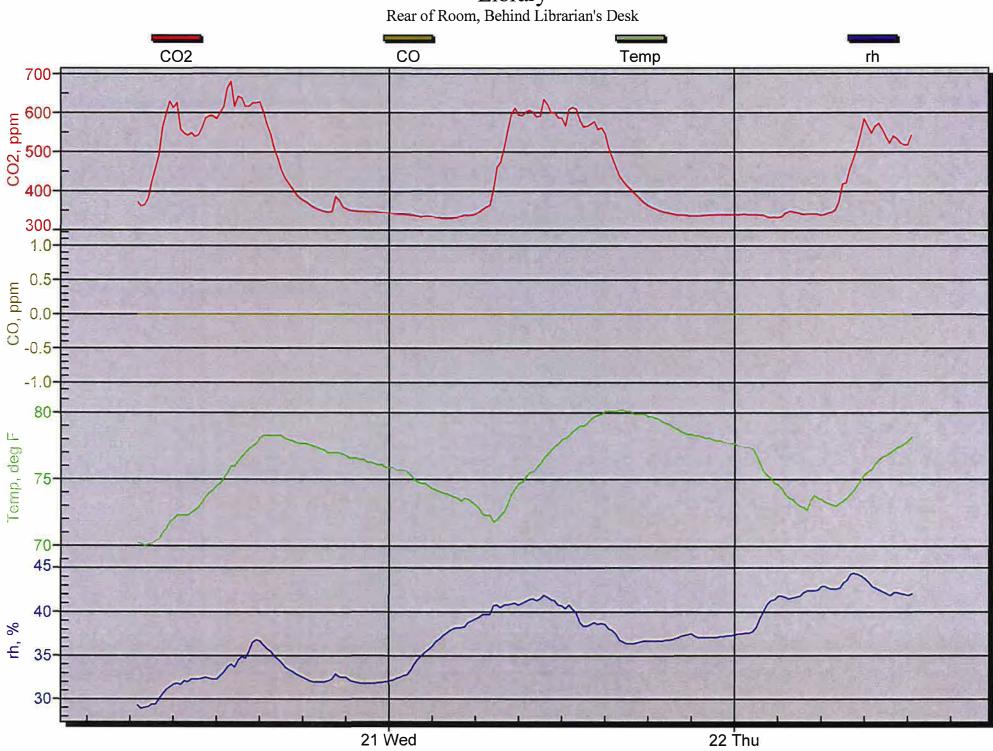
## DATA LOGGING RESULTS

English Room, Room #12



# Admin Area



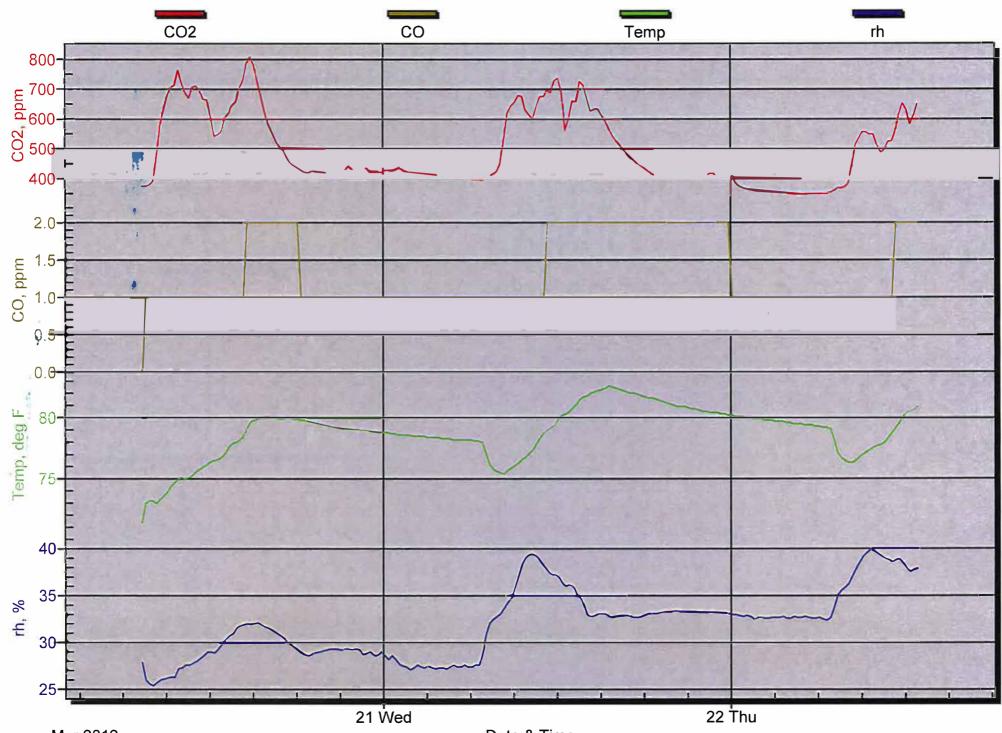


Liorary Rear of Room, Behind Librarian's Desk

Mar 2012

Date & Time

## Business Deptariment Rear of Room



Mar 2012

Date & Time

