

## **BUILDING WELLNESS CONSULTANCY, INC.**

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### **H. E. BARNEY BURROUGHS (CIAQP, PM-FASHRAE) —Biographical Summary**

*H. E. Barney Burroughs* is a technical consultant in the field of *Indoor Environmental Quality* and is a recognized expert in *Indoor Air Quality and Air Cleaning*. He is the President and CEO of **Building Wellness Consultancy, Inc.**, a consulting firm specializing in IAQ diagnostics and training, filtration, and related IAQ and Building Health, Safety, and Security issues. He is a prolific author of numerous papers/articles and is a lecturer on IAQ and frequently leads seminars on that and related subjects.

*Barney* was a principal and Director (now retired) of **Environmental Design International, Ltd. (EDI Engineers)**, an Atlanta-based IT consulting firm serving the Healthcare and IT Industry.

He is a Past International **President** (1987/88) and **Fellow** of **ASHRAE** (The American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc.). As a **Presidential Member**, *Barney* remains active in the activities of **ASHRAE**: a former Chairman of the Environmental Health Committee; active membership on Technical Committees 2.3 and 2.4 (Technical committees on gaseous and particulate filters); Past-chairman and member of SPPC 52.2 on Fractional Efficiency of Particulate Filters; member of Advanced IAQ Design Guide Project Committee; Trustee of the ASHRAE Foundation; and Past-member of the **ASHRAE** Presidential Ad Hoc Committee on Homeland Security Building Related Issues. *Barney* has attained the **ASHRAE Distinguished Service and Exceptional Service Awards (ESA)**, and was designated as a *Distinguished Lecturer* with **ASHRAE**'s Education Program. He is a recipient of the **ASHRAE Environmental Health Award** and the prestigious *Andrew Boggs Award for Sustained Exceptional Service* granted to outstanding ESA holders. He is also a *Distinguished "50" Year Member* of ASHRAE.

He is the past chairman of the Indoor Environmental Quality Subcommittee of **ARTI** (Air Conditioning and Refrigeration Institute's Research Activity for Century 21 Industry R & D). In addition, he was a member of **AEE** (Association of Energy Engineers) and is designated as a CIAQP (Certified IAQ Professional) and is the Past-Chairman of their "CIAQP" Certified Indoor Air Quality Professional certification board. He was the co-instructor in their Professional Certification Training Course; was named AEE Environmental Educator of 1995; and named Trainer of the Year by Indoor Environment Review. He is the primary author of the Burroughs/Hansen *Managing Indoor Air Quality*, now in fifth edition and is also co-author of the AEE course *Fundamentals and Core Skills of Indoor Air Quality*.

Mr. Burroughs also holds or has held various levels of membership and committee positions in the **American Industrial Hygiene Association (AIHA)**; **American Society for Testing and Materials (ASTM)**; **National Air Filtration Association (NAFA)**; **Indoor Air Quality Association (IAQA)**; **International Society of Indoor Air Quality (ISIAQ)**; **American Filtration Society (AFS)**; and **Institute of Environmental Sciences (IEST)**.

*Mr. Burroughs* founded in 1971, and was Chief Executive Officer of Purafil, Inc., a manufacturer of specialty gas phase filtration, until 1986 when he left to take the leadership of ASHRAE and to pursue his consulting activities. He was a **Rector Scholar**, graduating from DePauw University in Greencastle, Ind. and was granted the prestigious 50 year **Community Leader Award** from that institution. He currently resides in Atlanta, Georgia. In 2014, he received the **Lifetime Achievement Award** from the **National Air Filtration Association (NAFA)** for his numerous contributions to the filtration industry.

## **CURRICULUM VITAE**

**H. E. “BARNEY” BURROUGHS  
PRESIDENT  
BUILDING WELLNESS CONSULTANCY, INC.**

### **SPECIALIZED PROFESSIONAL COMPETENCE:**

Assessment, mitigation, and training of Indoor Air Quality matters  
Technology and application of gaseous filtration  
Technology and application of particulate filtration  
Application of filtration and air cleaning for Building Health and Safety (Homeland Security)  
Expert witness in matters concerning Indoor Air Quality and air cleaning  
Product development in the field of specialty filtration  
Application of strategic, functional, and life planning  
Consulting on management issues for small business.

### **EDUCATION:**

Undergraduate: Plymouth High School, Plymouth, Indiana, 1953, Valedictorian  
Graduate: DePauw University, Greencastle, Indiana, 1957, BA  
Post Graduate: Ohio University, Athens, Ohio, 1960-no degree  
Marietta College, Marietta, Ohio, 1959-no degree  
University of Georgia Executive Program, 1983

### **MAJOR ACCOMPLISHMENTS:**

- ❑ Founder and owner of Building Wellness Consultancy, Inc.
- ❑ Consultant, author, and lecturer on issues regarding Indoor Air Quality, Air Cleaning, and Building Security and Operations.
- ❑ Past Principal and Director of Environmental Design International, Ltd., an engineering firm specializing in IT, audio/visual and communication engineering issues for the Healthcare Industry.
- ❑ Past International President, 1987-1988, and Fellow of American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE). . . a professional international technical society of 55,000 members in the HVAC & R industry.
- ❑ Chaired the Project Committee that developed ASHRAE Standard 52.2 on filtration efficiency
- ❑ Developed and Chaired the AEE Indoor Air Quality Professional Certification Board.
- ❑ Developed definitive seminar series on IEQ issues, filtration, and building security.
- ❑ Revision author of “Managing Indoor Air Quality”—textbook on IAQ now in Edition V
- ❑ Founded and headed Purafil, Inc., a leading supplier of specialty gaseous filtration equipment. Retired after 20 years in 1987.
- ❑ Participant in a number of national committees dealing with 9/11 related Chem/Bio, Filtration, and Building Security issues.
- ❑ Trustee and member of Board of Stewards of Roswell Methodist Church, Roswell, GA

## **EMPLOYMENT EXPERIENCE:**

- 1988 - Present Building Wellness Consultancy, Inc., President. Consultant to HVAC industry on management and technical issues: especially IAQ, filtration, ventilation, building security, and. Standards.
- 1991 – 2013 Environmental Design Intl., Ltd. (EDI, Ltd.). Outside Director--EDI is a multi-discipline design consulting firm specializing in Communications, Security and A/V issues.
- 2002 – 2007 Building Diagnostics Research Institute (BDRI). Outside director. BDRI was a Wash. DC based non-profit research activity.
- 1987 - 1988 American Society of Heating, Refrigerating, and Air Conditioning Engineers: elected volunteer President of 55,000 member engineering and learned society.
- 1971 - 1986 Purafil, Inc: President, CEO and founder. Manufacturer of gaseous and contamination control equipment for industrial, institutional, and commercial buildings.
- 1968 - 1971 Filtration Engineering, Inc: President, CEO and founder. Manufacturers' representative and distributor of high efficiency and specialty gaseous filtration equipment.
- 1958 - 1968 Borg-Warner Chemicals: Various marketing functions including Public Relations Director, Advertising Manager, Market Development Engineer with polymers and chemicals.
- 1957 - 1958 Dow Chemical Co: Inside sales, polymers and resins.
- 1955 - 1957 IBM: Manufacturing and card printing. (Hourly)

## **PREVIOUS TECHNICAL and PROFESSIONAL LEADERSHIP ACTIVITIES**

ASHRAE	Member	Standard 29 Guideline for Assessing Building Security Risk
ASHRAE	Consultant	SPC Guideline 42P Committee on IAQ Advanced Performance
ASHRAE	Member	Filtration and Air Cleaning Position Paper Project Committee
ASHRAE	Member	Advanced IAQ Design Guide Project Committee
ASHRAE	Member	Trustee of ASHRAE Foundation
ASHRAE	Member	Presidential Ad Hoc Committee on Chem/Bio Terrorism Response
ASHRAE	Member	TC 2.3, Gaseous Air Contaminants and Gas Contaminant Removal Equipment
ASHRAE	Member	TC 2.4, Particulate Air Contaminants Particulate Contaminant Removal Equipment
ASHRAE	Member	IAQ '97 Steering Committee (Former Chairman of IAQ Series)
ASHRAE	Member	Standard 62.2 Committee member
ASHRAE	Chair	Standing Standards Project Committee 52.2 on Particulate Filters.
ASHRAE	Chair	Environmental Health Committee
*AEE	Chair	CIAQ Certified Air Quality Professional certification board
*AIHA	Member	IAQ Committee; Microbial Task Force
*ASTM	Member	D22.05 Committee on Indoor Air
*ARTI	Chair	21-CR IEQ Subcommittee;
*CSPA	Chair	Air filter Subcommittee

**PROFESSIONAL CURRENT and PAST AFFILIATIONS:**

Presidential Member: American Society of Heating, Refrigerating, and Air Conditioning Engineers, Inc.

Fellow: American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

Member: \*AEE

Member: \*AIHA

Member: \*ISIAQ

Member: \*NAFA

Member: \*AFS

Member \*IAQA

- \* AEE- Association of Energy Engineers
- \* AIHA-American Industrial Hygiene Association
- \* IAQA Indoor Air Quality Association
- \* ISIAQ-International Society of Indoor Air Quality and Climate
- \* NAFA-National Air Filtration Association
- \* AFS-American Filtration Society

• **PREVIOUS PROFESSIONAL AFFILIATIONS:**

American Association of Contamination Control	Member
Association of Pollution Control	Member
Illuminating Engineers Society/NA	Member
Instrumentation Society of America	Member
American Society of Test Methods	Member
Air and Water Pollution Control Society	Member
Society of Plastics Engineers	Member
DeKalb County Chamber of Commerce	Board of Directors
Air Conditioning & Refrigeration Institute	Member
Technical Assn. of Pulp & Paper Industries	Member
American Management Association	Member

**AWARDS AND HONORS:**

NAFA***	Lifetime Achievement Award 2014
Indoor Environment Review	Listed in top 5 of Power 50 of IAQ Influences
Indoor Environment '99	Named Top IAQ Educator of 1999
AEE **	Environmental Educator of the Year, 1995
ASHRAE*	Distinguished 50 Year Member 2018
ASHRAE*	Andrew Boggs Award/Sustained Exceptional Service 2015
ASHRAE*	Environmental Health Award 2009
ASHRAE*	Exceptional Service Award 2008
ASHRAE*	Distinguished Lecturer
ASHRAE*	<i>Fellow</i> 1994
ASHRAE*	<i>Presidential Member</i> 1988
ASHRAE*	Distinguished Service Award 1984
ASHRAE*	Regional Award of Merit 1984
ASHRAE*	Atlanta Chapter Engineer of the Year in Industry 1979
DeKalb Chamber of Commerce	Small Business Man of the Year in Atlanta 1983
DePauw University	Rector Scholar 1954
DePauw University	Beta Beta Beta Biology Honorary 1957
DePauw University	Community Service Award 2007

\* American Society of Heating, Refrigerating, and Air Conditioning Engineers

\*\* Association of Energy Engineers

\*\*\*National Air Filtration Society

## **PAPERS AND PUBLICATIONS:**

100 yr History of Filtration and Air Cleaning	ASHRAE Transactions February 2020
History of Air Filtration in Health Facilities	ASHRAE Journal November 2018
Demonstrating the Role of Filtration and Air Cleaning in Sustaining Acceptable IAQ Through Ventilation Replacement	Air Media: Fall 2013
Managing Indoor Air Quality Edition II, III, IV, & V	Textbook: Fairmont Press 2011
History of IAQ and Role in Development of Indoor Air Quality Design Guide	ASHRAE Seminar June 2010
Attaining and Maintaining Sustainability with the IAQ Procedure	ASHRAE Seminar January 2009
Role of Air Filtration and Air Cleaning in Applying the IAQ Procedure: a Field Study	Keynote Paper: AWMA/EPA July 2006
History of Filtration and Air Cleaning with IAQ	ASHRAE Seminar January 2006
Improving Filtration Effectiveness	HPAC Engineering Journal Dec. 2005
Filtration and Building Security	ASHRAE Journal April, 2005
Moisture, Mold, and HVAC	The Construction Specifier, Oct. 2004
The Role of Filtration in Building Security	ASHRAE International Webcast April 2004
Filtration and Building Security: Is Filtration the Silver Bullet	Air Media Journal Dec, 2003
The Role of Filtration in System Cleanliness	NAFA Sept, 2003
Specifying Filtration	HPAC Journal Nov, 2003
Drivers of IAQ	Keynote: AWMA Summer Technical Meeting July, 2003
Overview of Filtration in Building Security	ASHRAE Feb, 2003
Role of Prefiltration	AFS IAQ Conference Fall 2002

Filtration: Preparing for CBT Response	NIBS/Sloan Foundation Conference October 2002
Filtration and Building Security	TISP Conference October, 2002
Response to Terrorism in Buildings: Phase I and Phase II	RSES Journal, Jan and Feb Issues, 2002
Role of Filtration: New Reasons to Apply Filtration	Indoor Air Connection, Feb, 2002
Role of Filtration in Chem/Bio Terrorism Response	NADCA Annual Conference, Feb, 2002
Filtration for Industry: Issues	Specialty Chemical Manufacturers Assoc., 2001
Standard 62: Update and Briefing	Spec Institute, Johns Manville, 2001& 2002
Filtration Application and You	Healthy Indoor Environments 2001
IAQ for the New Millennium	Indoor Air Quality Association 2000
Under Control: New Ideas About Ventilation	Good Cents Magazine, Spring, 1999
Managing Indoor Air Quality	Second Edition Revision Author, Fairmont Press, 1998
Energy and IAQ for the New Millennium: A Cautious Partnership	Energy Users News, November, 1998
The Art and Science of Air 1998, HPAC, Heating/Piping/Air Conditioning, Penton Filtration Management in Health Care	Publishing, October, 1998
Improved Filtration in Residential Environments	1998, ASHRAE Journal, June, 1998
Sick Building Syndrome: Fact, Fiction, or Facility?	Chapter 1: A Guide to Managing Indoor Air Quality in Health Care Organizations, Joint Commission of Health care Organizations, 1997
Filtration: An IAQ Investment	1997, HPAC, Heating/Piping/Air Conditioning, Penton Publishing, August, 1997
Improved Filtration & the Residential Environment	1997, AWMA Proceedings
IAQ: An Environmental Factor in the Indoor Habitat.	1997, HPAC, Heating/Piping/Air Conditioning. Penton Publishing, February, 1997
Marketing the Healthy House: A Checklist for Planning and Optimizing the Environmental Quality Features of the Healthy Home.	1996, Good Cents Magazine, Southern Development & Investment Group, Inc.



Indoor Air Quality and Energy	1996, Chapter Author. <i>Energy Management Handbook</i> . Wayne C. Turner
Filtration: A Cause & Solution For IAQ	1996, Chapter Author. <i>Improving Indoor Air Quality Through Design, Operation and Maintenance</i> . Milton Meckler
Energy and IAQ, A Cautious Partnership	1996, Chapter Author. Oklahoma State Univ. Energy Conservation Manual.
Standard 62 Revisited: A New Version on the Horizon	1995 World Workplace, IFMA
Particulate Filtration: A New Look With New Data	1995 EPA, AWMA Conference on Engineering Solutions to Indoor Air Quality Problems
The Selection of Air Filters in New Homes	1995, Good Cents Magazine
Surviving the IAQ Storm/IAQ Overview	1995, AIPE
Air Filtration: Underused Ally in the Fight for Good Indoor Air Quality	Building Operating Management Magazine July, 1994
IAQ Overview: Where Are We? Where Do We Go From Here?	1993 World Environmental Engineering Congress
The Usage of Filtration as Fulfillment of Acceptable Indoor and Optimal Energy Management	1992 World Environmental Engineering Congress
The Usage of Filtration as Fulfillment of Acceptable Indoor Air for ASHRAE Ventilation Standard 62-89	National Coalition on Indoor Air Quality, First Annual Conference, 1992
The Role of Risk Assessment as a Mitigation Protocol	Association of Energy Engineers 1991
Standard 62-89: Engineering Implications and Response Issues	Association of Energy Engineers Conference 1990
IAQ Challenge of the '90s	Association of Energy Engineers Conference 1989
ASHRAE Standard 62: Protocol for Building Wellness	Florida Air Conditioning Conference 1989
ASHRAE and the Human Destiny	Presidential Keynote June, 1987
ASHRAE Fundamentals,	Chapter 33 Control of Gaseous Contaminants 1980

Standard 62: Protocol  
for Acceptance of IAQ

Training slide presentation ASHRAE

IAQ Issues & Opportunities

Air Conditioning Contractors of America Training Series

Preventing and Correcting  
Indoor Air and Environmental  
Problems

Seminar series on IEQ: Multiple Presentations

Principles of  
Entrepreneurship: 8 "P"s

Georgia Institute of Technology  
Senior Electrical Engineering Seminar 1980 through 1994

Filtration in the Context of  
Standard 62R Draft

1996 World Environmental  
Engineering Congress

Filtration and Standard 52.2

1995 World Environmental  
Engineering Congress

An Application Model for  
Proactive Monitoring

1994 World Environmental  
Engineering Congress

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