PIRTLE

PIRTLE CONSTRUCTION celebrates 40

Pirtle Construction Company 5700 Griffin Road, Suite 200 Davie, Florid

Tel: 954.797.0410 Fax: 954.797.6330

Monday, August 16, 2010

SCHOOL BOARD OF BROWARD COUNTY
1700 SW 14th Court
Ft. Lauderdale, FL 33312

Attn: Scott Hennigar

Re: PARKSIDE ELEMENTARY SCHOOL
Project No: 3631-27-01/P000680
Final Indoor Air Quality Assessment

Dear Scott:

As you are well aware, 8-classroom addition at Parkside Elementary has been unoccupied since late November of 2009 due to an apparent observed odor within the building that was deemed offensive to some of the building's occupants. Since that time, Pirtle Construction has diligently attempted to address the concerns of the staff at Parkside Elementary as well as the School Board of Broward County's Facilities and Risk Management Department. In our over 40 years of commercial construction, Pirtle Construction has never experienced a challenging situation of this nature.

Over the course of the last few months, we have worked with The School Board of Broward County (SBBC) as a team to address the concerns in the new building. We have performed IAQ Assessments and specific material testing with the help of Nutting Environmental, all of which produced negative results for contaminants within the building. Even with the negative air testing, we continued our commitment to the School Board by attempting to eliminate all potential sources of the odor.

The odor was described as a close resemblance to that of lightweight insulating concrete. In order to eliminate the potential for this as the source, we coated the entire underside of the metal deck with an elastomeric material that sealed any potential off-gassing produced by the lightweight insulating concrete from the interior of the building. We took additional steps to remove and replace the ceiling tiles throughout the building. We performed detailed investigations of the HVAC system to ensure all classrooms are receiving the proper air-flow per the approved design. All of the actions described above were performed at our expense to ensure your ultimate satisfaction with our company.

Upon completion of the above, it was requested that we again test the building utilizing a Certified Industrial Hygienist who can assess any contaminants within the building. At the

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recommendation of your Risk Management Department, we hired Enhealth Environmental, Inc. to perform another Indoor Air Quality Assessment. Attached you will find a copy of the IAQ analysis performed by Enhealth. We are pleased to inform you that the testing has produced results indicating there are no airborne contaminants within the building that could pose additional health risks to the occupants.

We are proud of the teamwork displayed by the school staff, SBBC Facilities and Risk Management as well as the Pirtle project team along with Triple M Roofing and Acousti Engineering (project subcontractors) while we worked through this challenging dilemma. We are proud of the successful relationship we continue with one of our best owners and this situation further enhances our commitment to the owner as we stand behind our work.

If you have any questions or concerns related to the information within this report, please feel free to contact me in our corporate office.

Very truly yours,
JAMES B. PIRTLE CONSTRUCTION CO., INC.

William R. Ellis
Vice President

CW
enclosures (Enhealth IAQ Report dated 8/11/10)
cc: Chris Westrick, Pirtle Construction
emailed: scott.hennigar@browardschools.com

EnHealth
Environmental, Inc.

Limited Indoor Air Quality Testing

Parkside Elementary School, Coral Springs, Florida

Pirtle Construction Company
5700 Griffin Road
Davie, FL 33314
Attn: Chris Westrick

Prepared By:

EnHealth Environmental, Inc.
8064 NW 124 Terrace
Parkland, FL 33076

August 11, 2010

Environmental & Industrial Hygiene Services

8064 NW 124 Terrace, Parkland, Florida 33076 Telephone/Fax (954) 522-5040

www.enhealthenvironmental.com

EnHealth
Environmental, Inc.

August 11, 2010

Pirtle Construction Company
5700 Griffin Road
Davie, FL 33314
Attn: Chris Westrick

Reference: Limited Indoor Air Quality Testing
Parkside Elementary School
10257 NW 29th Street
Coral Springs, FL
EHE Project No. 10-037

Dear Mr. Westrick:

Enclosed is the final report for the above referenced project.

If you have any questions concerning this project or need further assistance, please feel free to contact me at your convenience.

Sincerely yours,

EnHealth Environmental, Inc.

James S. Litrides, MS, CIH

JSL/j

INTRODUCTION

The School Board of Broward County requested Pirtle Construction to reassess the quality of the indoor air resulting from an objectionable odor perceived in the new 8 room classroom building at the Parkside Elementary School, located at 10257 NW 29th Street in Coral Springs, Florida. It was reported that there was a strong odor present in the school building during occupancy at the start of the 2009 school year. Indoor air quality testing was conducted by Nutting Environmental of Florida, Inc. which did not identify the source of the odor. Pirtle Construction investigated possible sources and determined that the odor may be off gassing from the lightweight insulating concrete deck. Based on their assessment, the metal deck was sealed on the interior side and Pirtle Construction contacted EnHealth Environmental, Inc. to conduct follow-up airborne testing. Review of the Nutting Environmental report "Limited Indoor Air Quality Evaluation" dated April, 2010, identified aldehydes and volatile organic compounds at measureable concentrations, therefore this assessment conducted on August 2, 2010 documented the aldehyde and volatile organic compound concentrations after the sealing of the metal deck to determine if there were any significant concentrations which may solicit complaints from the building occupants.

RECOMMENDED CRITERIA

There are currently no regulatory agencies, federal, state or local, which have set standards for acceptable levels of indoor air contaminants. Indoor air quality guidelines have been developed from governmental agencies and private professional organizations including recommendations from the Environmental Protection Agency (EPA), Housing and Urban Development (HUD), American Conference of Governmental Industrial Hygienists (ACGIH), the American Industrial Hygiene Association (AIHA), the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE), and The Leadership in Energy and Environmental Design (LEED) Green Building Rating. The following guidelines for assessing the quality of indoor air are a compilation of the above published criteria:

CONTAMINANT	GUIDELINES
Organic Vapors	500 ug/m3 (LEED-NC, v2.2-2007) <300 ug/m3 (<0.3 mg/m3) - Complaints unlikely 300-3,000 ug/m3 (0.3-3.0 mg/m3) - Complaints possible >3,000 ug/m3(>3.0 mg/m3) - Complaints likely (ASHRAE 62-1989R) *Note: ASHRAE 62.1-2004 does not recommend setting target concentrations for TVOC.*
Formaldehyde	0.4 ppm target ambient level, HUD standard for manufactured Homes, HUD 24 CFR 3280.308 (1984) 0.05 ppm LEED-NC.2007 v2.2; LEED-EB.2005 v2.0 0.027 ppm LEED-NC.2009 v3.0
Aldehydes	OSHA and ACGIH see chart

Total volatile organic compound (TVOC) sampling for exposure to indoor chemical contaminants is useful when there is no specific chemical source such as typically found in industrial settings. However, there is insufficient evidence that TVOC measurements can be used to predict health or comfort effects because odor and irritation responses to organic compounds are highly variable between individuals. Usually, the TVOC measurements identify potential chemicals which may be contributing to the overall indoor air quality and may warrant further testing for target chemical concentrations. Therefore, ASHRAE does not recommend setting target concentrations for TVOC's and only in the ASHRAE 62-1989R document does ASHRAE suggest concentration ranges which may solicit complaints. Leadership in Energy and Environmental Design (LEED) Green Building Rating establishes new building criteria for TVOC's which may be used as a target goal for indoor air quality assessments.

Formaldehyde is a common indoor air contaminant which by inhalation exposure can result in eye, nose, and throat irritation, respiratory symptoms, and sensitization. It is frequently used in plywood, fiberboard, resins, glues, carpet adhesives, and several other construction components. Because of the materials used in manufactured homes, HUD has set an ambient air level which should not be exceeded. Other guidelines and standards have been published by OSHA, NIOSH, ACGIH, which are governmental agencies for industrial exposures, and the WHO/Europe for the general public.

The Occupational Safety and Health Administration (OSHA) has set Permissible Exposure Limits (PEL) for a number of air contaminants in the Code of Federal Regulations for Labor and Industry (29 CFR 1910.1000). The PEL's are based upon an 8-hour Time Weighted Average (TWA) concentration. An employees' exposure to a substance for an 8-hour work shift of a 40-hour work week should not exceed the 8-hour TWA PEL for that substance. Ceiling levels are concentrations that should not be exceeded during any part of the working exposure.

The Threshold Limit Values (TLV) are health-based values that are established by committees that review existing published and peer-reviewed literature in various scientific disciplines. Based off the available information, American Conference of Governmental Industrial Hygienists (ACGIH) formulates a conclusion on the level of exposure that the typical worker can experience without adverse health effects. TLVs represent conditions under which ACGIH believes that nearly all workers may be repeatedly exposed without adverse health effects.

Both the OSHA Standards and ACGIH guidelines are developed for evaluating potential employee exposures in industrial environments and are not intended for non-industrial environments, therefore interpretation of the measured concentrations must be viewed with caution when compared to values established by OSHA and/or ACGIH. They may provide some usefulness, however, in non-industrial environments when used by a professional Industrial Hygienist to reference a target value. Some scientists have suggested a safety factor of 10 or 100 be applied to the OSHA PEL or ACGIH TLV when used in non-industrial environments although this practice has not been validated.

The etiology of indoor air quality is not totally understood. A wide variety of low level air contaminants have been detected in buildings, but their significance is not clear, and while most of the contaminants in office air are below accepted standards, their synergistic health effects are virtually unknown.

SAMPLING METHODOLOGY

The samples for total volatile organic compounds (TVOC) were collected by drawing ambient air through 1 Liter mini-canisters and analyzed by Gas Chromatography in accordance with EPA Modified Method TO-15. The samples were screened for the 61 compounds in the EPA Priority Pollutant List.

Air samples for aldehydes were collected by passive sampling in accordance with the National Institute of Occupational Safety and Health (NIOSH) Method No. 2016 Modified. Air passes through a passive dosimeter, ChemDisk Personal Sampler (Aldehyde), containing a fiberglass disk impregnated with the reagent dinitrophenylhydrazine (DNPH) which adsorbs the aldehyde. The badge is analyzed for multiple components by High Pressure Liquid Chromatography (HPLC) ultraviolet light (UV) to include all aldehydes.

The aldehyde samples were analyzed by EMSL Analytical, Inc. located in Westmont, New Jersey. The TVOC samples were analyzed by Galson Laboratories located in East Syracuse, New York. EMSL Analytical, Inc. and Galson Laboratories are American Industrial Hygiene Association (AIHA) accredited laboratories and successfully participate in the NIOSH/AIHA Proficiency Analytical Testing (PAT) program.

RESULTS AND DISCUSSION

The laboratory results of the baseline survey are attached. The following table summarizes the results collected on August 2, 2010 of the various parameters measured in the selected areas.

Aldehyde	Location			Exposure Guidelines	
	Room 313	Hallway	Room 320	OSHA PEL* (ppm)	ACGIH TLV (ppm)
	Sample Concentration (ppm)				
Formaldehyde	0.15	0.10	0.10	0.75 (1910.1048)	0.3 C
Acetaldehyde	0.010	ND	ND	200	25 C
Acrolein	ND	ND	ND	0.1	0.1 C
Acetone	0.049	0.025	ND	1,000	500
Propionaldehyde	ND	ND	ND	--	20
Butylaldehyde	ND	ND	ND	--	25 (WEEL)
Benzaldehyde	0.0069	0.0030	ND	--	2 (WEEL)
Crotonaldehyde	ND	ND	ND	2	0.3 C

ND denotes Not Detected

*OSHA 29 CFR 1910.1000 (Table Z-1)
AIHA WEEL – Workplace Environmental Exposure Level
ACGIH Ceiling (C) – The concentration that should not be exceeded during any part of the working exposure.

Volatile Organic Compound (VOC)	Location			Exposure Guidelines	
	Room 313	Hallway	Room 320	OSHA PEL* (ppm)	ACGIH TLV (ppm)
	Sample Concentration (ppm)				
Isopropyl Alcohol	0.022	0.055	0.035	400	200
Acetone	0.014	0.020	0.014	1,000	500
Toluene	0.074	0.026	0.0092	200	20

The samples for selected volatile organic compounds did not identify any significant concentrations of chemicals at or above the detection limit which would be expected to solicit complaints. Very low concentrations of isopropyl alcohol, acetone, and toluene were detected which are commonly found in cleaning agents and solvents.

The samples for aldehydes did not identify any significant concentrations of chemicals at or above the detection limit which would be expected to solicit complaints. Low levels of formaldehyde were reported as less than 0.2 ppm in the areas tested which is below the 0.4 ppm target ambient level suggested by HUD therefore occupant complaints are unlikely. When compared to the LEED target criteria, the formaldehyde levels were slightly elevated although not significant. It should be noted that the HUD target criteria is established for home occupancy whereas the LEED criteria is a target level to be achieved after new construction prior to occupancy of office buildings.

Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short and long term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors. VOCs are emitted by a wide array of products numbering in the thousands. Examples include: paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment such as copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions.

Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing, and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.

It is important to recognize that the results of our tests represent conditions only at the time the observation, collection or sampling occurred. Thus, this report should not be relied on to represent conditions at other locations, times, or dates and does not imply the space is free of other contaminates. In addition, changes in equipment operational characteristics, changes in air velocity, maintenance procedures, and many other factors can have a significant effect on the particle distribution associated with indoor air quality (IAQ). Maintaining acceptable IAQ is an ongoing effort and must be continually monitored to be effective.

CONCLUSION

The results, when compared to the referenced guidelines for indoor air quality, obtained August 2, 2010 in the new 8 room classroom building at the Parkside Elementary School, located at 10257 NW 29th Street in Coral Springs, Florida suggest that the indoor air quality parameters measured are in agreement with the referenced ASHRAE, AIHA, ACGIH, HUD, and OSHA guidelines. Based on the results of the data obtained from the indoor air quality parameters measured on August 2, 2010, it is our opinion based on our experience and certifications that the sample concentrations for volatile organic compounds and aldehydes did not identify any significant chemical concentrations which would be expected to solicit complaints and there is no increased health risk to the occupants.

EnHealth
Environmental, Inc.

APPENDIX A
Analytical Results

GALSON LABORATORIES
6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

LABORATORY ANALYSIS REPORT

Client : EnHealth Environmental
Site : NS
Project No. : 010-037

Date Sampled : 03-AUG-10
Date Received : 04-AUG-10
Date Analyzed : 08-AUG-10
Report ID : 657708

Account No.: 21608
Login No. : L220312
Units : ppbv

Galson ID:	LOQ	L220312-1	L220312-2	L220312-3
Client ID:	ppbv	CAN WA485 REG WR389	CAN WA693 REG WR383	CAN WA692 REG WR439
Propylene	5.0	<5.0	<5.0	<5.0
Freon-12	5.0	<5.0	<5.0	<5.0
Chloromethane	5.0	<5.0	<5.0	<5.0
Freon-114	5.0	<5.0	<5.0	<5.0
Vinyl Chloride	5.0	<5.0	<5.0	<5.0
1,3-Butadiene	5.0	<5.0	<5.0	<5.0
Bromomethane	5.0	<5.0	<5.0	<5.0
Chloroethane	5.0	<5.0	<5.0	<5.0
Vinyl Bromide	5.0	<5.0	<5.0	<5.0
Freon-11	5.0	<5.0	<5.0	<5.0
Isopropyl Alcohol	5.0	35	55	22
Acetone	5.0	14	20	14
1,1-Dichloroethene	5.0	<5.0	<5.0	<5.0
Methylene Chloride	5.0	<5.0	<5.0	<5.0
Freon-113	5.0	<5.0	<5.0	<5.0
Allyl Chloride	5.0	<5.0	<5.0	<5.0
Carbon Disulfide	10	<10	<10	<10
Trans-1,2-Dichloroethene	5.0	<5.0	<5.0	<5.0
Methyl Tert-Butyl Ether	5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	5.0	<5.0	<5.0	<5.0
Vinyl Acetate	5.0	<5.0	<5.0	<5.0
Methyl Ethyl Ketone	5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethylene	5.0	<5.0	<5.0	<5.0

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod.OSHA PV2120/EPA TO15
Collection Media : Mini Can

Submitted by: kaw
Approved by : rjw
Date : 10-AUG-10 NYS DOH # : 11626
QC by : Karen Becker

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified

MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms

M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Level of quantitation

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LABORATORY ANALYSIS REPORT

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Site : NS
Project No. : 010-037

Date Sampled : 03-AUG-10
Date Received : 04-AUG-10
Date Analyzed : 08-AUG-10
Report ID : 657708

Account No.: 21608
Login No. : L220312
Units : ppbv

Galson ID: / Client ID:	LOQ ppbv	L220312-1 CAN WA485 REG WR389	L220312-2 CAN WA693 REG WR383	L220312-3 CAN WA692 REG WR439
Hexane	5.0	<5.0	<5.0	<5.0
Ethyl Acetate	5.0	<5.0	<5.0	<5.0
Chloroform	5.0	<5.0	<5.0	<5.0
Tetrahydrofuran	5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	5.0	<5.0	<5.0	<5.0
Cyclohexane	5.0	<5.0	<5.0	<5.0
Carbon Tetrachloride	5.0	<5.0	<5.0	<5.0
Benzene	5.0	<5.0	<5.0	<5.0
1,4-Dioxane	20	<20	<20	<20
2,2,4-Trimethylpentane	5.0	<5.0	<5.0	<5.0
Heptane	5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	5.0	<5.0	<5.0	<5.0
Trichloroethylene	5.0	<5.0	<5.0	<5.0
Bromodichloromethane	5.0	<5.0	<5.0	<5.0
cis-1,3-Dichloropropene	5.0	<5.0	<5.0	<5.0
trans-1,3-Dichloropropene	5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane	5.0	<5.0	<5.0	<5.0
Toluene	5.0	9.2	26	74
Dibromochloromethane	5.0	<5.0	<5.0	<5.0
Methyl Isobutyl Ketone	20	<20	<20	<20
Methyl Butyl Ketone	20	<20	<20	<20
1,2-Dibromoethane	5.0	<5.0	<5.0	<5.0

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod.OSHA PV2120/EPA TO15
Collection Media : Mini Can

Submitted by: kaw
Approved by : rjw
Date : 10-AUG-10 NYS DOH # : 11626
QC by : Karen Becker

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified

MG -Milligrams
UG -Micrograms
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M3 -Cubic Meters
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LOQ -Level of quantitation

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LABORATORY ANALYSIS REPORT

Client : EnHealth Environmental
Site : NS
Project No. : 010-037

Date Sampled : 03-AUG-10
Date Received : 04-AUG-10
Date Analyzed : 08-AUG-10
Report ID : 657708

Account No.: 21608
Login No. : L220312
Units : ppbv

Galson ID: / Client ID:	LOQ ppbv	L220312-1 CAN WA485 REG WR389	L220312-2 CAN WA693 REG WR383	L220312-3 CAN WA692 REG WR439
Tetrachloroethylene	5.0	<5.0	<5.0	<5.0
Chlorobenzene	5.0	<5.0	<5.0	<5.0
Ethylbenzene	5.0	<5.0	<5.0	<5.0
Bromoform	5.0	<5.0	<5.0	<5.0
m & p-xylene	10	<10	<10	<10
Styrene	5.0	<5.0	<5.0	<5.0
o-Xylene	5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane	5.0	<5.0	<5.0	<5.0
4-Ethyltoluene	5.0	<5.0	<5.0	<5.0
1,3,5-Trimethylbenzene	5.0	<5.0	<5.0	<5.0
1,2,4-Trimethylbenzene	5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	5.0	<5.0	<5.0	<5.0
Benzyl Chloride	5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod.OSHA PV2120/EPA TO15
Collection Media : Mini Can

Submitted by: kaw
Approved by : rjw
Date : 10-AUG-10 NYS DOH # : 11626
QC by : Karen Becker

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LABORATORY FOOTNOTE REPORT

Client Name : EnHealth Environmental
Site :
Project No. : 010-037

Date Sampled : 03-AUG-10
Date Received: 04-AUG-10
Date Analyzed: 08-AUG-10

Account No.: 21608
Login No. : L220312

Unless otherwise noted below, all quality control results associated with the samples were within established control limits.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LCQ concentrations prior to correction for desorption efficiency (if applicable).

L220312 (Report ID: 657708):
SOPs: in-vocs(14)

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

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Tel: (315) 432-5227
888-432-LABS (5227)
Fax: (315) 437-0571
www.galsonlabs.com

☐ Check if change of address

New Client ? ☐ yes ☒ no

Report To : EnHealth Environmental
Jim Litrides
8064 NW 124th Terrace
Parkland, FL 33076
Phone No. : (954) 522-5040
Fax No. :

Invoice To : Same
Phone No. :
Fax No. :

Site Name : Project : 010 - 037 Sampled By :

Need Results By:	(surcharge)
☒ 5 Business Days	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same day	200%

☒ Samples submitted using the FreePumpLoan™ Program.
☐ Samples submitted using the FreeSamplingBadges™ Program.

Client Account No. :
Purchase Order No. :
Credit Card No. : Card Holder Name : Exp. :

Email / Fax Results To : EnHealth Environmental
Email Address : enhealth@comcast.net Fax No. :

Report Reference No. Generated: 11-AUG-10 09:09

	Sample Identification	Date Sampled	Collection Medium	Reg Start	Reg Stop	Passive Monitors (Min)	Analysis Requested	Room #	Specific DL Needed
1.	Can: WA485/Reg: WR389	8/3/10	Mini can	-30	-1	330 min	TO15	320	
2.	Can: WA693/Reg: WR393	8/3/10	Mini can	-29	-9	380 min	TO15	Hall outside 316	
3.	Can: WA692/Reg: WR439	8/3/10	Mini-Can	-30	-8	380 min	TO15	313	
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									

☐ Yes ☒ No **We normally add a laboratory blank for each analyte. We will charge you for this at our normal rate. If you agree please check "Yes" otherwise check "No".**

List description of industry or process / interference's present in sampling area: PS#180649

Comments:

Chain of Custody	Print Name	Signature	Date/Time
Relinquished by :	Stephen Litrides		8/3/10
Received by LAB :	M. Kraus	M. Kraus	8/4/10 @ 1133

Samples received after 3pm will be considered as next day's business. * sample collection time X LPM = Air Vol. Page 1 of 1

LAB ORIGINAL

EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ 08077

Order ID: 281001248

Attn:	Jim Litrides Enhealth Environmental, Inc. 8064 Northwest 124 Terrace Parkland, FL 33076	Customer ID:	ENHE50
		Customer PO:	
		Date Received:	08/04/10 9:10 AM
		EMSL Order:	281001248
Fax:	954-522-4611	EMSL Project ID:	
Project:	010-037	Date Analyzed:	08/05/10
Report Date:	08/09/10		

Test Report – Multiple Component Analysis by HPLC/UV of Passive Monitoring Badges via Mod. NIOSH 2016 (to include all aldehydes), Issue 2, 3/15/03

Sample ID	Location	Component	Sampling Volume (minutes)	Report Limit (ug)	Report Limit (PPM)	Sample Conc. (ug)	Sample Conc. (PPM)
3H10-HD1938 281001248-0001	Room 313	Formaldehyde	380	0.050	0.0081	0.91	0.15
3H10-HD1938	Room 313	Acetaldehyde	380	0.050	0.0055	0.095	0.010
3H10-HD1938	Room 313	Acrolein	380	0.050	0.0043	ND	ND
3H10-HD1938	Room 313	Acetone	380	0.050	0.0042	0.59	0.049
3H10-HD1938	Room 313	Propionaldehyde	380	0.050	0.0042	ND	ND
3H10-HD1938	Room 313	Butylaldehyde	380	0.050	0.0034	ND	ND
3H10-HD1938	Room 313	Benzaldehyde	380	0.050	0.0023	0.15	0.0069
3H10-HD1938	Room 313	Crotonaldehyde	380	0.050	0.0035	ND	ND
3H10-HD2379 281001248-0002	Hallway	Formaldehyde	380	0.050	0.0081	0.63	0.10
3H10-HD2379	Hallway	Acetaldehyde	380	0.050	0.0055	ND	ND
3H10-HD2379	Hallway	Acrolein	380	0.050	0.0043	ND	ND
3H10-HD2379	Hallway	Acetone	380	0.050	0.0042	0.29	0.025
3H10-HD2379	Hallway	Propionaldehyde	380	0.050	0.0042	ND	ND
3H10-HD2379	Hallway	Butylaldehyde	380	0.050	0.0034	ND	ND
3H10-HD2379	Hallway	Benzaldehyde	380	0.050	0.0023	0.066	0.0030
3H10-HD2379	Hallway	Crotonaldehyde	380	0.050	0.0035	ND	ND

Notes:
1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are blank corrected.
4. Discernable blank(s) not submitted with samples.
5. ND denotes Not Detected.

Alexis Willey
Analyst

alexis willey for
Scott VanEtten, CIH- Lab Manager
Or other approved signatory

EMSL Analytical, Inc. 200 Route 130 North, Cinnaminson, NJ 08077

Order ID: 281001248

Attn:	Jim Litrides Enhealth Environmental, Inc. 8064 Northwest 124 Terrace Parkland, FL 33076	Customer ID:	ENHE50
		Customer PO:	
		Date Received:	08/04/10 9:10 AM
Fax:	954-522-4611	EMSL Order:	281001248
Project:	010-037	EMSL Project ID:	
Report Date:	08/09/10	Date Analyzed:	08/05/10

Test Report – Multiple Component Analysis by HPLC/UV of Passive Monitoring Badges via Mod. NIOSH 2016 (to include all aldehydes), Issue 2, 3/15/03

Sample ID	Location	Component	Sampling Volume (minutes)	Report Limit (ug)	Report Limit (PPM)	Sample Conc. (ug)	Sample Conc. (PPM)
5F10-HG4430 281001248-0003	Room 320	Formaldehyde	330	0.050	0.0093	0.55	0.10
5F10-HG4430	Room 320	Acetaldehyde	330	0.050	0.0064	ND	ND
5F10-HG4430	Room 320	Acrolein	330	0.050	0.0050	ND	ND
5F10-HG4430	Room 320	Acetone	330	0.050	0.0048	ND	ND
5F10-HG4430	Room 320	Propionaldehyde	330	0.050	0.0048	ND	ND
5F10-HG4430	Room 320	Butylaldehyde	330	0.050	0.0039	ND	ND
5F10-HG4430	Room 320	Benzaldehyde	330	0.050	0.0026	ND	ND
5F10-HG4430	Room 320	Crotonaldehyde	330	0.050	0.0040	ND	ND
Desportion Blank		Formaldehyde	0	0.050	N/A	ND	N/A
		Acetaldehyde	0	0.050	N/A	ND	N/A
		Acrolein	0	0.050	N/A	ND	N/A
		Acetone	0	0.050	N/A	ND	N/A
		Propionaldehyde	0	0.050	N/A	ND	N/A
		Butylaldehyde	0	0.050	N/A	ND	N/A
		Benzaldehyde	0	0.050	N/A	ND	N/A
		Crotonaldehyde	0	0.050	N/A	ND	N/A

Notes:

1. Samples were received in acceptable condition unless otherwise noted.
2. These results relate only to the samples tested.
3. Sample results are blank corrected.
4. Discernable blank(s) not submitted with samples.
5. ND denotes Not Detected

Alexis Willey
Analyst

alexis Willey for
Scott VanEtten, CIH- Lab Manager
Or other approved signatory

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Industrial Hygiene
Chain of Custody

EMSL Order Number (Lab Use Only): 281001248

EMSL ANALYTICAL INC
200 R[illegible] 130 N[illegible]
C[illegible]N NJ 08077
PHONE [illegible] 856.858.4800
FAX [illegible] 856.786.0386

Report To Contact Name: Jim Litrides	Bill To Company:	Sampled By (Signature):
Company Name: EnHealth Environmental	Attention To:	Number of Samples in Shipment: 3
Address 1: 8064 NW 124th Terrace	Address 1:	Date of Shipment: 8/3/10
Address 2: Parkland, FL 33076	Address 2:	U.S. State where Samples Collected: FL
Phone: (954)522-5040 Fax:	Phone: Fax:	Purchase Order:
Email Results To: enhealth@concast.net	Project Name: 010-037	

Turnaround Time – Please Check: Please Note Standard TAT is 2 Week.							Media Type:
2 Week	1 Week	4 Day	3 Day	2 Day	1 Day	Other (Call Lab)	Manufacturer/Part #:
☐	☒	☐	☐	☐	☐	☐	Lot #:

Sample ID	Media	Analyte / Method	Volume	Sample Date/Time	Location	Comments
3H10-H01938	ChemDisk	Aldehyde Scan		8/3/10 8:25-2:45	Room 313	
3H10-H02379	ChemDisk	Aldehyde Scan		8/3/10 8:30-2:50	Hallway	
5F10-H64430	ChemDisk	Aldehyde Scan		8/3/10 8:32-2:02	Room 320	

RECEIVED IN GOOD CONDITION EMSL ANALYTICAL, INC.

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By	Date	Received By	Date
	8/3/10		
		OMB-CX-910	8-4-10

Comments:

EnHealth
Environmental, Inc.

APPENDIX B
Certifications

ABIH

american board of industrial hygiene®

organized to improve the practice of industrial hygiene
proclaims that

James S. Litrides

having met all requirements through
education, experience and examination,
is hereby certified in the

COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH

Certificate Number: 3611 CP

Awarded: July 20, 1987

Expiration Date: June 1, 2015

Chair ABIH

Executive Director ABIH

The
American Board of Industrial Hygiene®
ABIH®

James S. Litrides, CIH

Diplomate of the American Board of Industrial Hygiene, has successfully met the requirements, including examination, in the industrial hygiene sub-specialty of

Indoor Environmental Quality

July 7, 1999
Date

CP 3611
Diplomate Certificate Number(s)

THIS CERTIFICATE IS TO BE USED ONLY AS EVIDENCE OF CERTIFICATION. THE RELATIONSHIP OF THE CERTIFICATE HOLDER TO A SPECIFIC PROJECT IS DEFINED BY CONTRACTUAL ARRANGEMENTS.

Chair, ABIH

Secretary, ABIH

The
American Board of Industrial Hygiene®
ABIH®

THIS CERTIFICATE IS TO BE USED ONLY AS EVIDENCE OF CERTIFICATION. THE RELATIONSHIP OF THE CERTIFICATE HOLDER TO A SPECIFIC PROJECT IS DEFINED BY CONTRACTUAL ARRANGEMENTS.

organized to improve the practice of Industrial Hygiene

DEFINED BY CONTRACTUAL ARRANGEMENTS.

proclaims that

James Stephen Litrides

having met all requirements through education, experience, and examination, is hereby certified in the

COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE

and has the right to use the title and designations

CERTIFIED INDUSTRIAL HYGIENIST
CIH

date July 20, 1987

Chairman ABIH
Charles E. Adkins, CIH

certificate number 3611

Secretary ABIH
Loren A. Anderson, Jr., CIH

American IAQ Council

hereby certifies that

James S. Litrides

has met all the specific standards and qualifications of the re-certification process, including continued professional development, and is hereby re-certified as a

Council-certified Indoor Environmental Consultant

CIEC

This certificate is valid for 2 years, expiring march 31, 2011.
This certificate remains the property of the
American Indoor Air Quality Council, PO Box 11599, Glendale, AZ 85318

Charles F. Wiles

Charles F. Wiles, Executive Director

0703036

Certificate Number