

Subject: Plumbing Option Added to the Mechanical Engineering Discipline of the Professional Engineers Exam
Date: Friday, August 25, 2017 at 11:54:29 AM Central Daylight Time
From: Ron Bartley
To: Billy Smith, BJ Allen, Brianne Hall, Christoph Lohr, Dave Dexter, David Dexter, Haig Demergian, Mitch Clemente, Saum Nour, Scott Steindler
CC: Ben Denker, Bob Boulware, Carmen Cejudo, Joe Stone, Marty Rogin, Natalia Blackburn, Kay, Rufus A., Tom Betteridge, Will Maltby
Attachments: ATT00001.png, ATT00002.png, ATT00003.png, ATT00004.jpg, image001.gif

Good afternoon, all. Below is an email received late this morning from Rufus Kay of the Atlanta Chapter. I believe the contents speak for themselves.

Oh...if you happen to be the 1 or 2 people that are already aware of this, please do not be upset with me. I'm afraid that your email address is part of the group listing that I use. Take care; enjoy the coming weekend.

Ron Bartley
Board of Governors Chair
Southwestern Ohio Chapter

American Society of Plumbing Engineers



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-----Original Message-----

From: Kay, Rufus A. [mailto:RAKAY@southernco.com]
Sent: Friday, August 25, 2017 11:59 AM
Subject: FW: Plumbing Option Added to the Mechanical Engineering Discipline of the Professional Engineers Exam

Good morning, Ron.

I just received an email from Darren Mickler indicating that the Georgia State Board is in support of adding a "Plumbing" option to the NCEES PE Examination.

Mr. Mickler was sent by his cell phone. Let me know if I need to have him to provide a letter indicating the Board's support if his email is not suffice.

Thank you.

Rufus Kay

-----Original Message-----

From: Mickler, Darren [<mailto:dmickler@sos.ga.gov>]

Sent: Friday, August 25, 2017 11:51 AM

To: Kay, Rufus A.

Subject: Re: Plumbing Option Added to the Mechanical Engineering Discipline of the Professional Engineers Exam

The board is in support.

Sent from my iPhone

On Aug 25, 2017, at 11:41 AM, Kay, Rufus A. <RAKAY@southernco.com<<mailto:RAKAY@southernco.com>>>> wrote:

Good morning, Mr. Mickler.

I just wanted to follow up with you in regards to my email correspondences back in June to see if the Georgia State Board is in support of adding a "Plumbing" option to the NCEES PE Examination under the Mechanical Engineering discipline.

Thank you and have a good day.

Rufus Kay, P.E.
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Tel 404.506.2371
Mobile 770.550.2853
southerncompany.com

<image001.gif>

From: Mickler, Darren [<mailto:dmickler@sos.ga.gov>]

Sent: Tuesday, June 27, 2017 12:19 PM

To: Kay, Rufus A.

Subject: RE: Plumbing Option Added to the Mechanical Engineering Discipline of the Professional Engineers Exam

Mr. Kay,

Your letter was provided to each member of the board and was discussed, but no action was taken. I expect that it will come up again at our August 8th meeting. If it is the pleasure of the Board to support this action, I

will inform Mr. Miller and copy you.

Regards,

Darren Mickler | Executive Director

Office of Secretary of State Brian P. Kemp Professional Licensing Boards Division | 237 Coliseum Drive Macon, Georgia 31217 Telephone (478) 207-2440 | Fax (478) 314-9123 |

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From: Kay, Rufus A. [<mailto:RAKAY@southernco.com>]

Sent: Tuesday, June 27, 2017 11:03 AM

To: Mickler, Darren <dmickler@sos.ga.gov<<mailto:dmickler@sos.ga.gov>>>

Subject: Plumbing Option Added to the Mechanical Engineering Discipline of the Professional Engineers Exam

Good morning, Mr. Mickler.

My name is Rufus Kay, and I am part of the American Society of Professional Engineers (ASPE) Professional Engineering Working Group (PEWG) for Georgia. I have called and sent a letter to the Georgia State Board back February 2017 in seeking the Board's support in adding a "Plumbing" option to the National Council of Examiners for Engineers and Surveyors' (NCEES) Principals & Practices (PP) "Mechanical Engineering" discipline exam. Unfortunately, I have not heard back from any member of the Board.

I am reaching out to you hoping that I can reach a member(s) of the Board. Based on discussions with NCEES' Tim Miller, a minimum of ten Boards must concur to the need for such an option. Currently, the State Boards of Ohio and Arizona have sent notices to NCEES stating that they in favor. As a Registered Professional Engineer, and a member of the ASPE and ASHRAE, I would like to get in contact with member(s) of the Georgia State of Registration for Professional Engineers and Land Surveyors to get their support in this endeavor.

The practice of engineering encompasses many disciplines which contain many specific sub-disciplines within their general discipline. One such sub-discipline, not currently represented within the subset of Mechanical Engineering, is Plumbing. At one time, plumbing was felt to be simplistic enough that any ABET-accredited engineer could adequately meet the demands of the discipline; providing fixtures, drains and vents. However, plumbing engineering has been and continues to become more complex than it was in the past. Plumbing has just a great impact on public health, safety and welfare just as HVAC. Some of the systems in which the plumbing engineer must design and manage are:

- * Domestic/potable water (specialized systems such as distilled, softened, deionized, reverse osmosis, grey water and black water, among others)
- * Sanitary waste and vent (specialized clinical, medical, laboratory and kitchen waste systems along with removal of Fats, Oils and Greases (FOG) from the kitchen waste)
- * Storm water removal and reuse (both conventionally and siphonically)
- * Fuel systems (natural gas, liquidified petroleum (LP or propane) fuel oils, gasoline and others)

- * Industrial gases (oxygen, nitrogen, acetylene, argon, carbon dioxide and others)
- * Medical gas systems (oxygen, breathing air, instrument air, vacuum, waste anesthesia gas removal and others)
- * Laboratory gas systems (which can feature medical gases, industrial gases, fuels, etc.)
- * The growth of "Green" systems rain and waste reclamation systems

And when one considers the design and regulatory requirements, Plumbing Engineering has achieved a complexity all of its own. Engineers, specializing in plumbing, must routinely concern themselves with these various and complex Plumbing Systems. Today's practice of engineering has become more difficult, if not impossible, for the typical Registered Engineer specializing in the HVAC discipline. It is becoming a challenge to maintain the necessary level of competency in the two distinct disciplines of plumbing and HVAC. The reality is that the vast majority of these Registered Engineers routinely affix their seal and signatures to plumbing documents, prepared by designers and drafters, who lack the necessary engineering background. Clearly, this should be considered a violation of the rules established by the Board and not in the best interest of the welfare and safety of the public-at-large.

Yes, there are many similarities between engineers who practice within the HVAC and plumbing disciplines; heat transfer, thermal dynamics, fluid flow, gases such as air, etc. However, there are many differences as well. HVAC engineers deal with full pipe flow, psychometrics, relatively low pressure air movement, building automation systems, etc. Plumbing engineers, on the other hand, deal with partially filled pipe flow, open channel flow, bio-films and pathogenic growths within potable water systems, higher pressures within gas systems that involve considerations for compressibility, etc... For these and the reasons above, a plumbing option should be placed within the framework of the mechanical PE examination process. It has become a necessity for the engineering community and the regulatory boards that oversee that community to assure that the public's health, safety and welfare is protected. This will ensure that the Registered Engineers sealing and signing plumbing documents have a level of verifiable knowledge and competency within the discipline.

In closing, I urge the Board to support the inclusion of a plumbing option within the Mechanical Engineering examination and to advise NCEES of this support.

Thank you for your time, consideration, and support.

Rufus Kay, P.E.
Team Leader - Mechanical
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