

The NEBB Professional

2024 – Quarter 3

Going for Gold:

4 Big Benefits
of Choosing a
NEBB Certified
TAB Firm



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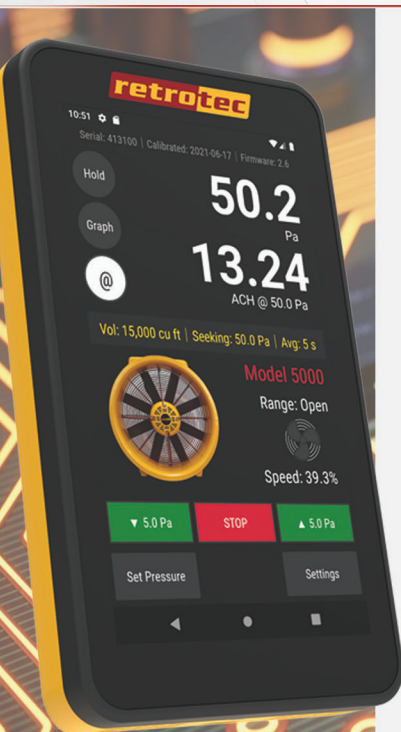
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



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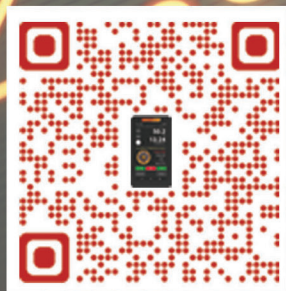
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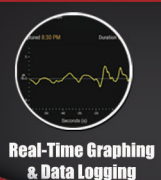
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Contents

Quarter 3 – 2024

- 2 **PRESIDENT'S MESSAGE**
- 3 **MENSAJE DEL PRESIDENTE**
- 7 **EXECUTIVE VICE PRESIDENT'S MESSAGE**

Features

- 9 **Going for Gold: 4 Big Benefits of Choosing a NEBB Certified TAB Firm**
By George E. Martin
- 15 **Experience Luxury and History at The Wigwam Resort, Arizona**
By Kerri Souilliard
- 19 **NEBB 2024 Pre-Conference Program Guide**
- 35 **Q+A: NEBB Across the Generations**
With Tiffany Russell
- 37 **The NEBB Toolbox:**
Instrument Changes for the 2025 Recertification Cycle
By Jeff Schools
- 39 **War Stories: The Residential Challenge**
By William Bailey
- 42 **Andy Nolfo Receives the NEBB George B. Hightower Distinguished Service Award and NEBB Certified Professional Emeritus Status**
By TAB Committee members
- 46 **Chapter Updates**



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President's Message



I have thought of many ways to begin my last message, and all of them lead me to the same point:

Thank you so much to all the members of NEBB I have had the opportunity to work with during this year as the president of this outstanding organization. Thank you for what you do for NEBB, for all your contributions, and above everything, for caring for this organization! No great accomplishment this year could have been possible without the passion each one of you delivers through your work. Thanks a lot!

The NEBB National is around the corner, and the entire team working on this event has put in a lot of effort to make it an unforgettable experience, like any of the previous ones. For this year, we are making changes so that the conference is more appealing, embeds technology along the way, and brings future perspectives to create today our best possible tomorrow. The theme of LEADING TRANSFORMATION INTO A BRIGHT FUTURE aims at two fundamental elements for all of us as members of the organization: the world is changing and will continue to do so; therefore, we need to recognize that we are called upon to lead, transforming ourselves to capitalize on the change and create an excellent future for NEBB.

In addition, the update of the NEBB strategic plan has already been performed with a participative model, where input from several stakeholders has been col-

lected. I once read that human beings step over the same obstacle twice, and this collaborative effort is aimed not only at preventing this but also at continuously building upon our strengths and collective knowledge, to be ready for a future that approaches us at a very fast pace.

This update is ambitious, as it should help the whole organization keep our focus on our upcoming actions for a period of approximately five years. But as we learned from the previous plan, new things will arise that might not have been identified, but the team has demonstrated the necessary savvy to quickly react and deliver on those emerging needs for the betterment of the NEBB organization.

Finally, I would like to close this message by sharing a fundamental lesson from this wonderful year: working with an organization mainly composed of volunteers is unique in nature and should follow a different process to establish goals and track our performance against those goals compared to the way I'm sure we all do in our day-to-day jobs. However, it is one of the best expressions of what we, as volunteers, are: human beings looking to leave a long-lasting legacy in what we do, reaching personal satisfaction while we do it!

Thanks again for allowing me to be your Orchestra Director this year.

A big hug and Pura Vida!

Luis Chinchilla

NEBB President

Mensaje del presidente

He pensado en muchas formas de como iniciar mi último mensaje y todas ellas me llevan al mismo punto: Muchas gracias a todos los miembros de NEBB con quienes he tenido la oportunidad de trabajar este año como presidente de esta organización sobresaliente. Muchas gracias por lo que ustedes hacen por NEBB, por todas sus contribuciones y por encima de todo, ¡por cuidar de esta organización! Ninguno de los grandiosos logros de este año hubiera podido ser posible sin la pasión que cada uno de ustedes entrega mediante su trabajo. ¡Muchas gracias!

La conferencia nacional de NEBB esta a la vuelta de la esquina y todo el equipo que está trabajando en este evento ha realizado múltiples esfuerzos para tener una experiencia inolvidable como todas las anteriores. Para este año, estamos realizando cambios para hacer la conferencia más atractiva, incorporar tecnología durante el proceso y brindar perspectivas futuras para crear hoy el mejor mañana posible. El tema de: LIDERAR LA TRANSFORMACIÓN HACIA UN FUTURO BRILLANTE aspira a dos elementos fundamentales para todos como miembros de la organización: el mundo esta cambiando y continuará de esta forma, por lo tanto, debemos reconocer que estamos llamados a liderar nuestra transformación para capitalizar el cambio y crear un excelente futuro para NEBB.

Adicionalmente, se ha llevado a cabo la actualización del plan estratégico de NEBB, con la implementación de un modelo participativo, donde se consideraron aportes de múltiples partes interesadas. Una vez leí que los seres humanos suelen tropezarse dos veces con el mismo obstáculo y este esfuerzo colaborativo esta enfocado no solo en prevenir esta situación sino también para construir de manera continua sobre nuestras fortalezas y el conocimiento colectivo, estando listos para un futuro que se nos aproxima a un ritmo vertiginoso.

Esta actualización es ambiciosa ya que debería ayudar a toda la organización a mantener nuestro enfoque en las

acciones a realizar por un periodo de aproximadamente 5 años, pero tal y como aprendimos del plan anterior, van a surgir nuevos retos que no necesariamente han sido identificados; no obstante, el equipo ha demostrado tener la sabiduría suficiente para reaccionar rápidamente y cumplir en esas necesidades emergentes para la mejora de la organización de NEBB.

Finalmente, me gustaría cerrar este mensaje compartiendo un aprendizaje fundamental de este año maravilloso: trabajar con una organización que esta compuesta principalmente por voluntarios es de naturaleza única y debe seguir un proceso diferente para establecer metas y como darle seguimiento a nuestro desempeño en comparación con el proceso que estoy seguro cada uno de nosotros sigue en nuestro día a día en el trabajo; sin embargo, es una de las mejores expresiones de lo que los voluntarios somos: seres humanos buscando dejar un legado imperecedero en lo que hacemos alcanzado una satisfacción personal mientras lo realizamos !

De nuevo muchas, muchas gracias por permitirme ser el Director de la Orquesta este año.

Un gran abrazo y ¡Pura Vida!



Luis Chinchilla

Presidente de NEBB

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Letter from the Editor



As we wrap up the third quarter of 2024, I can't help but remark how quickly the year has flown by. But you know what they say: time flies when you're having fun! And what a fun and exciting year it has been at NEBB.

This issue of The NEBB Professional is a testament to the dedication and expertise of the NEBB community, featuring insightful contributions from a variety of seasoned professionals. Their hard work and passion are what make each issue a valuable resource for our readers. It is the expertise and unique perspectives of many that help drive innovation and excellence within NEBB, and we strongly encourage more members to step forward and share their knowledge. Whether you're a

long-time member or new to the organization, your contributions are vital to our collective success.

Looking ahead to the 2024 NEBB Annual Conference, set to take place in late October at the beautiful Wigwam Resort in Arizona, there is much more excitement to come. Offering an incredible opportunity for networking, learning, and celebrating the NEBB community's shared commitment to industry excellence, the annual conference is a known highlight of each year. If you haven't already, make sure to mark your calendars—you won't want to miss it!

As we continue through the latter part of the year, I hope you'll stay engaged with NEBB and consider contributing your ideas and expertise to future magazine issues. Your participation is what makes this publication—and the entire NEBB organization—thrive. I look forward to incorporating new voices of NEBB(perhaps yours?) in future issues.

Thank you for your continued support, and here's to finishing 2024 on a high note!

Kerri Souilliard,
Editor

A graphic with a dark blue background featuring a grid of glowing blue squares and lines. On the left is a large white outline of a lightbulb with three lines radiating from it. To the right of the lightbulb, the text "Share Your Ideas!" is written in large, bold, white sans-serif font. Below this, in a smaller white font, is the text: "The NEBB Professional is a hub of peer tips and expertise, case studies and experiences, upcoming industry trends, and more. Share your story ideas today, so we can help you turn it into an article tomorrow." Further down, the contact information "Contact editor@nebb.org" is displayed in white. At the bottom right is the NEBB logo, which consists of a white icon of a balance scale above the letters "NEBB" in a bold, white, sans-serif font.

Share Your Ideas!

The NEBB Professional is a hub of peer tips and expertise, case studies and experiences, upcoming industry trends, and more. Share your story ideas today, so we can help you turn it into an article tomorrow.

Contact editor@nebb.org



CONTRIBUTORS



► **George E. Martin** is a commissioning agent at Loring Consulting Engineers. He is currently a NEBB TAB CP and serves as a corresponding member of the NEBB TAB, YPN, and Marketing Committees.



► **Tiffany A. Russell** is founder and owner of VTG, LLC located in the Pacific Northwest. She is the current NEBB Chairman for the Cleanroom Performance Testing (CPT) discipline committee. Within NEBB she is a CPT Certified Professional, appointed SME and is a Certified Technician in Sound Measurement. With over 22 years of industry experience, she and has traveled the world supporting customers and is a member of other industry organizations promoting critical environment testing such as IES, IEST, and CETA.



► **William Bailey** has been a member of NEBB since 1997 and a member of ASHRAE since 2003. His hobbies are fishing for largemouth and smallmouth bass on the Tennessee River/Kentucky Lake. William loves teaching classes related to HVAC for Associated Builders and Contractors and Service Group at NMC.



► **Jeff Schools** is the Past President of NEBB and currently works with the NEBB Headquarters team, NEBB committee chairs, and Compliance members as NEBB Technical Director.



Introducing the NEBB YPN Honors Program

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<https://www.nebb.org/nebb-ypn-honors-program/>

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Executive Vice President's Update

Are you ready to elevate your professional skills, connect with industry leaders, and explore the latest innovations in the building industry? Mark your calendars for the 2024 NEBB Annual Conference, taking place in the vibrant and picturesque state of Arizona, from October 31 to November 2, 2024! This year's event promises to be bigger and better, offering unparalleled opportunities for continuing education, vendor engagement, and professional networking.

Continuing education is a cornerstone of the NEBB Annual Conference, and this year we've curated a series of sessions led by industry experts and leaders, with a newly formatted schedule. Topics and speakers have been carefully selected to cover the latest trends, techniques, and technologies in building systems, AI, commissioning, cleanroom performance, and testing, adjusting, and balancing. This is an excellent opportunity to discover how cutting-edge technology is transforming the industry and how you can integrate these advancements into your work.

Between educational sessions, you'll have the chance to explore the expansive vendor hall, where leading companies will showcase their products and services. This is an opportunity to see the latest tools, equipment, and software in action and to speak directly with the manufacturers and suppliers who are driving innovation in the industry. You'll witness live demonstrations of new and innovative products that can enhance your work, expanding your knowledge.

The NEBB Annual Conference isn't just about learning; it's also about connecting. Network with peers, men-



tors, and industry leaders from across the country. Whether you're looking to build new relationships, find potential collaborators, or simply exchange ideas, our conference offers numerous opportunities to expand your professional network.

On Thursday, October 31, 2024, NEBB President Luis Chinchilla will kick off the conference by introducing our opening speaker, Aron Ralston. Mr. Ralston will deliver the opening session, "Between a Rock and a Hard Place: Turning Adversity to Advantage," followed by a warm welcome reception where you can meet fellow attendees in a relaxed and informal setting. With an optional Halloween theme, you might even win an award for Best Costume! Over the next two days of educational sessions, you'll have the opportunity to participate in industry luncheons that encourage discussions on specific topics of interest. In the evenings, unwind after a day of learning and networking by enjoying social events or sampling local cuisine in a fun and engaging environment that fosters lasting connections.

In addition to the exceptional conference programming, attendees will have the chance to experience the natural beauty and cultural richness of Arizona. From breathtaking landscapes to vibrant local culture, Arizona offers the perfect backdrop for this year's conference.

Don't miss the 2024 NEBB Annual Conference. Whether you're looking to advance your career, discover new products, or connect with industry leaders, this event has something for everyone. Register now to secure your spot and join us in Arizona for an unforgettable experience!

We look forward to seeing you there!

Tiffany J. Meyers

NEBB Executive Vice President



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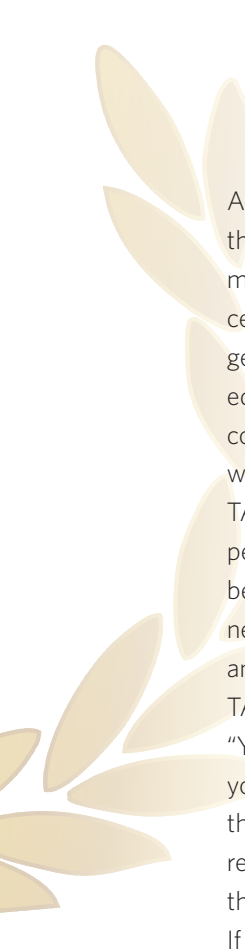
By George E. Martin

I remember the day I was first hired by a TAB firm. I had no prior knowledge of the Testing, Adjusting, and Balancing (TAB) world. My work experience mostly consisted of some mechanical drafting I had done for a chiller manufacturer for a few months and the previous years I had spent working as a laborer for my dad's interior demolition company. Nevertheless, my previous boss took a chance on a young guy with no experience and invested the time, expense, and effort in showing me the ins and outs of the TAB industry. For that, I will honestly be forever grateful.

From the outset, it became clear to me that NEBB certification is the gold standard in the TAB industry. The rigorous process, the high level of technical expertise required, and the commitment to continuous education, all make NEBB Certified TAB work stand out. When you're working with a NEBB Certified Firm, you know you're getting top-tier service—because that's what it takes to earn and maintain that certification.

One day, my boss approached me about becoming a Certified Professional. I had spent some time in a management role in his company—shout out to the team at Independent Testing and Balancing!—and had effectively been running projects and troubleshooting systems for enough time to meet the requirements set forth by NEBB. It was time to take the next step in my career.





At the time, I did not question why I should put myself through the process of taking (and eventually passing) multiple examinations or what the true value of this certification would be. All I saw was an opportunity to get better at my trade and gain credentials that validated my years of experience. Looking back on what becoming a Certified Professional has meant for me, and what it means to operate in that capacity for a NEBB TAB Certified Firm, I can more clearly see the value expected from and brought by the NEBB brand. I remember the first time I received a phone call from an engineer with a question on a project that was not mine, and when I asked why he was calling me and not the TAB contractor assigned to the job, his response was, “You’re NEBB Certified, so I know that you know what you’re doing.” While that may well summarize one of the reasons why so many in the mechanical industry rely on NEBB firms, I can assure you there is more to it than just being a firm that “knows what they’re doing.” If you’ll permit me some of your time, I would like to explain more fully why you should choose to work with

a TAB firm that is specifically NEBB Certified. I will begin with the most obvious benefits and work towards those which may be less apparent.

Technical Competence

Unless you have personally attempted to obtain NEBB TAB Certification, you may not be aware of the level of technical competence required to meet this professional milestone. Becoming a Certified Firm begins with having at least one individual qualify as a NEBB TAB Certified Professional. This individual must meet educational and experience requirements to qualify to apply for certification. Once the application is accepted, the individual must pass three in-person exams—two of which test the candidate’s practical proficiency in air and hydronic balancing, and the third, a written exam to test their theoretical knowledge of mechanical systems, engineering fundamentals and NEBB’s own TAB Procedural Standards. These tests are not easy. I personally know multiple U.S. licensed Professional Engineers who have failed one or more of



these exams. This is typically not due to a lack of technical competence on their part, but to a lack of deep knowledge of the TAB industry and problem-solving methodology. In other words, they have a solid grasp of engineering principles but lack the necessary TAB-specific knowledge to pass the exams. You cannot become a NEBB TAB Certified Professional unless you personally have a deep understanding of how to properly balance a given system, troubleshoot commonly encountered TAB issues, understand the design intent of mechanical systems, and can train others to understand and implement NEBB's TAB Procedural Standards. Obtaining this certification is no small feat, and even having an individual meet this requirement does not automatically qualify a firm for certification. The firm must also demonstrate that they have been providing TAB services for an extended period and be able to produce recommendation letters from architects, engineers, contractors, and building owners to verify that the work they performed resulted in a system that was functioning as intended and to the satisfaction of the occupants of the space.

The simple act of becoming a certified firm already marks a given service provider as meeting the NEBB standard—one of technical excellence and proficiency in the TAB industry. Even so, there is more involved in a firm's maintaining its status as a certified firm. The company needs to meet a requirement of continuous education that ensures that its members are aware of new and developing technologies, changes in mechanical system designs, and new products in the HVAC market. Consequently, it is uncommon for a NEBB TAB Certified Firm to find itself working on a project or system that they do not understand. In fact, when they struggle to understand a system, that tends to be a good indication that there may be a deficiency in the design of the system.

Further, the process to obtain and maintain status as a NEBB TAB Certified firm stands alone relative to other certifying agencies. You may be familiar with AABC, but were you aware that this agency does not require its Test and Balance Engineers to complete a practical exam to verify that they personally know how to balance a system? Likewise, it is common knowledge in the industry that the written exam for TABB



certification is not as rigorous as the one provided by NEBB. This is not to diminish the credibility of anyone possessing either of those certifications. Truly, it is a blessing to the TAB industry as a whole that there are organizations holding their professionals to any kind of standard. Nevertheless, NEBB has continually striven to be the premier international certifying agency and proves that by intentionally providing a process that cannot easily be obtained. This may sound like a bunch of marketing, but I encourage you to do your own research. Ask around, look up the qualifications for all the available TAB certifying agencies (NEBB publishes these on their website for public perusal). Between what you are able to read and what those in the industry are well aware of, I can assure you will come to the conclusion that there is no TAB Firm Certification like the one provided by NEBB. In short, if you are working with a NEBB TAB Certified Firm, you are undoubtedly working with one of the best available firms in the TAB industry.



An Underappreciated Benefit: Communication

Try to imagine working as a mechanical design engineer. You pour countless hours into designing a system, verifying your calculations, drafting up a sequence of operations to cover all possible scenarios under which the system may be operating. You also have to ensure that your system can operate as required for “design days,” those instances when the temperature and/or humidity in your area skyrocket, or when the next polar vortex envelopes your neighborhood. After completing all that—and spending additional time on RFIs and subsequently needed revisions—what do you think would cause you the greatest professional stress?

Unfortunately, no one is perfect, and mistakes are made by even the best engineers. That being said, when the time comes to address any operational issues that arise, what would a design engineer appreciate most? In principle, when any of us faces a challenge, one of the most valuable assets to us at that point in time is a teammate, someone who understands the issue and can “speak our language.” Someone who works collaboratively with you to resolve the issue or minimize its

negative impacts and can communicate their thinking process to you in a way you can readily understand.

Think back to the certification process for NEBB TAB Certified Firms. Recall that this process requires the successful completion of exams that not only show practical ability to perform the balancing of a mechanical system, but also require that the NEBB Certified Professional have a grasp of fundamental engineering principles. They are tested on basic thermodynamics, fluid mechanics, fan and pump laws, and more. Where there are plenty of TAB firms out there that can record readings on air or hydronic systems, one that is NEBB Certified understands the how and why behind the readings. They understand the reasoning used by an engineer in the design process, even if they themselves are not engineers. Thus, they are capable of speaking with an engineer “at eye level,” bringing that same understanding to the table along with their procedural expertise.

What does all this mean? Simply, it means that a NEBB TAB Certified Firm and its Professional can more readily identify issues, explain why these are occurring, and work with the mechanical contractor and design en-

gineer towards a resolution. This results in less time wasted trying to effectively communicate. A qualified TAB firm acts as a bridge between the contractors and engineers on a project and needs to be able to speak to both parties, combining both technical and practical expertise to convey recommendations that unite the team towards a solution to the problem. This turns into less downtime, faster project completion, and—for those concerned with the financial aspect of a project—money saved.

The Network

This is not to say that all NEBB Certified Firms have a full understanding of every aspect of any given mechanical system for all possible environments. Though NEBB does its best to ensure that the highest standard is set for its members, any individual will still have gaps in their personal knowledge. In those situations, what does a NEBB TAB Certified firm have that sets it apart from firms certified by other agencies? They have access to a global network of professionals that are ready to lend a hand.

I can attest to this personally, but ask around, and you will find that many other NEBB TAB Certified Professionals have reached out to each other for help in understanding and resolving issues on their projects. Even among local competitors, I have seen NEBB's members collaborate and support each other. This stems from a fundamental belief that upholding the NEBB standard benefits all NEBB Certified Firms – *a rising tide lifts all boats*, so to say.

In the rare event where no one in a given area understands a given system design or issue, NEBB Headquarters holds an office for Technical Director Jeff Schools to offer additional advice and support. In the event that he cannot personally assist, the office can provide connections to any number of its Certified Professionals, many of whom also hold NEBB Certifications (often in more disciplines than just TAB) and some of whom are licensed professional engineers working to design and balance systems all over the world. The NEBB Network provides such a powerful support system for its members that I have yet to

see an instance where a problem goes unidentified and unexplained.

The globality of this network cannot be over-emphasized. Current NEBB President Luis Chinchilla is from Costa Rica. The systems designed there vary widely from what one might find in the Pacific Northwest of the United States where Phil Emory, NEBB's immediate Past President, hails. From the US to Costa Rica, to the Middle East, and Australia, NEBB TAB Certified Firms work on all manner of systems designed for all conceivable conditions. As a whole, NEBB has literally seen it all, so when you work with a NEBB TAB Certified Firm, you benefit from the knowledge possessed not only by that firm, but also the entire NEBB network.

When All Else Fails: The Quality Assurance Program

In rare cases, a NEBB TAB Certified Firm fails to perform its work to the standard established by NEBB. Most often, when a report is presented with false or inaccurate information, the end user will note the discrepancy, and the NEBB TAB Certified firm will correct the matter (typically involving disciplinary action taken against the technician who failed to perform the TAB



work correctly) and the matter will end with the reputations of NEBB and that particular firm intact. In even rarer instances, a firm could refuse to meet contractual obligations and insist on providing subpar workmanship. If this happens, the end user may feel trapped and, if they are working with a firm that is not certified, they very well may be. However, this is not the case when the firm in question is certified by NEBB.

NEBB's Quality Assurance Program is a fail-safe that ensures no end user who chose to rely on a NEBB TAB Certified Firm is left in the lurch. The program allows for the client in question to contact NEBB Headquarters and file a complaint, request an investigation and (depending on the results of the investigation, even have another NEBB TAB Certified Firm head to their location and perform proper balancing of their system. If an individual firm does not uphold the NEBB core value of integrity, NEBB will uphold that value itself. While the specifics of the Quality Assurance Program are more involved than the summary laid out here, these are published on NEBB's website for the public to review. Again, this is yet another means by which NEBB separates itself from other certifying organizations. The protection afforded to those who rely on the NEBB standard ensures that they are never left feeling disappointed with the end result.

What To Do with This Information

This article has laid out only four of the many benefits to be had from working with a NEBB TAB Certified Firm for design professionals, contractors, and building owners/occupants. What do you do now with all this information?

If you are a design professional concerned with ensuring that your clients receive the best quality end product, looking for a collaborative team member who can communicate with your team and clients effectively to resolve issues on a project, and eager to bring your projects to a successful close with a system you know has been properly balanced, you should consider specifying NEBB TAB Certified Firms.

If you are a Contractor looking for a TAB Contractor in your area to help work through a particularly com-

plicated project, do not hesitate to look up NEBB TAB Certified Firms on the NEBB website. The information is publicly available, and you will find not just the company name, but the name of the individual Certified Professional with whom you will be working. Build a relationship with these firms and see how they support your efforts to effectively and efficiently close out projects with minimal downtime.

If you are a Building Owner or Owner's Representative and are experiencing difficulties getting your space to feel comfortable, you are also encouraged to use the NEBB website to find a Certified Firm in your area who can provide you with the service and support you need to ensure that the systems in your building are functioning as designed.

Lastly, if you are a NEBB Certified Professional and have reviewed the above article, then you know what is expected of you. All NEBB Certified Professionals and Firms are expected to provide the best possible service to their clients and ensure that the TAB work performed is of the highest quality. If you need help on a project, do not hesitate to reach out to other firms near you for advice and support. Truly, in the world of NEBB, a rising tide does lift all boats. The NEBB network is one that you can help contribute towards building up. Work with your clients and design professionals to validate your certification. In doing so, you set your own firm apart, but you also clearly illustrate the benefits of choosing a NEBB TAB Certified Firm, the gold standard in the industry. ●





Experience Luxury and History at The Wigwam Resort, Arizona

By Kerri Souilliard

Nestled in the heart of Arizona's serene desert landscape, The Wigwam Resort stands as a testament to timeless luxury and Southwestern charm. As NEBB Professionals prepare for the 2024 NEBB Annual Conference, held during late October, this historic landmark promises not only a comfortable stay but an enriching experience steeped in history, offering a range of amenities and activities to enhance your visit.

History and Legacy

Originally established in 1918 as a gathering place for the Goodyear Tire & Rubber Company executives, The Wigwam Resort has evolved into a premier destination while retaining its historic allure. Situated in Litchfield Park, just outside Phoenix, Arizona, this resort has witnessed nearly a century of hospitality and remains an iconic fixture in the region. The architecture reflects a blend of adobe-style authenticity and modern amenities, ensuring a unique and memorable stay.

Reputation for Excellence

Renowned for its exceptional service and warm hospitality, The Wigwam Resort has garnered a reputation that extends far beyond Arizona. It consistently receives accolades for its luxurious accommodations,

picturesque surroundings, and commitment to guest satisfaction. Whether you are attending a conference or seeking a weekend retreat, The Wigwam Resort offers an unparalleled experience that combines comfort with elegance.

Amenities to Enhance Your Stay

Upon arrival, NEBB Professionals will find themselves immersed in a world of comfort and convenience. The resort boasts a variety of accommodations, including traditional casitas and suites, each designed to provide a relaxing retreat after a day of conferences or exploration. Modern amenities such as high-speed internet, flat-screen televisions, and plush bedding ensure that guests can unwind in style.

For those looking to indulge, The Wigwam Resort features a full-service spa where guests can rejuvenate with a massage or facial, ensuring a peaceful escape from the demands of daily life. Three championship golf courses designed by renowned architects offer challenges for golf enthusiasts amid stunning desert vistas. Additionally, multiple pools, including a designated adults-only pool, provide the perfect oasis for relaxation under the Arizona sun.

■ Exploring the Rich History of The Wigwam Resort

A Legacy of Luxury and Heritage:

- **Origins:** Founded in 1918 by Goodyear Tire & Rubber Company executives as a private retreat, The Wigwam Resort has evolved into a symbol of timeless elegance and Southwestern hospitality.
- **Historic Architecture:** The resort's distinctive adobe-style architecture reflects its early 20th-century origins, blending traditional craftsmanship with modern comforts.
- **Celebrity Guests:** Over the decades, The Wigwam Resort has hosted numerous celebrities and dignitaries, drawn to its secluded charm and luxurious amenities.

Cultural Insights and Activities:

- **Native American Heritage:** Explore the rich cultural heritage of the region through guided tours and workshops focusing on Native American craftsmanship and traditions.
- **Local Art and Museums:** Discover Southwestern artistry at nearby galleries and museums, showcasing works that capture the essence of Arizona's vibrant cultural landscape.
- **Historic Landmarks:** Visit nearby historical sites that offer glimpses into Arizona's past, from ancient petroglyphs to well-preserved adobe structures.

Outdoor Adventures:

- **Championship Golf Courses:** Tee off on one of The Wigwam Resort's three championship golf courses, designed by legendary architects and set against breathtaking desert vistas.

- **Desert Exploration:** Embark on guided hikes through scenic desert trails, encountering diverse wildlife and enjoying panoramic views of the Sonoran Desert.
- **Hot Air Balloon Rides:** Experience the beauty of Arizona from above with exhilarating hot air balloon rides, offering unparalleled views of the desert landscape.

Culinary Delights:

- **Southwestern Cuisine:** Indulge in a culinary journey through Southwestern flavors at the resort's restaurants, featuring locally sourced ingredients and innovative dishes.
- **Farm-to-Table Dining:** Savor fresh produce and meats sourced from local farms, ensuring a farm-to-table dining experience that celebrates Arizona's bounty.
- **Mixology and Tastings:** Enjoy craft cocktails and tastings of regional wines, highlighting the diversity and quality of Arizona's burgeoning wine and spirits scene.

Wellness and Relaxation:

- **Spa Retreat:** Pamper yourself at the resort's full-service spa, offering a range of treatments designed to rejuvenate both body and mind amid tranquil surroundings.
- **Yoga and Fitness:** Stay active with yoga classes, fitness centers, and outdoor activities that promote wellness and vitality throughout your stay.
- **Poolside Relaxation:** Unwind at the resort's pools, including an adults-only oasis, where you can soak up the Arizona sun in a serene and luxurious setting.





Activities for Every Interest

Late October at The Wigwam Resort offers an array of activities tailored to every interest. The mild Arizona climate during this season provides ideal conditions for outdoor exploration and recreation. Guests can embark on guided hikes through nearby desert trails, experiencing the unique flora and fauna of the Sonoran Desert firsthand.

For those interested in cultural experiences, the resort offers tours and workshops focusing on Native American heritage and craftsmanship, providing insight into the rich history of the region. Art enthusiasts can visit nearby galleries showcasing Southwestern art, while history buffs can explore local museums detailing the area's past.

Sports enthusiasts will find plenty to enjoy at The Wigwam Resort, with options ranging from tennis and pickleball courts to fitness classes and yoga sessions. Adventurous guests can also try their hand at horseback riding or hot air balloon rides, taking in panoramic views of the desert landscape from above.

Dining Experiences

Culinary excellence is a hallmark of The Wigwam Resort experience. Guests can savor a variety of dining options, from casual fare to fine dining, all featuring

locally sourced ingredients and inspired Southwestern flavors. The resort's restaurants offer a blend of traditional dishes and innovative cuisine, ensuring a dining experience that satisfies every palate.

As NEBB Professionals prepare for the 2024 NEBB Annual Conference at The Wigwam Resort in late October, they can look forward to a stay characterized by luxury, comfort, and cultural richness. Whether attending sessions, networking with peers, or exploring the surrounding desert landscape, The Wigwam Resort offers an unforgettable experience tailored to enhance both professional engagement and personal relaxation. Embrace the allure of Arizona's history and hospitality at The Wigwam Resort—a destination where every visit becomes a cherished memory.

In conclusion, The Wigwam Resort invites NEBB Professionals to indulge in a blend of luxury, history, and relaxation during their stay in late October. Whether attending the 2024 NEBB Annual Conference, enjoying recreational activities, or simply unwinding amid the scenic beauty of Arizona, The Wigwam Resort promises an experience that exceeds expectations. Discover the essence of Southwestern hospitality and make your visit to The Wigwam Resort an unforgettable journey.

■ Unique Experiences at The Wigwam Resort

- **Historic Oasis:** Originally conceived as a haven for Goodyear executives in 1918, The Wigwam Resort has retained its historic charm while evolving into a modern luxury destination. Its original adobe architecture and lush, expansive grounds provide a serene backdrop for relaxation and exploration.
- **Historical Echoes:** Guests can explore the resort's storied past through curated historical tours. Discover the secrets of the Wigwam Bungalows, each named after Native American tribes, and learn about the resort's transformation from a private escape to a renowned international destination.
- **Golfing Legacy:** Tee off at one of Arizona's oldest and most revered golf resorts. The Wigwam boasts three championship courses, including the famed Gold Course designed by Robert Trent Jones Sr., where golf legends have played and history has been made.
- **Cultural Immersion:** Delve into the rich heritage of the Southwest with authentic Native American experiences. Engage in interactive workshops led by local artisans, learning traditional crafts such as pottery and weaving, and gain insights into the customs and rituals of indigenous tribes.
- **Exquisite Dining:** Elevate your culinary journey with farm-to-table cuisine at Litchfield's, the resort's signature restaurant. Enjoy dishes crafted from ingredients sourced directly from local farms, ensuring freshness and flavor that capture the essence of Arizona's agricultural bounty.
- **Family-Friendly Fun:** The Wigwam Resort caters to families with an array of activities, including Kids Club programs that blend entertainment with education. From nature walks to arts and crafts, children can engage in supervised activities while parents enjoy their own leisure pursuits.
- **Wellness Oasis:** Rejuvenate body and soul at The Wigwam's award-winning Red Door Spa. Unwind with signature treatments inspired by the desert environment, or simply relax by the spa's private pool, offering a peaceful retreat from the hustle and bustle of everyday life.
- **Signature Events:** Experience special events that celebrate the resort's unique heritage and the vibrant culture of the Southwest. From seasonal festivals to exclusive culinary evenings, each event offers a glimpse into the resort's commitment to creating unforgettable memories. ●





2024 Annual Conference

Phoenix, Arizona • October 31 - November 2



NEBB 2024 PRE-CONFERENCE PROGRAM GUIDE

LEADING TRANSFORMATION INTO A BRIGHT FUTURE



MESSAGE FROM THE PRESIDENT



Welcome, Bienvenidos, to Sunny and Beautiful Phoenix, Arizona for the 2024 NEBB Annual Conference!!

Some great authors have expressed the notion that what we are today has been shaped by those experiences we have in life. Several years ago, I had the opportunity to live for a period in Chandler, Arizona, which was a life shaping experience for me. In this place I had the opportunity to meet wonderful people, develop new friendships and develop a connection with the outdoors and nature, which you can experience wherever you go in Arizona. Hopefully this year's location allows you to try some of these great experiences as well and that you will leave the NEBB Annual Conference with new friends and priceless experiences!

Some fun facts regarding Arizona are that it is the 48th state and the last of the contiguous states to be admitted to the Union, achieving statehood on February 14, 1912, coinciding with Valentine's day.

The etymology of the state name ranges from a Spanish name derived from the Oódhm name alí sonak, meaning "small spring" to a Basque phrase that means "the good oak" to a final misconception on the state's name associated with the Spanish term Árida Zona "Arid Zone". The state is home to several native American groups and up to about one-quarter of the state is made up of Indian reservations. It also boasts a diversity of ancestry groups and has more than 10 non-English languages present.

Such a diverse landmark is a perfect scenario to host a group as unique as NEBB, with 8 different certifications for Firms, Professionals, and Technicians, 22 chapters and a technical individual's population of approximately 650+ Certified Firms, 1,900+ Certified Professionals, and 1,400+ Certified Technicians, worldwide.

Rocio and I sincerely hope that you can take advantage of the great venue for this year, enjoy the nice weather, the many activities planned and the renewed format for the annual conference. The new schedule was shaped to allow for more interaction of the attendees between themselves and the vendors, while staying acquainted with the topics presented and receiving an update on the progress made this year on our key programs, including deliverables by all of our Committees and our future plans.

I would like to close with a big Thank You to all the CTs, CPs, NEBB certified firms, NEBB Chapters, NEBB Staff, NEBB Committees, NEBB Board, NEBB EFC and external collaborators that contribute relentlessly to make NEBB an organization to be proud of.

Pura Vida,

A handwritten signature in black ink, which appears to read "Luis Chinchilla". The signature is stylized and fluid.

Luis Chinchilla
NEBB President



2024 NEBB CONFERENCE SCHEDULE AT A GLANCE

TIME	MONDAY – OCTOBER 28
8:00 am – 5:00 pm	TAB CT Seminar – <i>Registration Required</i>
	TUESDAY – OCTOBER 29
8:00 am – 5:00 pm	TAB CT Seminar – <i>Registration Required</i>
	WEDNESDAY – OCTOBER 30
8:00 am – 5:00 pm	TAB CT Seminar and Exam – <i>Registration Required</i>
8:00 am – 5:00 pm	NEBB Exam Day – <i>Registration Required</i>
8:00 am – 5:00 pm	Closed Committee Meetings
12:00 pm – 6:00 pm	Annual Conference Pre-Registration Open
7:00 pm – 10:00 pm	Appreciation Dinner – <i>Invite Only</i>
	THURSDAY – OCTOBER 31
7:00 am – 6:00 pm	Annual Conference Registration and NEBB Store
7:00 am – 1:00 pm	NEBB 26th Annual Golf Tournament – <i>Registration Required</i>
3:00 pm – 4:00 pm	NEBB Past President’s Meeting – <i>Closed</i>
4:30 pm – 6:00 pm	Opening Session: Welcome and Keynote Presentation Keynote Speaker: Aron Ralston
6:00 pm – 9:00 pm	Get Acquainted Reception – <i>Full Conference and Guest Registrants Only</i>
	FRIDAY – NOVEMBER 1
7:00 am – 8:00 am	Breakfast
7:00 am – 4:00 pm	Annual Conference Registration and NEBB Store
7:00 am – 5:00 pm	Exhibit Hall Hours
8:00 am – 10:00 am	NEBB Discipline Panel: How To Find NEBB Work
10:00 am – 10:30 am	NETWORKING BREAK
10:30 am – 11:30 am	TECHNICAL TRACK SESSIONS Track 1 (TAB): Measurement of Outdoor Air Intakes on Rooftop Air Handling Units Track 2 (Technology): A Business Prospect: Understanding How AI Permeates NEBB
11:30 am – 12:30 pm	NETWORKING LUNCHEON
1:00 pm – 2:30 pm	TECHNICAL TRACK SESSIONS Track 1 (Cx): Fault Detection and Diagnostics (FDD) Track 2 (Business & Leadership): Building Your Brand: Marketing Essentials for NEBB Professionals and Firms

**NOTE: Track sessions and meals are open to Full Conference Registrants only.*



2024 NEBB CONFERENCE SCHEDULE AT A GLANCE

TIME	SATURDAY - NOVEMBER 2
7:00 am – 8:00 am	Breakfast
7:00 am – 2:00 pm	Annual Conference Registration and NEBB Store
7:00 am – 6:00 pm	Exhibit Hall Hours
8:00 am – 10:00 am	Business and Leadership Panel: NEBB and Business Segment leading industry transformation
10:00 am – 10:30 am	NETWORKING BREAK
10:30 am – 11:30 am	TECHNICAL TRACK SESSIONS Track 1 (CPT and IAQ): Facility Qualification: Cleanroom Certification and IQ-OQ-PQ Track 2 (TAB / Cx): Working Together: TAB & Commissioning for a Successful Project
11:30 am – 12:30 pm	NETWORKING LUNCHEON
1:00 pm – 2:00 pm	TECHNICAL TRACK SESSIONS Track 1 (TAB): Methods of Visualization for Hotel Smoke Removal Systems Track 2 (CPT / FHT): How Not to Test a Fume Hood!
2:30 pm – 3:30 pm	Town Hall - <i>Full Conference Registrants Only</i>
3:30 pm – 4:00 pm	Closing Session - <i>Full Conference and Guest Registrants Only</i>
4:00 pm – 6:00 pm	Vendor Reception - <i>Full Conference and Guest Registrants Only</i>
SUNDAY - NOVEMBER 3	
8:00 am – 12:00 pm	Board of Directors Meeting – <i>OPEN</i>

**NOTE: Track sessions and meals are open to Full Conference Registrants only. Schedule times subject to change.*



THANK YOU TO OUR 2024 CONFERENCE SPONSORS

SILVER AND BRONZE LEVEL SPONSORS

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PLEASE PLAN ON VISITING OUR EXHIBITORS!

Exhibits will be set up for learning opportunities between sessions.
The following exhibitors have signed up with more to come!





2024 NEBB CONFERENCE ADVANCE PROGRAM

OPENING SESSION: THURSDAY, OCTOBER 31 • 4:30 PM – 6:00 PM

1-CONTINUING EDUCATION CREDIT (CEC) AND 1-AIA CREDIT (LU)



WELCOME AND KEYNOTE PRESENTATION

KEYNOTE SPEAKER: Aron Ralston

Between a Rock and a Hard Place: Turning Adversity to Advantage

Aron Ralston's extraordinary story of survival after an 800-pound boulder trapped him in a remote Utah canyon captured global headlines in 2003. In his New York Times best seller, *Between a Rock and a Hard Place*, the Oscar-nominated film, *127 Hours*, and on stage, Ralston takes audiences vicariously through those six days without water, means of communication, or hope of escape, to the ecstatic moments when he freed himself by severing his own arm.

Following a miraculous rescue spearheaded by his mom and with the aid of prosthetics he helped design, Aron returned to his outdoor passions, completing elite mountaineering projects which remain unrepeated even to this day. He has interviewed with Tom Brokaw, David Letterman, and Jay Leno, and received standing ovations and industry-leading testimonials from over five hundred groups around the world. Attendees credit Ralston's story with encouraging them through disease, disability, and loss, even saving their lives from suicide and depression.

Aron's incredible triumph in the face of insurmountable odds inspires audiences to harness the power of their deepest motivations, relationships, and mindset to transform personal and professional "boulders" into their blessings. Today, Ralston continues to pursue high-altitude adventures, advocates for wilderness protection, and tries to keep up with his two spirited children, Leo and Elisabetta.

2024 NEBB CONFERENCE ADVANCE PROGRAM

MORNING PANEL SESSIONS: FRIDAY, NOVEMBER 1 • SATURDAY, NOVEMBER 2

FRIDAY PANEL SESSION: NEBB DISCIPLINE PANEL

2-CEC AND 2-AIA (LU) CREDITS

8:00 am – 10:00 am NEBB Discipline Panel



SPEAKERS: Luke Bumgardner – Commissioning Engineer, Newcomb & Boyd
Bohdan Fedyk – FHT Consultant, Independent Consultant
Mike Peak – TAB/BET Supervisor, Testcomm, LLC
Don Pittser – President, JEDI Balancing
Chad Mathews – Principal, Air Technologies, Inc.
Tiffany Russell – CEO, VTG, LLC

MODERATOR: Jeff Schools – Technical Director, NEBB

This will be a panel discussion that includes the Chairs of each NEBB technical committee (BET, Cx, CPT, FHT, S&V and TAB). We will be discussing how each discipline proceeds to find work in their specific aspect of building performance and what distinct methods they use for finding work in their respective fields.

SPEAKER BIOS: Panel speaker bios can be found on the NEBB 2024 conference website.

SATURDAY PANEL SESSION: BUSINESS AND LEADERSHIP PANEL

2-CEC AND 2-AIA (LU) CREDITS

8:00 am – 10:00 am NEBB and Business Segment Leading Industry Transformation



SPEAKERS: Aaron Blawn – Intel Corporate Services Site Manager, Intel Arizona
Chester Zelaya – Senior VP Implant Network Operations, Edwards Lifesciences Americas
Juan Madrigal – Commissioning and Qualification Coordinator for CAPEX Projects
Americas, Bayer U.S. LLC
Greg Jackson – Director, Facility Operations, TSMC Arizona Corporation

MODERATOR: Luis Chinchilla – NEBB President / General Manager, OPIA C.R.

Today's business environment is changing at an astonishing pace. NEBB firms and professionals need to accelerate the continuous improvement cycle in our business and having representatives from leading companies in various key industry sectors is an excellent opportunity to directly interact with them and obtain information about those trends and make adjustments.

SPEAKER BIOS: Panel speaker bios can be found on the NEBB 2024 conference website.



2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: FRIDAY, NOVEMBER 1 • 10:30 AM – 11:30 AM

TRACK 1: TAB

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am **TAB: Measurement of Outdoor Air Intakes on Rooftop Air Handling Units**

SPEAKER: David Dougan – President, EBTRON, Inc.



This session will discuss the measurement uncertainties associated with the direct measurement of outdoor air intake flow rates using both permanently mounted and hand held measurement techniques based on laboratory testing. Best-practice solutions will be discussed.

SPEAKER BIO: David Dougan has more than 40 years of experience with EBTRON, Inc., a leading manufacturer of airflow measurement technology. Dougan has been the President of EBTRON since 1993 with prior experience as the Director of Product Development for the Company.

TRACK 2: TECHNOLOGY

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am **A Business Prospect: Understanding How AI Permeates NEBB**

SPEAKER: Javier Hernandez – Mecatronic Engineer, OPIA C.R.



AI leverages intelligence occurring in nature, such as learning, social behavior, biological evolution; commonly used for optimization, predictive controls, energy savings, weather forecasting, and fault detection. NEBB can decide how AI integrates with disciplines like TAB, CPT, and Cx. Some examples of NEBB-AI applications include Virtual Commissioning and Accelerated TAB.

SPEAKER BIO: Javier Hernandez is a Mecatronic Engineer from the Costa Rican Technology Institute, working for OPIA Operaciones e Ingenieria de Avanzada de Centroamerica S.A. in the area of process validation. At the University level, he was an active member of the Mecatronic Students association and has become self versed in several AI principles, even leveraging on this knowledge for his graduation project "Partial Automation Proposal for HVAC System Balancing Optimization". He likes to exercise during his free time, also working actively with his church.

2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: FRIDAY, NOVEMBER 1 • 1:00 PM – 2:30 PM

TRACK 1: Cx

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:30 pm

Fault Detection and Diagnostics (FDD)

SPEAKER: Ken Gilbert – Solutions Consultant, Automated Logic Corporation



This session will define Fault Detection and Diagnostics (FDD) and examine the origins and evolution of FDD. In addition, we will look at some of the types of FDD and how it is implemented on systems today. Lastly, how FDD and commissioning activities complement each other will be discussed.

SPEAKER BIO: Ken brings significant industry experience to ALC, having served in various sales and consultative roles. Ken graduated from Georgia Tech with a Bachelor of Science in Industrial Management and recently completed his MBA from the University of Georgia. Ken is a LEED AP actively involved with ASHRAE and BACnet International.

TRACK 2: BUSINESS & LEADERSHIP

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:30 pm

Building Your Brand: Marketing Essentials for Professionals & Firms

SPEAKER: Caroline Lane – Partner, ProperExpression



This workshop will equip NEBB Certified Professionals with actionable marketing strategies to enhance their reach and win more contracts. Learn how to improve your website and articulate your unique value, with opportunities for tailored advice and feedback.

SPEAKER BIO: Caroline Lane spent 10+ years helping start-ups and high-growth companies impact the bottom line. From being employee number 2 at a start-up to assisting a successful exit, she has built marketing functions from the ground up, including lead generation, product marketing, inbound marketing, and marketing communications for several tech companies in the B2C and B2B space.



2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: SATURDAY, NOVEMBER 2 • 10:30 AM – 11:30 AM

TRACK 1: CPT AND IAQ

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am **Facility Qualification: Cleanroom Certification and IQ-OQ-PQ**



SPEAKER: Mike Turnure – Contamination Control Product Specialist, TSI, Inc.

Cleanroom testing can be referred to using various terms including Certification, Validation, Qualification, Commissioning, and Monitoring. This presentation discusses what specific certification activities are required for various industry scenarios. This includes a detailed overview of formal Installation, Operational and Performance Qualification activities.

SPEAKER BIO: Mike Turnure is a cleanroom professional with 25 years of experience in design, construction, certification and qualification of cleanrooms and related infrastructure. Mike is a longstanding NEBB-Certified Professional in Cleanroom Performance Testing. His career has included managing teams in cleanroom certification, equipment qualification, formal facility and critical utility IQ-OQ-PQ, and metrology.

TRACK 2: TAB/Cx

1-CEC AND 1-AIA (LU) CREDIT

10:30 am – 11:30 am **Working Together: TAB & Commissioning for a Successful Project**



SPEAKERS: Brian Keller – Principal, Cleary Zimmermann Engineers, LLC
Jonathen Lloyd – Commissioning Engineer, Lloyd's T.A.B Pty
Don Pittser – President, JEDI Balancing
Glenn Putnam – Director of Utilities, Texas Christian University

The NEBB TAB Procedural Standard 9 was approved in 2019. How does it affect what you and your business does on a day to day basis? NEBB CP's should understand the new changes in NEBB TAB Procedural Standard 9. Once their NEBB Certified TAB Reports are NEBB TAB Procedural Standard 9 compliant, they can mentor other NEBB Firms in their area as well as educate the local engineering community. We will clearly explain the NEBB TAB Procedural Standard 9 as we were the authors of the document. We will help the NEBB CP and Certified Firms avoid reporting problems by educating them on what is required to be included in a NEBB Certified TAB Report to remain NEBB TAB Procedural Standard 9 compliant.

SPEAKER BIOS: Panel speaker bios can be found on the NEBB 2024 conference website.

2024 NEBB CONFERENCE ADVANCE PROGRAM

TECHNICAL TRACK SESSIONS: SATURDAY, NOVEMBER 2 • 1:00 PM – 2:00 PM

TRACK 1: TAB

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:00 pm

Methods of Visualization Testing for Hotel Smoke Removal Systems

SPEAKER: Jim Kelleher – Regional General Manager, Integra Testing Services



This presentation illustrates methods of conducting smoke removal visualization testing in a hotel environment: atrium, ballroom, and corridor. In this review and discussion of an actual field performance test, we explore smoke generating equipment, effects on field of view, and factors that helped decide the best solution for each scenario.

SPEAKER BIO: Jim is the Regional General Manager for Integra Testing Services' Eastern Region with over 30 years' experience in the HVAC industry. He is Certified NEBB CP in TAB, BSC, RCx; and ICB TABB-S, FSD-S; ACAC CIEC; and holds Master HVAC licenses in the states of Maryland and Virginia.

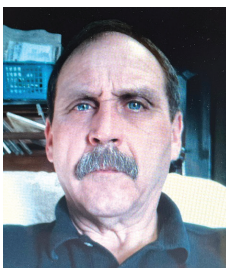
TRACK 2: CPT/FHT

1-CEC AND 1-AIA (LU) CREDIT

1:00 pm – 2:00 pm

How Not to Test a Fume Hood!

SPEAKER: Bohdan Fedyk – FHT Consultant, Independent Consultant



The most important aspect of fume hood testing is the safe containment which in turn protects the user and environment. While this is the main concern, we cannot be distracted from this mission by trying to mask this issue with an environmentally unconscious concern of the tracer gas itself.

SPEAKER BIO: One of founding members of the NEBB FHT committee in 2006 and current chairman as well as member of the 2016 and current member of the ASHRAE 110 committee. Testing laboratory environs for over 35 years, whether fume hoods, bio-safety cabinets, or whatever!



2024 NEBB CONFERENCE INFORMATION

THE WIGWAM RESORT

300 E. Wigwam Blvd • Litchfield Park, AZ 85340 • (844) 239-1641



NEBB's Discounted Rates: \$279.00 (Single/Double Rooms)

To ensure the NEBB discounted room rate, reservations must be made by Thursday, September 26, 2024. Group rooms may sell out, so don't delay! Rooms are subject to availability. Reservations made after September 26 will be on a space-available-and-prevailing-rate basis. Taxes and resort fees are not included in room rates.

2024 NEBB Conference Fees

FULL CONFERENCE REGISTRATION	\$1350
<ul style="list-style-type: none"> • Opening Session on October 31 • Get Acquainted Reception on October 31 • Two Full days of Technical Track Sessions (November 1 and 2) • Breakfast, Lunch, Morning and Afternoon Breaks (November 1 and 2) • Vendor Reception and Prize Giveaway on November 2 	
GUEST REGISTRATION	\$450
<ul style="list-style-type: none"> • Opening Session on October 31 • Get Acquainted Reception on October 31 • NEBB Guest Event (Sedona Charter) on November 1 • Vendor Reception and Prize Giveaway on November 1 	
GUEST REGISTRATION - MINOR (18 AND UNDER)	\$200
<ul style="list-style-type: none"> • Opening Session on October 31 • Get Acquainted Reception on October 31 • NEBB Guest Event (Sedona Charter) on November 1 • Vendor Reception and Prize Giveaway on November 1 	

2024 NEBB CONFERENCE ACTIVITIES

GET ACQUAINTED RECEPTION: THURSDAY, OCTOBER 31 • 6:00 PM – 9:00 PM



Halloween Theme Reception at The Wigwam Resort Lawn!

Join us if you Dare... for a Trick or Treat Halloween Scare...We've got the tasty bites and booze, YOU get to bring the BOO'S.

Enjoy an evening of mingling with your fellow conference attendees and showing off your most imaginative costume! This year's Get Acquainted Reception will be held on the Wigwam Lawn immediately following the Opening Session.

ATTIRE: If you've got it, haunt it. Costumes are highly encouraged! Prizes will be awarded for Scariest Costume, Funniest Costume and Overall Best Costume.

CONFERENCE GUEST EVENT: FRIDAY, NOVEMBER 1 • 8:00 AM – 4:00 PM



Sedona Bound!

Join us Friday, November 1st into Arizona's geological marvel, Sedona! Guests will be dropped off in Uptown Sedona which has one of the most happening shopping districts in town. Home to many different shops, one great museum, restaurants and red rock views! Spend the day strolling through this beautiful quaint town, popping in and out of boutiques and snacking at some local restaurants!

Please note, this excursion is a 2-hour drive from The Wigwam to Sedona, plus a 2 hour return. There will be bathrooms available on the charter bus.

**This event is included in the Guest Registration, with limited capacity - RSVP is required to attend.*



NEBB 26TH ANNUAL GOLF TOURNAMENT

THE WIGWAM RESORT'S GOLF RED COURSE

Join us for the the 26th Annual Golf Outing Thursday, October 31st, 2024 at Wigwam's Red Course! The Red Course was designed by Arizona Golf Hall of Fame member and golf course architect Robert "Red" Lawrence. Nicknamed the "Desert Fox" for his brilliant design of Desert Forest Golf Club in Carefree, Arizona, Lawrence's other notable designs include the Championship Golf Course at the University of New Mexico in Albuquerque and Tubac Golf Resort in Tucson where the movie Tin Cup was filmed.



If you are interested in playing golf during the 2024 Annual Conference, please send an email directly to events@nebb.org.

AGENDA

7:00 am – 7:45 am: Grab n' Go Breakfast

8:00 am: Shotgun Start

12:30 pm: Lunch and Awards



2024 NEBB CONFERENCE PAYMENT INFORMATION

PAYMENT INFORMATION

Online registration is payable by credit cards (American Express, MasterCard and Visa).

OPTIONAL ITEMS

Activity	Date/Time	Cost
26th Annual Golf Tournament	October 31, 2024 (7:00 am – 1:00 pm)	\$150
Golf Club Rentals	October 31, 2024	\$65
NEBB Logo Polo Shirt (S – 5XL)	Pick up at Conference Registration Desk	\$45
Optional NEBB Exam Day	October 30, 2024	Contact certification@nebb.org for details and pricing

CANCELLATION POLICY

Written request received on September 30, 2024	Full cancellation less a 25% admin fee
Written request received on/after September 30, 2024	Nonrefundable
No-show for any reason	Nonrefundable

CONTINUING EDUCATION CREDITS (CECs) AND AIA CREDITS (LUs)

- All of the educational sessions (including the Keynote speaker and the NEBB Town Hall) are awarded NEBB CECs and AIA LUs (Learning Unit through the American Institute of Architects).
- Electronic scanning will be done for each session in order to verify attendance and allocate the appropriate number of CECs and LUs to the CP or CT.

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Q&A

NEBB Across the Generations



Since 1971, NEBB has been serving firms and individuals that deliver high performance buildings and systems. As the premier international certifying association in the building industry today, NEBB thrives as a result of collaboration across various generations that all bring different experiences and perspectives to the table. We sat down with Tiffany Russell, member of the NEBB Board of Directors, to discuss her personal journey with NEBB below:

The NEBB Professional (NP): What generation do you identify with?

Tiffany Russell (TR): Gen X-This is me!

NP: Briefly explain your journey with NEBB: How did you initially get involved?

TR: In the year 2000, I started testing cleanrooms for a NEBB certified firm. I immersed myself in all aspects of cleanroom testing and wanted to learn everything.

NP: What made you want to get more involved?

TR: I didn't just want to be a data collector so I started educating myself and speaking regularly with my mentors, most of whom were NEBB Certified Professionals. Although I was the only woman in class, the men always treated me as an equal and encouraged me to be the very best. That's when I decided that I was going to become certified too.

NP: What committees or positions have you been involved with?

TR: I joined the CPT Committee as a voting member and realized I was "at the table". During meetings, I would catch myself speaking and realize I was the expert. This has been surreal.

Next, I became the committee chairman and have been serving as such for over 7 years. The more Certified Professionals that I worked with, the more I gained in professional knowledge. I am always learning and I love it!

My journey with NEBB is nowhere near its end. In 2023, I was elected to the Board of Directors and now I am at another level in my personal and professional development.



NP: Was it difficult to find the time to volunteer with NEBB? How do you feel your involvement with NEBB has been an investment in yourself and your career?

TR: My time is an investment, not just for a participation ribbon. Having an understanding of how NEBB has an impact on many industries the time I personally invest comes back to me in professional contacts and ways to be savvier at business. I feel like I am passing the torch to the future of the NEBB organization with my contributions.

Being on committees allows me to steer the ship and have a direct impact on the way things are done. I become an early adopter of industry standards which keeps me very competitive in the markets. I really do have the “rest of world” experience that my customers need.

Everyone is busy, I understand. I truly enjoy my career, and it doesn't feel like a burden to volunteer. I have built a vast network of colleagues and friends through NEBB. The more involved, the more people I meet and the more I look forward to our meetings and seminars.

NP: What would you like to see for the future of NEBB? How do you see NEBB transforming in years to come?

TR: In my personal company, I prioritize our involvement with NEBB. I support fiscally with volunteer hours, travel to seminars, continuous trainings, and individual certifications. I feel so strongly about our procedural standards that I incorporate them into my customer specifications.

As the Young Professionals Network grows, I see more individuals at the beginning of their careers actively participating in our committees. You don't have to go to college to get your education and one of our core values at NEBB is training people to be the best in their industry. Our training is an avenue for training and education that will lead others to a professional career. As some of our members retire, young people are getting the opportunity to not just join the organization but to join our committees.

NP: As a business owner, you've led others through transformation and adaptation before. What do you think helped facilitate any changes that led to a brighter future?

Diversity and inclusion of women to our industry. When I began my career, many work sites were mainly homogeneous. Now, I look at my team and am very proud to be a woman owner of such an awesome organization that embraces our diversity. I enforce my company's core values by leading with the philosophy that all backgrounds attribute to the contribution I can make. As a steward and pioneer for the future women in our industry, I demonstrate the value of our representation. I have encouraged our employees to gain knowledge and certifications, even promoting with financial incentives. VTG, LLC now holds two firm certifications (CPT and Sound) and we are working towards even more. I understand that with the addition of new certifications, we holistically enhance our attractiveness to our customers and can greater fulfill their needs. ●



By Jeff Schools

Instrument Changes for the 2025 Recertification Cycle

Each year, before recertification begins, we query the Technical Committees to identify any necessary changes to the current discipline Required Instrumentation lists on the NEBB website. This year, there will be language updates to the Cleanroom Performance Testing list. These are purely verbiage changes; no new instrumentation is required, and the existing instruments remain unchanged.

CPT Option 1, Aerosol Photometer

Change:

- Remove "10-3" and replace it with "0.01%-100%."
- Remove "over the range of 100 times the threshold sensitivity" and replace it with "a minimum range from 10 to 90 micrograms/liter."
- Remove " ± 0.1 psi 0.04 psi (US)" and replace it with "of reading with a flow rate of 1 cfm."

Old 2024 Verbiage:

The instrument shall have a threshold sensitivity of 10-3 micrograms/liter of challenge aerosol particles and be capable of measuring concentrations over a range of 105 times the threshold sensitivity. Sample flow rate shall be 28.3 L/min (1 cfm). Readout shall be either linear with an accuracy of 1% of full scale of the selected range. $\pm 2\%$ of reading ± 0.1 psi 0.04 psi (US).

New 2025 Verbiage:

The instrument shall have a threshold sensitivity of 0.01%-100% of the challenge aerosol particles and be capable of measuring concentrations with a minimum range from 10 to 90 micrograms/liter. Sample flow rate shall be 28.3 L/min (1 cfm). Readout shall be linear with an accuracy of 1% of full scale of the selected range. $\pm 2\%$ of reading with a flow rate of 28.3 L/min (1 cfm).

CPT Option 1, Pneumatic Aerosol Generator

Change:

- Remove "thermal generator."

Old 2024 Verbiage:

A device that can aerosolize oil medium to serve as an artificial challenge for filter integrity testing of systems under 3,000 cfm, typically Laskin nozzle(s) type, thermal generator, atomizer, etc.

New 2025 Verbiage:

A device that can aerosolize oil medium to serve as an artificial challenge for filter integrity testing of systems under 3,000 cfm, typically Laskin nozzle(s) type, atomizer, etc.

CPT Option 2, Optical Particle Counter for Scan Test

Change:

- Add "at least" in front of "a 1.0 cfm flow rate."

Old 2024 Verbiage:

A particle counter should have a 1.0 cfm flow rate with a threshold sensitivity of at least $0.3\mu\text{m}$. The counter must have an audible alarm for every particle that is counted. The particle counter shall have a continuous counting mode or a sample time that exceeds the time required to completely scan the area of the filter under test. This counter may also be used for Cleanliness Classification above.

New 2025 Verbiage:

A particle counter should have at least a 1.0 cfm flow rate with a threshold sensitivity of at least $0.3\mu\text{m}$. The counter must have an audible alarm for every particle

that is counted. The particle counter shall have a continuous counting mode or a sample time that exceeds the time required to completely scan the area of the filter under test. This counter may also be used for Cleanliness Classification above.

CPT Option 2, Diluter

Change:

- Remove "shall" and add "should."

Old 2024 Verbiage:

A device used with the scanning particle counter to sample the aerosol challenge upstream of a filter under test. The dilution ratio shall be between 300 – 1,000:1. The resulting counts after dilution should not exceed 100,000 particles.

New 2025 Verbiage:

A device used with the scanning particle counter to sample the aerosol challenge upstream of a filter under test. The dilution ratio should be between 300 – 1,000:1. The resulting counts after dilution should not exceed 100,000 particles.

CPT Option 2, Aerosol Generator

Change:

- Remove "A low output (defined as one that supplies of $< 5 \times 10^{-9}$ particles/min of $> 0.3\mu\text{m}$ in size), or a normal output generator may be used."

Old 2024 Verbiage:

A device that can aerosolize oil or microsphere medium to serve as an artificial challenge for filter integrity testing. A low output (defined as one which supplies $< 5 \times 10^{-9}$ particles/min of $\geq 0.3\mu\text{m}$ in size) or a normal output generator may be used.

New 2025 Verbiage:

A device that can aerosolize oil or microsphere medium to serve as an artificial challenge for filter integrity testing.

These changes will be reflected on the (effective January 1, 2025) Instrument List when it is posted on the NEBB website before the next recertification cycle begins. ●

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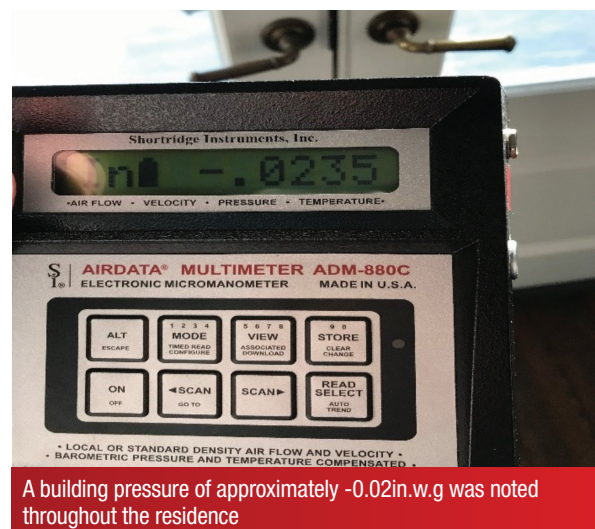
The Residential Challenge

By William Bailey

As a TAB and Commissioning professional, most people assume our work focuses on major facilities, from smaller buildings to high-rise structures. For the most part, that assumption is correct. You can imagine my surprise, then, when I received a call from a close friend who managed one of our accounts for a past senator to help with some issues in their residence. Frankly, I thought this project would be a “piece of cake,” but it soon became quite a challenge.

We set up a meeting with the senator’s daughter and the house manager/director. According to their account, the issue started after one Thanksgiving holiday. The residents discovered that they could not light the fireplace in the main area of the house (The Great Room) because, when they did, smoke would roll out of the fireplace and cause serious issues. As we walked through the house, the homeowner mentioned she was not happy with her previous HVAC service provider and had terminated their contract. She was interested in hiring our firm if we could resolve this issue and allow her to use all her fireplaces. Yes, you read that right—fireplaces, plural, 9 in total. The homeowner stated she wanted to use all of them during the upcoming Christmas holiday.

Of course, as a basic first step, I asked if there were any mechanical drawings of the residence that I could use to understand the HVAC system. I was told that although multiple contractors had been involved in past renovations, no as-built drawings were ever completed or provided. Therefore, any work done here would be based mainly on what I could observe while walking the space. As we continued walking around the residence and investigating the issues, we noticed that



A building pressure of approximately -0.02in.w.g was noted throughout the residence

all the other fireplaces had gas logs installed, and only the Great Room was wood-burning. These log sets required vents to be open since they were the vented type, not ventless. As we checked whether the flues were open, we found the majority were in the open position, causing the residence to maintain a negative pressure. I took multiple readings at different doors on different sides of the residence and measured approximately -0.02 in.w.g. of pressure with no gas logs operating. I also noted my concern about CO detectors since all flues had isolation capability, and the gas logs required venting. The residence did have monitors built-in with smoke detectors.

We continued investigating the HVAC equipment that served the residence and found that the HVAC system consisted of multiple geothermal units with outside air ducts tied to each unit. Looking into this a bit further, we found there was a dedicated outdoor air unit that served air to each WSHP (water-source heat pump). The dedicated outdoor air HVAC unit provided outside air to help offset the overall exhaust throughout the residence, pulled from the bathroom and kitchen exhaust systems as well as the additional negative airflow caused by the fireplaces. When tracing out the duct systems, we made some additional interesting discoveries. When we found outside air inlets, which consisted of two 12" rounds entering the residence, we observed that one of the ducts was cut and ducted into the ceiling of the residence's lower-level basement area. The first of the following two pictures shows the



flex duct that was separated from the unit, while the other picture shows the flex duct connected to a supply grille in a lay-in ceiling.



As it turned out, the dedicated outdoor air unit that was supposed to discharge fresh air into the residence was not supplying the home with outside air at all. The unit was just recirculating air from within the space! After looking further into the outside air system, we found it had a pre-heat hot water coil that was circulated with an instantaneous water heater. Further, this system was low on glycol and was not pre-heating the air as required. We asked the owner questions about the overall operation of this system, and the owner stated that the basement area where the system was located stayed cool and damp.

After a detailed review of the outside air geothermal heat pump, we used the model and serial numbers on the system to obtain cut sheets showing the original design purpose for this unit—how much airflow it should provide as well as the entering and leaving design conditions. This system was intended to provide 70°F (21°C) air at 50% relative humidity to the space. The system was capable of pre-heating, dehumidifying, cooling, and heating the outside air to achieve this goal. In short, this system was very elaborate and not what you would consider standard for a residence. In fact, it seemed typical of what we would expect to see in a commercial application.

We proceeded to conduct additional testing on the residence to resolve the negative pressurization issue. After repairing the intake duct to the dedicated outdoor air system, adding glycol, and making the pre-heat system functional, we logged into the unit controller to enter the necessary set points to obtain the 70°F (21°C) air at 50% relative humidity that the unit was designed to supply. Once these settings were changed and everything was confirmed to be functioning as needed, we were able to pressurize the residence enough to operate two of the nine gas fireplaces and the wood-burning fireplace in the Great Room.

After determining how much additional fresh air would be needed to sufficiently pressurize the space to allow the rest of the fireplaces to operate simultaneously, the owner decided that all the fireplaces would not need to be burning at the same time. We also recommended that all the gas fireplaces be changed to ventless systems, where the flues could be regulated down to help minimize the negative pressure created by the fires and help heat the rooms instead of allowing all the heat to escape through the flues. As you know, the hotter the flue, the greater the draft.

In conclusion, we see everything in the field of TAB. When you think of a residential installation, you often assume it is simple and that there is not much to it. However, I can tell you that we experienced a lot with this residence and learned that some residential engineers really go the extra mile to make things work properly.



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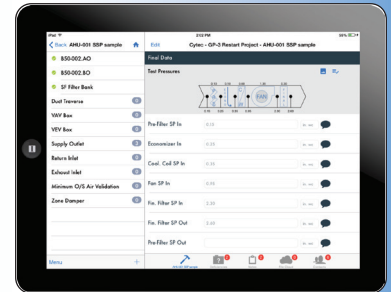
Unit Data	
Unit Manufacturer	Trane
Unit Model Number	ADB01-210465
Unit Serial Number	254y9y9m77airip
Unit Discharge	Horizontal

AHU-01/Supply Fan	
Starter Manufacturer	See Photo

Test Data			
	Design	Actual	%
Total Airflow	5000 CFM	4500 CFM	90%
OA Airflow	500 CFM	400 CFM	80%
Return Airflow	4500 CFM	4000 CFM	89%

Starter Manufacturer Photo:

Name: Starter Manufacturer.jpg
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Despite the expertise of these engineers and the experience of our TAB professionals, we often find that we must lean on the service group of our firm to get the refrigeration circuits and controls components set to the proper values. Once these are achieved through the review by the RCx team, you would be amazed at how quickly and smoothly things come together. Currently, the owner of the residence is extremely happy with the service we provided and now has a service agreement with our company to maintain the equipment and keep everything operating as it should. Sometimes, even on a residential project, you may find that you need to apply TAB, Retro-Cx, and HVAC service principles to successfully resolve an issue! ●

Andy Nolfo Receives the NEBB George B. Hightower Distinguished Service Award and NEBB Certified Professional Emeritus Status



Andy Nolfo, PE, was presented with the NEBB George B. Hightower Distinguished Service Award and NEBB Certified Professional Emeritus Status by 2023 NEBB President Phil Emory at the NEBB National Conference held in Monterey, California, on October 26, 2023. The George B. Hightower Distinguished Service Award, NEBB's most prestigious honor, was established in 1999. In November of that year, George B. Hightower received the inaugural award at the Annual Meeting in Colorado Springs. Named in his honor, the award

recognizes outstanding individuals who have generously given their time and talents, demonstrating their dedication to NEBB and the future of our industry. Andy Nolfo was nominated for the NEBB George B. Hightower Distinguished Service Award by the Capital MarVa International Chapter and the Tennessee Chapter of NEBB.

Andy Nolfo became a Registered Mechanical Professional Engineer (PE) in 1976 and NEBB Certified in TAB in 1977. Andy served on the Commissioning (R&D) Committee from 1990 through 1998, holding the position of Chairman from 1994 to 1998. He served on the NEBB National Board of Directors from 1990 through 2000, acting as Treasurer in 2000. He then stepped down to become the Technical Director from 2000 to 2009. Andy has been a member of the TAB Committee since 2014 and continues to serve. His 34 years of service to NEBB at the national level are a testament to his enduring commitment.

The George B. Hightower Distinguished Service Award Winners:

- **1999: George B. Hightower**
- **2000: David Bevirt**
- **2000: Bill Abernathy**
- **2005: Robert B. Gawne**
- **2008: Jim Bell**
- **2010: Jim Bochat**
- **2012: Eric Jenison**
- **2014: Fred Menger**

- 
- **2020: Dan Driscoll**
 - **2023: Andy Nolfo**

Andy was nominated for NEBB Certified Professional Emeritus status by Ronald Landberg, who currently serves on the NEBB National Board of Directors, as a TAB Committee Voting Member, Exam Development Committee Voting Member, and on the Pacific Northwest NEBB Chapter Board of Directors. The first supporter of the Emeritus nomination was Donald Pittser, who serves on the NEBB National Board of Directors, as TAB Committee Chairman, on the Rocky Mountain NEBB Chapter Board of Directors, and as Rocky Mountain NEBB Chapter Past-President. The second supporter was Jon Sheppard, NEBB National Past-President, Immediate Past-Chairman of the TAB Committee, Past-Chairman of the Building Systems Commissioning Committee, Capital MarVa International NEBB Chapter Past-President, and member of the Capital MarVa International NEBB Chapter Board of Directors.

In regards to the nomination, **Ronald Landberg** stated, "Andy is a valuable contributor to the NEBB community and plays a crucial role in advancing NEBB method-

NEBB Certified Professional Emeritus Definition:

A Certified Professional who has displayed exemplary commitment and outstanding service to NEBB through their volunteer efforts, demonstrated leadership, and fostered growth and development in the NEBB organization. Service may have been performed at the local chapter, national, or international level, or in any combination. Emeritus is a mark of distinguished service.

- Individuals granted NEBB Emeritus CP status must be retired.
- The Emeritus CP Nominee shall not practice in their previous NEBB discipline(s).
- This honorary designation requires a recommendation process and approval by the Board of Directors.
- The Emeritus CP designation is granted as an honor.
- The Emeritus CP will receive a special certificate denoting their Emeritus status.
- The Emeritus CP will not be required to pay the annual recertification fee or submit continuing education credits.
- The Emeritus CP can serve on NEBB committees and participate in NEBB volunteer activities.

ology through his extensive knowledge and teaching abilities. Here are some key points about Andy:

1. **Expertise in NEBB Standards:** Andy has a deep understanding of NEBB's Procedural Standards and knows how to reference them to ensure that projects are carried out systematically and in compliance with NEBB guidelines.
2. **Multidisciplinary Knowledge:** Andy possesses knowledge in multiple disciplines, which is likely beneficial for NEBB projects that may require expertise from various fields.
3. **Confident Communicator:** Andy is not hesitant to express his opinions and beliefs, even in front of a group. His ability to articulate and advocate for specific approaches can be an asset in promoting NEBB methodology and ensuring that standards are upheld.
4. **Teaching Experience:** Andy has played a role in educating other NEBB members by teaching them about NEBB standards and methodology in various types of classes, including those related to Building Systems Commissioning (BSC) and Retro-Commissioning (Retro-Cx),

as well as several decades of teaching TAB to CPs and CTs.

Overall, Andy's combination of knowledge, confidence, and teaching abilities makes him a valuable member of the NEBB community, contributing to the understanding and advancement of NEBB standards and procedures."

Jon Sheppard echoed those sentiments with, "Andy Nolfo has been a staple of NEBB since he joined the organization back in 1972. Nearly everyone who sits on a NEBB Committee or the Board of Directors today has attended one of Andy's seminars or sought his help at some point in their careers. Even though Andy is retired, he continues to give back to NEBB at a rate greater than any other volunteer. He helps create teaching materials and publications and provides valuable support to various aspects of the NEBB family. Anyone who hears the name Andy Nolfo automatically thinks of NEBB. Anyone familiar with NEBB knows the name Andy Nolfo. Andy has accumulated enough continuing education credits to last a lifetime and has remained loyal and generous to NEBB throughout his retirement."



Donald Pittser agreed, stating, “I met Andy Nolfo in 1998 while preparing for the NEBB TAB Certified Supervisor exam. Andy served as the NEBB Technical Director from 2000 to 2009, and I was privileged to see Andy at every NEBB National Conference during those nine years. His technical sessions and seminars have reached most of NEBB’s membership. Andy wrote the TAB Technician Home Study Course, with support from the TAB Committee, which was published in January 2002 when NEBB introduced the NEBB TAB Certified Technician program. We are still using his training materials. My first seminar with Andy was Building Systems Commissioning in 2005. Andy and Jim Bochat taught a class of around 25 attendees with overhead projectors and flip charts. As one of the original authors of the NEBB TAB Certified Professional and Certified Technician Seminars, Andy still provides training for the TAB Seminar Instructors and helps maintain the continuity of the TAB seminars. Andy is the key author and editor of many NEBB publications. I was privileged to work with Andy and nine other NEBB SME Committee members to create NEBB’s first TAB Job Task Analysis (JTA) in 2007 and again in 2016.

I was fortunate to work with and learn from Andy while I served on the NEBB TAB Committee as a Voting Member from 2006 through 2009. Andy attended all the TAB Committee meetings as the NEBB Technical Director. As the TAB Committee Chairman from 2019 until now, Andy is my go-to volunteer. Any question, any time, Andy provides the answers and history concerning our NEBB history. Since Andy retired, he has increased his NEBB volunteer hours. He continues to give back to NEBB and mentor the next generation of NEBB Certified personnel. He helps create and edit teaching materials, metrification, and provides SME support to anyone who asks. Andy volunteered 258 hours in 2021, 307 hours in 2022, and 536 hours in 2023. Calling Andy my mentor doesn’t even begin to cover what I have learned from him.

Anything that has been asked of Andy Nolfo by NEBB leadership throughout his 47 years of NEBB membership, he has done it. He has seen many good people come and go over the years, and Andy is one of NEBB’s constants. We knew we would see Andy and Nancy at every NEBB Conference.”

Celebrating Mr. Nolfo’s achievement, **William Bailey**, NEBB TAB CP expressed, “I want to start by congratulating Andy on obtaining the Hightower Award from NEBB. I recall the first time I met Andy at the BSC seminar when Roger Wehby and I went to Arizona; I believe it was in 2005. I think the instructors for the prep class and testing were Andy, Jim Bochat, and Jerry Bauers. I remember the class well. This was one of the first BSC classes, if I recall correctly, and it was a very interesting class. Andy was very vocal during the class as the presentation moved forward. Andy would make statements that this was not right, and that statement was wrong as the class proceeded. I recall Jim and Jerry trying to explain things to Andy, and Andy would consider their points but usually disagree with their statements. I enjoyed watching the conversations about the different perspectives and approaches to the proper process for conducting Commissioning. Over the years, I would see Andy at the National meetings and often take a few minutes just to say a few things to him. I would watch Andy in conversation with others, seeing him often speak his thoughts on various matters, especially in meetings such as Town Hall and Committee Meetings.

Andy was very instrumental in helping me understand the NEBB standards, as he spent a lot of time with me and others on the Committee to discuss the changes we were proposing. His reasoning for making changes to the standards was always that he wanted the best document we could provide to the NEBB firm. He made sure we were thinking about how the standard would be enforced or how to comply with the requirements. There were many cases when Andy did not agree with the changes we proposed, and we would spend a lot of time discussing his concerns. Eventually, we either resolved the issue or agreed to disagree. But either way, he always had a strong desire to ensure that we understood his point of view, and he was always very open to suggestions, although we did not always agree. I appreciated Andy’s time and dedication to the NEBB organization, the Committee, and me.” ●

Congratulations, Andy, and thank you for your contributions to the NEBB family!



Chapter News

Florida EBB Chapter

Terry Wichlenski

Florida EBB (FEBB) held its 43rd Recertification Sessions and Vendor Expo April 25-26, 2024 at the Rosen Shingle Creek in Orlando. We had over 120 attendees join us for all our activities, from the Golf and Cornhole Tournaments, which provided scholarships to college students in engineering fields, to our fantastic sessions on Thursday and Friday. NEBB President Luis Chinchilla provided a NEBB update, and everyone enjoyed his session on "NEBB & AI: Can They Beat

the Odds Together?" Another great session was held by Dave Dougan from Ebtron, discussing Outdoor Air Delivery Challenges in Florida. We also had insightful sessions by Bill Smith from Original Solutions Company and Derek Hedrick. Additionally, we held our second year of a second track for Certified and Non-certified Technicians, which was well-attended with over 70 participants.

Florida EBB presented its first NEBB Emeritus Award to Mr. Richard Flanders who has been a NEBB TAB Certified Professional for over 35 years. He is now



Florida EBB recertification session In Orlando, FL



Emeritus award for Richard Flanders

retired and traveling. Richard was, and still is, a great leader and enjoyed working with everyone.

Lastly, we are offering the TAB Practical Exam at our Deerfield Beach Test Site on October 12, 2024 when we have at least two candidates and an available exam site. Contact our Chapter Coordinator Terry at 727-240-4254 or Febbchapter@nebb.org.

MAEBA Chapter

Trish Casey

The MAEBA chapter will be hosting its Annual Recertification Seminar on September 22-23, 2024, at the Tropicana Casino and Resort in Atlantic City, New Jersey.

The event will begin with the MAEBA business meeting, followed by a safety presentation from Greg Wharton, SMCA Safety Director. Mike Kelly, NEBB President-Elect and representative of Air Filtration Management, Inc., will provide an update on NEBB national initiatives. Other presentations will include an in-

roduction to the new Phoenix control-interface package and a detailed exploration of the “Fundamentals of Dedicated Outdoor Air Systems (DOAS Units) and Energy Recovery Units.”

During an extended lunch break, MAEBA will host its Dessert and Coffee with the Vendors, offering CPs and CTs the opportunity to engage with vendors and learn about their products and services.



Mid-South EBB (MEBB) Chapter

Ginger Slaick

Mid-South EBB's first practical exam was a success! On June 14th, Joel Shannon, Chapter Vice President & TCC; Scott Kleback, Chapter Board Member; Thad Routh, Chapter Secretary/Treasurer; and Ron Greene, Chapter Board Member, met with Jeff Schools, NEBB Technical Director, at the new practical exam site in Columbus, GA for a mock run-through before testing the first candidates. The next day, the very first candidates were tested, and Scott, Thad, and Ron met the necessary requirements to become NEBB-approved proctors. The opening of the practical exam site would not have been possible without the time and dedication of our volunteers.

Special recognition goes to Scott Kleback, Joel Shannon, Thad Routh, Ron Greene, Travis Stuck, Mark Andrews, Scott Goller, Chris Goff, Ken Doyle, John Dachenhaus, Billy Bivins III, Brandon Caves, and several others behind the scenes who made the Mid-South

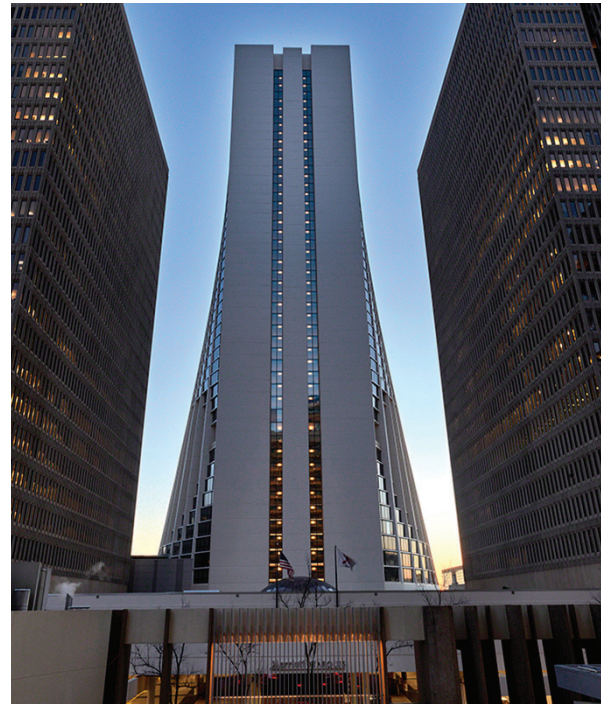


Left to right: Thad Routh, Ron Greene, Scott Kleback, and Joel Shannon preparing for the first Mid-South EBB Practical Exam. Photo: Jeff Schools.

EBB Practical Exam Site a reality. We would also like to acknowledge Don Pittser, NEBB TAB Committee Chair, Jeff Schools, NEBB Technical Director, and the NEBB TAB Committee for their assistance throughout the process, from start to finish. We look forward to hosting regularly scheduled practical exams for any candidate who needs to test. Future dates will be announced soon and posted on the NEBB website under Seminars and Practical Exams Calendar.

Registration is now open for Mid-South's Recertification Seminar and Vendor Expo, being held September 14th-15th at the Atlanta Marriott Marquis in Atlanta, GA. We extend our thanks to sponsors Instruments Direct,

TSI, Evergreen Telemetry, Building Start, and other valuable vendors for their continued support of our Chapter! Learn more about the speakers and presentations, as well as seminar information and registration options, by visiting the Chapter website at www.MidSouthEBB.com. ●



Atlanta Marriot Marquis

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IFMA WORLD WORKPLACE

October 9 - 11, 2024 | San Antonio, Texas

IFMA's World Workplace® stands as the world's largest, most esteemed facility management conference. Since its inception in 1995, World Workplace has been the pioneer forum for groundbreaking discussions on facility management and the broader built environment. It's the premier destination where workplace professionals gather to explore innovative FM technologies, forge valuable connections, and enhance essential skills.

Career Development

Get best practices, valuable takeaways and thought-leadership from industry leaders from around the world. Stay updated on the latest trends and topics in facility management.



Networking

Build your professional network and meet other industry professionals. Enjoy happy hours, cocktail events, breakfast meetings and other facility management professional meetups.



Explore the Expo

From educational sessions and product demonstration to one-on-one discussions with the leaders in FM solutions, the expo is where you'll find the best products and services for your facility needs. Learn how to use the latest FM tools and tech. Get answers to big questions for your facilities.

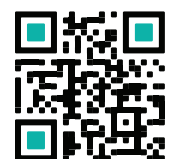


Learning

Learn everything you ever wanted to as a facility management professional. World Workplace is the must-attend event for serious FMs looking to advance their career in facility management.



Register today at worldworkplace.ifma.org.





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