

NEBB's Building Enclosure Testing Seminar

September 9-11, 2013

Washington, DC



NEBB, in continuance of its policy to enhance education and training of NEBB firms, owners, engineers and contractors will offer a 2-day intensive instructional review seminar followed by written and practical exams for Building Enclosure Testing (BET). Enrollment is limited—please register soon.

DATE

September 9-11, 2013

Arrival in Washington, DC – September 8, 2013

Departure should be after 6:00 p.m. on September 11 or anytime on September 12

LOCATION

American Institute of Architects (AIA)

1735 New York Avenue, NW

Washington, DC 20006

SEMINAR OVERVIEW

The seminar will provide the attendees with an introduction to building enclosure testing concepts. This will include discussions of environmental safety enclosures, such as air barrier enclosures, and review of the various testing methods that are currently being specified. The basic operation of the blower door equipment and their respective applications and features will be presented.

The NEBB *Procedural Standard for Building Enclosure Testing* will be reviewed with emphasis on the requirements for firm certification, certified professional certification, instrumentation and reporting requirements, and testing procedural requirements. Detailed presentations will be provided for the two primary performance tests: Blower Door and HVAC Utilization Tests. In addition to the presentations addressing the procedural requirements of these tests, hands-on demonstrations on operating the blower door and thermal imaging cameras will be performed. The seminar will emphasize the testing procedures, reporting requirements and the evaluation of test results.

NEBB's theme is "Performance Delivering Professionals". In concert with that theme, the seminar will conclude with a session on trouble shooting air barrier leakage issues and problem resolution.

TESTING OVERVIEW

The NEBB BET discipline is similar to all of the other NEBB disciplines in that there are written and practical examinations that must be successfully completed in order to attain certified professional certification. These written and practical examinations test the knowledge, engineering application and field testing skills required to properly test the performance of Building Envelope.

The Written Examination is a 1 ½ hour test that is comprised of True/False, Multiple Choice and Work Problems that test the candidate in the following areas:

- Knowledge of the NEBB BET Procedural Standard testing requirements
- Knowledge of basic HVAC airflow testing methodologies
- Knowledge of the air barrier enclosures
- Knowledge of the engineering applications of air barrier testing
- Knowledge of the engineering applications of thermal imaging.

A Fundamentals Exam is required for candidates who are NOT currently NEBB Certified Professionals in either TAB or Cleanroom programs. The Fundamentals Exam is a 1 ½ hour test that is comprised of True/False, Multiple Choice and Work Problems that test the candidate in the following areas:

- Knowledge of basic HVAC principles
- Knowledge of TAB and Cleanroom engineering principles and applications
- Knowledge of TAB and Cleanroom testing procedures

The Practical Examination is comprised of three sections: Blower Door Tests (1 hour), Required Report Calculations, Required Reporting.

CERTIFIED PROFESSIONALS

As with all of the NEBB disciplines, candidates for NEBB Certified Professional status require specific educational and experience requirements be met. NEBB recognizes that some candidates may not currently possess the necessary technical expertise in the field of building envelope testing. This seminar is an excellent method to become educated on the requirements of the program so that an informed business decision regarding involvement with this discipline may be made.

We welcome individuals who are gathering information about the testing procedures as performed by NEBB Certified Professionals to assist in the preparation of testing criteria and the auditing of Building Enclosure Testing and may not possess the knowledge or equipment to attend the seminar and take the practical exam.

Some individuals may already possess the technical competence, knowledge of the test procedures and instrumentation proficiency that is necessary to successfully complete the practical exams. NEBB will provide only one manufacturer's blower door equipment. Prior to the seminar we encourage the individuals to inquire as to which manufacturer's equipment will be made available for the practice exam. If the equipment is unfamiliar to the individual, we strongly encourage each individual to bring their instrumentation to the seminar and to utilize their instrumentation during their practical exam.

If you choose to bring your own instruments, instrumentation must conform to the requirements of the NEBB BET Procedural Standard and must be calibrated. Candidates meeting the educational and experience requirements along with successful completion of the Written and Practical Exam will have met the requirements for the NEBB Certified Professional status.

SCHEDULE

Monday, September 9	8:00 a.m.	Registration
	8:00 a.m. to 12:00 noon	Introduction to Building Enclosure Testing HVAC Basics BET Procedural Standards Air Barrier Testing Methodologies Blower Door Testing
	12:00 noon to 1:00 p.m.	Lunch
	1:00 p.m. to 5:00 p.m.	HVAC Utilization Testing Safety and Protocol
Tuesday, September 10	8:00 a.m. to 12:00 noon	Overview of Testing Requirements and Utilizing Thermal Imaging
	12:00 noon to 1:00 p.m.	Trouble Shooting and Problem Resolution Lunch
	1:00 p.m. to 2:00 p.m.	Review Session
	2:00 p.m. to 3:30 p.m.	BET Exam (Open Book)
	4:00 p.m. to 5:30 p.m.	Fundamentals Exam – if required (Closed Book)
Wednesday, September 11	7:00 a.m. to 6:00 p.m.	Practical Exam (First Come – First Serve)

NEBB will publish the Practical Testing schedule once the attendance minimum has been reached. **PRIOR TO BOOKING TRAVEL, CONFIRM YOUR TESTING SCHEDULE TIMES AS COMPLETION WILL OCCUR BASED IN ORDER OF CONFIRMED SEMINAR RESERVATION.** Instruments for the Practical Exams will be provided. However, if you currently possess an instrument that meets the requirements of the BET Procedural Standard and is calibrated, you are encouraged to bring it to the seminar for your use.

MEET THE INSTRUCTORS

Instructors are members of the NEBB's BET Committee.



Jim Bochat is the President of Commissioning Concepts, has been involved in the Arizona Engineering and Construction industry for over 40 years. He is a former NEBB President and instrumental in developing and teaching commissioning standards for NEBB. He has co-authored Commissioning standards for NEBB, ASHRAE and ABBA. He is a Life Member of ASHRAE and serves on the GPC-30, GL1.2, PMP Project Committee and Certification committees, chairs the ASHRAE PMP Best Practices committee and recently served on the ABBA Whole Building Tightness Committee.



Stan Fleischer is the President of Seneca Balance, and has more than 32 years' experience testing and balancing office buildings, hospitals, government facilities, research laboratories and complex building systems. He has been NEBB certified since 1987. He holds a Master HVAC License in Maryland, is a LEED AP and NEBB Certified Professional in TAB, Commissioning, HVAC/Plumbing, and Sound & Vibration. He is the 2012 President-Elect for NEBB and is also on the Board of Directors, and the Executive Finance Committee. He served in the Capital MarVa NEBB chapter as President, Technical Chairman & Board Chairman and other roles. He is the lead proctor for NEBB's Capital Marva chapter and NEBB National for TAB discipline. He is the past Chair of the NEBB's TAB Committee and a member of ASHRAE and SMACNA.



Rodney Hinton is the VP of Palmetto Air & Water Balance, has been involved in the South Carolina Construction industry for over 30 years. His experience includes Air Barrier Testing, Mechanical Design, Mechanical Construction, Test & Balance, Commissioning and Retro Commissioning. He is a member of the NEBB Test, Adjust and Balancing Committee. He is a Member of ASHRAE. He has been a NEBB Certified professional since 1991 and has co-authored several standards regarding TAB and BET for NEBB.



Phil Emory is a graduate of Montana State University in Mechanical Engineering and is the Senior Project Manager for Neudorfer Engineers, has been involved in the Washington Engineering and Construction industry since 1985. His experience includes Mechanical Design, Mechanical Construction, Test & Balance, Air Barrier Testing and is a ASTN Level II Thermographer. He has tested over 60 buildings that have included over 2.6 million square feet of envelope. He is currently serving on the ABBA Whole Building Tightness Committee and is co-author of the NEBB's BET Procedural Standard.



Bill Neudorfer is the President of Neudorfer Engineers has over 38 years of experience in Mechanical Design, Air Barrier Testing, Building Commissioning, Testing, Adjusting and Balancing of HVAC systems, Cleanroom Certification, and Sound and Vibration testing for Neudorfer Engineers. In addition to having achieved numerous NEBB and industry certifications, he is the current Chair of NEBB's BET Committee, is the past Chair of the NEBB Cleanroom Committee and is immediate Past President of NEBB. He has been certified by NEBB since 1986 and has co-authored Cleanroom and BET procedural standards for NEBB. He is a member of ASHRAE, ABBA, and SMACNA.

FEE

- \$1,350 per person and includes lunch on September 9-11, 2013
- Optional Exam Fees and Written exam \$100 (each); Practical exam \$600
- Contact Elana Noel for fees on retests of written and/or practical exams.

REGISTRATION **Registration deadline: Friday, August 30, 2013**

Complete attached Registration Form and send with payment to:

Attention: Elana Noel, NEBB, 8575 Grovemont Circle, Gaithersburg, MD 20877
NEBB Tel: 301.977.3698 FAX: 301.977.9589 Email: elana@nebb.org

HOTEL AND TRAVEL INFORMATION

Hotel: NEBB will send a list of nearby hotels that honor AIA negotiated rooms rates once seminar registration is confirmed. Rates vary from \$84—\$350 plus taxes.

Airport: DCA (Washington Reagan Airport) or IAD (Washington Dulles Airport)

Ground transportation: Taxis, Supershuttle and Metro

NEBB BUILDING ENCLOSURE TESTING SEMINAR REGISTRATION FORM

I will attend the NEBB BET seminar at AIA, Washington DC

Name: _____ Nickname: _____

Company Name: _____ Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Require special assistance: YES / NO

Email: _____ Dietary requests: _____

All hotel reservations must be made directly by the seminar participant. Please refer to the local hotel information in this brochure.

FEE:

NEBB BET Seminar: \$1,350	Government: \$200	\$ _____
Optional Exams Fees:		
Written BET and/or Fundamental Exams: \$100		\$ _____
Practical Exams: \$600 each		\$ _____
BET Procedural Standard \$60 for NEBB Firm and \$95 for Non-NEBB Firms		\$ _____
TOTAL AMOUNT		\$ _____

PAYMENT METHOD:

Check Enclosed made payable to NEBB for Seminar Registration Fee

VISA MASTERCARD AMERICAN EXPRESS

Name on the Card: _____

Credit Card Number: _____ Expiration: _____

Security Code: _____ Signature: _____

FORM & CHECK MUST REACH THE NEBB OFFICE NO LATER THAN FRIDAY, AUGUST 30, 2013 - SUBMIT TO:

Attention: Elana Noel, elana@nebb.org
NEBB, 8575 Grovemont Circle, Gaithersburg, Maryland 20877-4121 |

CONDITIONS:

- Preregistration and prepayment of fees are necessary to ensure participation.
- Cancellation by registrants prior to August 1, 2013, regardless of reason, will be subject to a \$100 service charge. A refund of the pre-paid registration fees will be made less the \$100 service charge.
- Those who cancel between August 1 and August 28, 2013 (unless a replacement can be found) will forfeit the entire registration fee. No shows (those persons registered for the seminar) who do not cancel prior to August 28, 2013 and/or subsequently do not attend the course, will not receive any refund, regardless of the reason. They will also be responsible for their hotel room payment.
- NEBB reserves the right to cancel any seminar having insufficient registrants, in which case, all prepaid registration fees will be refunded in full.
- NEBB cannot be responsible for any losses resulting from cancellation of a seminar.

FOR NEBB USE: Registration Form Received by NEBB and Reservation Made as Requested Above.

Confirmed by: _____ Date: _____

National Environmental Balancing Bureau

8575 Grovemont Circle
Gaithersburg, Maryland 20877

Telephone: 301.977.3698

Fax: 301.977.9589

www.nebb.org



April 2013