



DAPE

NEWS

News from Delaware's Licensing Council for Professional Engineers

Spring 2003

PRESIDENT'S MESSAGE

ABET

Tweak it or Trash it

By J. Ross Harris, P.E.

As DAPE's President of Council, I represented Delaware licensees at the National Council of Examiners for Engineering and Surveying (NCEES) Presidents/Member Board Administrators assembly held in Alaska in February, and the joint zone meeting of NCEES' Northeast and Central Zones held in Orlando, Florida, in April. At both sessions, the decreasing quality controls for adequately preparing future engineers with the basic skills needed to properly safeguard public property, health, safety and welfare was one of the key issues of discussion.

For years, the Accreditation Board for Engineering and Technology (ABET) has been used throughout the United States as the yardstick for measuring the quality of engineering education one has received. Prior to that, it was its predecessor, the Engineering Council for Professional Development (ECPD). Its specific minimum requirements, referred to as "criteria", spelled out in black and white what the ongoing studies conducted by the National Council of Examiners for Engineering and Surveying (NCEES) indicated engineering students needed to know in their field of study to be minimally competent. The criteria, as it stood, was also the basis for the comparable evaluation of individuals with degrees from other countries.

Educators were critical of the criteria for the most part because they felt that it was aimed at

preparing an individual for going out into the work force, but not into research, as most U.S. colleges and universities are focused on. Subsequently, ABET came out with Criteria 2000 which dropped the prescriptive form of the criteria and adopted an outcome assessment approach. In short, it allows an engineering program to be pretty much what its administrators want it to be, providing that they can demonstrate some degree of continuous improvement from one ABET visit to another, usually 6 years apart. This not only applies to what was once known as ABET's Engineering Accreditation Commission (EAC), but also their Technology Accreditation Commission (TAC). The Accreditation Board for Engineering and Technology no longer identifies itself as such, they're now known simply as "ABET".

In just the few years that Criteria 2000 has been in place, it has opened the door to several 4-year technology programs, generally considered to be much weaker than straight engineering, to qualify as engineering programs under Criteria 2000. Furthermore, the engineering curriculum in general, and the fundamental subject areas related to engineering in particular, are becoming far more fragmented from one college's program to another than ever before. This writer was surprised when he recently learned that steel design and concrete design were no longer a requirement to graduate from the Civil Engineering program at the University of Delaware. A New England university recently announced that it was dropping statics and strength of materials as individual subjects and will cover the essential knowledge as needed when studying other related subjects that apply their principles. Our NCEES leadership has concluded that it is presently impossible for a program being evaluated under Criteria 2000 to fail to pass. What's worse, we've only seen the

tip of the iceberg with this year being the first year that all programs being evaluated must do so under Criteria 2000. I'm quite sure that there will be far more significant curriculum changes that will develop in the oncoming years.

None of this matters to most of our readers since they're already licensed and way past that hump. It matters a lot to most of the following that are still deeply tied to ABET as the sole yardstick for measuring the quality of an engineering education:

- DAPE's Examining Committee relies on ABET accreditation for qualifying an individual as an NCEES model engineer for taking the FE and P&PE examinations, as do most other states in the U.S., and as required by our state laws. If such is no longer creditable, what are we to use?
- The greater the diversion is between what is being taught and what NCEES's task force studies on minimum competency requirements show is needed, the less prepared engineering graduates will be to pass either examination. Keep in mind that the results of the NCEES's studies are what our industry is saying is required out there.
- An even lower failure rate for the FE examination will provide more ammunition to the many educators out there who maintain that the FE exam is irrelevant and licensure is of little or no value to most engineers.
- Fewer FE and P&PE examination applicants will lead to higher fees for both, with fewer making the grade.
- If ABET accreditation is no longer creditable, NCEES will have to change its model law and to what? Delaware's Title 24 law will also have to change.
- Without a credible measuring stick for the quality of a graduate's engineering

education, how are employers going to know what they're getting?

If you will notice, and you most likely didn't, I referred to "us" above as "our industry" and not "our profession". The reason is that we're not a profession. That is, not according to the U.S. Department of Education. They classify architecture as a profession but not engineering. That's because architecture requires advanced study (5-years) to complete a program in such, as compared to the traditional 4-year program for engineering. The credit hours needed to graduate in non-professional areas of study are stipulated by state legislatures, which accounts for the steady decrease in credit hour requirements over the years. Programs qualifying as "professional" do not fall under legislative mandates and can be as many credit hours as deemed necessary to meet the program goals. We (us engineers) need to regain control of mandating what it requires to be a good engineer and be qualified to protect the public while practicing our profession. Here's how we should go about doing it:

1. Actively participate on your college's Industrial Advisory Committee. They're always looking for volunteers. Better yet, get the organization you work for to support the college's engineering programs with some noteworthy donation of dollars, equipment, faculty assistance and etc.
2. Volunteer your time to be on an ABET accreditation team for the professional organization you identify with, such as ASME, ASEE, ASCE, and etc. Most all have short training sessions that qualify you for such and they're in desperate need of practitioners.
3. Be aware of what's happening to the engineering curricula at your local college and either get the professional organization you belong to, or the firm you work for, to voice an opinion as to what the curricula should be when ABET

comes to town for its next accreditation visit.

4. Join the college's adjunct faculty (they're always looking for some) and teach a few engineering courses the old fashioned way, by having the students do the work, not the computer.
5. Volunteer your time to talk to freshman engineering students and advise them on the benefits of becoming licensed and what subject areas they will need to be prepared in if they wish to eventually pass the FE and P&PE exams.
6. Support efforts being made to form "professional schools" of engineering by either requiring the programs to be 5-year programs, or the requirement of a master's degree as an entry level requirement to the profession. That will free engineering programs from having to comply with legislated credit hour limits and allow the programs to expand to better prepare its graduates for their future.

NCEES has not totally given up on negotiating with ABET, but the anticipated results do not appear to be encouraging. Engineering Credentials Evaluation International (ECEI), the service that evaluates foreign degrees, is presently using ABET's criteria prior to Criteria 2000 for comparable evaluations. However, those criteria will eventually become obsolete and will need to be upgraded. Where the upgrades will come from and who will do them is presently an unknown.

###

CERTIFICATE OF AUTHORIZATION RENEWALS

Your firm's current authority to practice, or offer, engineering services in the State of Delaware, expires **June 30, 2003**.

Renewal notices were mailed to 655 firms on April 21, 2003, providing sufficient notice to renew Certificates of Authorization.

§2806 (e) (1) of the law states that if fees are not paid within three months after the expiration date, the holder of a Certificate of Authorization shall be declared ineligible to practice engineering in the State and shall be removed from the active roster.

Please read the article in this issue of the newsletter on the new delinquency fee policy approved by the Council of DAPE on April 9, 2003.

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NEW DELINQUENCY FEE SCHEDULE!

At its April 9, 2003 Council meeting, the members of the DAPE Council approved a new delinquency fee schedule.

When the renewal fee has not been paid, and the individual or firm has not provided notice of withdrawal within three months of expiration date, the member of DAPE will be placed on delinquent status. Upon request of reinstatement, licensee will be required to pay a penalty of \$50/month (up to six months), plus the remainder of the renewal fees due.

(A similar policy is being developed for Certificate of Authorization holders; however, this requires a bylaws revision, which you will read about in this newsletter.)

The rationale for this policy is to encourage timely renewals, and reduce the opportunity for unlicensed practice and subsequent disciplinary action. All requests for reinstatement from delinquent status will be reviewed for possible violations of the law.

It is your professional responsibility to renew your license upon expiration. Please notify our office immediately of any change of address to ensure your renewal information reaches you!

###

JOINT REGIONAL MEETING HELD IN ORLANDO

The Northeast and Central zones of NCEES met jointly on April 3-5, 2003 in Orlando, Florida.

This is the first time a joint zone meeting was held and in a location outside either of the zones. It was planned to increase attendance and promote stronger support from the respective zones.

In addition to zone-specific business – finances, election of Zone Vice President, and future site selection -- the zones met jointly to discuss examination security and administration standards to ensure fair and uniform exam administration; education issues; and reports from the various NCEES committees on assigned tasks.

Representing DAPE were President J. Ross Harris, P.E., Carmine Balascio, P.E., J.G.S. Billingsley, P.E., Robert A. Chagnon, P.E., and Peggy Abshagen.

###

MEDICAL GAS SYSTEMS AND THE PRACTICE OF ENGINEERING

President Ross Harris appointed an Ad-Hoc Committee to address the issue of whether the design, installation, testing, verification, maintenance and modification of medical gas systems constitute the practice of engineering.

Chaired by Walter L. Frank, P.E., committee membership included James S. Davidson, P.E. (former Council member), Glen A. DiEleuterio, P.E. (Law Enforcement/Ethics Comm. Member), Robert W. McClure, P.E. (Council member), and Robert A. Mulrooney, P.E. (Christiana Care Health Services).

The Ad-Hoc Committee presented its findings to Council and Council approved the following position.

1. **Design** of medical gas systems is considered the practice of engineering, requiring the services of a Professional Engineer.

2. **Installation** in accordance with design specifications is not engineering. Field modifications of the design, or resolution of conflicts in specifications that would require interpretations or calculations involving the “application of engineering principles and data” would be the practice of engineering.

3. **Testing** in accordance with NFPA 99 is not the practice of engineering, as long as the tests are conducted and the results judged on a “pass/fail” basis in literal accordance with the requirements of NFPA 99.

Reviews, evaluations, or interpretations of any departures from the strict requirements of NFPA 99, whether made by the testing organization or the facility representative, would constitute the practice of engineering.

4. **Verification**, typically performed by a medical gas inspection company, involves completion of a series of tests specifically defined in NFPA 99. The same considerations as outlined under “testing” apply to verification.

5. **Maintenance** is any repair activity that maintains the medical gas system in accordance with the original design specifications. This is not the practice of engineering, as long as the installation, after the repair activity, still meets the design specifications.

6. **Modification** is any change that results in the medical gas system departing in some manner from the original design specifications. This could include, but not be limited to, changes in operating capacity, addition of new branch lines or new outlets on existing branch lines, addition or deletion of tankage, etc. Modifications do involve the practice of engineering, and should be subject to a critical evaluation and control process to ensure that the changes do not compromise the safety of the installation.

This information was mailed to the hospitals and surgical centers in Delaware, in addition to the Division of Health and Social Services.

President Harris extended his appreciation to Chair Frank and the committee members for accomplishing this task thoroughly and expeditiously.

###

THE RECENT DEMISE OF MANDATORY CPC AND PLI FOR DELAWARE

By Robert A. Chagnon, P.E.

At the April DAPE Council meeting held in Sussex County, Council, in their infinite wisdom, voted down this writer's proposals for mandatory Continuing Professional Competency (CPC) and mandatory Professional Liability Insurance (PLI) for sole practitioners and firms offering engineering services to the public in Delaware. The vote on the latter was near unanimous, except for a couple of die-hards like myself, but the CPC vote was close. It lost by a margin of just one vote, with all 15 Council members accounted for. Actually the official count was two votes against but the last voter, who was in favor of CPC, elected to abstain when the failure of the motion appeared to be obvious.

There was no doubt in my mind that my proposal for mandatory PLI would never be approved. But I needed to hear opposing views on why not require mandatory PLI inasmuch as many clients of consulting engineering firms (or sole practitioners), require that they (the client) be protected by errors and omissions insurance. So, if we provide services to the public and DAPE is mandated by law to protect the public by regulating over those that provide the services, then why not make PLI mandatory? The most compelling reason not to, appeared to focus on the fact those other state regulatory boards with similar mandates don't require it. I have no problem with that but, as holder of the Consulting

Engineering seat on Council, **I want my fellow colleagues out there to know that I did my best to level off the playing field, as many of you had requested of me.**

The mandatory CPC issue was another matter. Council first brought this issue up some nine years or so back as some of you can recall the heated debates on such that were held between Russ Jones, Ph.D., P.E., and Jack Billingsley, P.E. At that point in time, there were only three states requiring mandatory CPC. There are now over twenty. The architects, surveyors and landscape architects in Delaware didn't require it back then, now all three of them do. Furthermore, most adopted it because the Delaware legislature's Sunset Committee required it of them when they were reviewed. DAPE hasn't undergone a Sunset Committee review for over ten years. I'd have to say that we're overdue. My philosophy on the matter has always been that, if we don't do it ourselves, someone else will do it for us.

We heard from many of you out there who primarily were against mandatory CPC. Surprisingly to me, many of our professional organizations, who struggle each month for attendees at their meetings where CEU units can be earned, were also against it. Needless to say, they are obviously insensitive to many of their members registered in several other states (more than one of which have mandatory CPC) and have to meet all of the other states' CPC requirements because their home state (Delaware) doesn't have mandatory CPC. My proposed program was very user friendly. If you were in any way involved in your profession, you made the cut. It even allowed credit for engineering practice providing it was in an area of work controlled by ever changing codes and regulatory mandates. Engineers reaching the age of 60 with 20 years of aggregate practice had the option to no longer participate in the CPC program. The primary aim of the program was to satisfy CPC requirements at little or no cost or inconvenience to its participants. I said earlier that "Council, in its infinite wisdom," voted it down. I'm not being cynical in saying that. I have learned to rely on the strength of Council's leadership diversity and have accepted their decision on the matter as

what must be best for Delaware engineers at this point in time. Once again, however, to all of you out there who have to meet CPC requirements of more than one state, **I gave it my best shot!**

###

COUNCIL MEMBER SPOTLIGHT

Representing Sussex County, public member **Edward Lewandowski**, is the Education and Outreach Coordinator with the Center for the Inland Bays (Delaware Inland Bays National Estuary Program).

Ed considers his time spent on Council as both "enjoyable and educational; although somewhat surprised at the breadth and depth of legal issues confronting Council."

As for the challenges facing Council, this public member suggests Council maintain its focus and attention on continued protection of the public welfare, rather than devoting its time and effort addressing the needs and desires of DAPE's members, to continue its self-governance success in the interests of Delaware's citizens.

As Chairman of the Public Information Committee, Ed was instrumental in the publication of our newsletter and drafting a public relations brochure for DAPE's outreach program.

Ed, an avid golfer and hunter, resides in Bridgeville, with his wife and two daughters.

The public members of Council, appointed by the Governor, are a welcome addition to the Council of DAPE for their unique perspective they bring to Council issues.

Former Governor Carper appointed Edward Lewandowski to represent Sussex County for a four-year term expiring May 11, 2003. That time is here and the DAPE Council would like to publicly express its sincerest appreciation to Ed for his many contributions over the past several years. Ed's attendance and participation during

his tenure was excellent, despite the many hours involved in traveling to meetings.

MANY, MANY, MANY THANKS, ED!

###

EXAMINATION CORNER

NCEES Structural II PE Exam Format

Effective with the April 2004 administration, the format for the NCEES **Structural II** examination will be revised. (This additional eight-hour exam is required for those engineers seeking licensure in several jurisdictions as Structural Engineers. Delaware does not license Structural Engineers.) The new exam will contain four problems covering bridges and four problems covering buildings. Examinees choosing bridge problems in the morning session, must answer bridge problems in the afternoon session, etc. Examinees are required to pass the total exam in a single administration; and scores will be reported as either pass or fail for the total exam.

This differs from the current format in which one problem was given in the morning and one in the afternoon and examinees were permitted to pass the morning and afternoon portions separately.

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NEW EXAM SCORE REPORTING

The Council of DAPE approved reporting exam scores as "pass/fail" only, effective with the April, 2003 exam administrations. Previously, examinees had received the converted percentage grade provided by NCEES.

Now that all NCEES exams have been converted to 100% multiple choice, to increase exam security the national policy is to prohibit reviews of failed exams. Accordingly, a diagnostic report will be provided to failing candidates. As such, it was determined reporting grades as pass/fail is appropriate.

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APRIL, 2003 EXAM ADMINISTRATION

Ninety-seven examinees took the Principles & Practice of Engineering exam on Friday, April 11, 2003.

On Saturday, April 12, 2003, 205 candidates took the Fundamentals of Engineering exam.

The following DAPE members offered their services to proctor these exams, and appreciation for their continued commitment to the engineering profession is acknowledged:

Desmond Baker, P.E.
Daniel Barbato, P.E.
Bill Brockenbrough, P.E.
Joseph Charma, P.E.
Vincent Cichocki, P.E.
Glenn Davis, P.E.
Colm DeAscanis, P.E.
Herbert Duffield, P.E.
Belknap Freeman, P.E.
Michael Keefe, P.E.
Robert Leitsch, P.E.
Will Mather, P.E.
George Nagase, P.E.
James Neal, P.E.
John Traynor, P.E.
Steven Seip, P.E.
Joseph Serbu, P.E.
Michael Siwek, P.E.
David Spangler, P.E.
Joseph Volk, P.E.
Lonnie Webb, P.E.

Special thanks to **Jim Davidson, P.E.** who served as Exam Supervisor both days, which he has done for the past 10 years, and to **Bob Leitsch, P.E.**, who offered his services on both Friday and Saturday.

Many, many thanks to all our proctors!

If you are interested in joining our proctoring team, please contact the DAPE office and we will provide you with the necessary information!

###

(EXAM PHOTOS)

LAW ENFORCEMENT ACTIVITY

Council Hearing **State vs. Gejza Csoltko, P.E.**

On November 13, 2002 Council held a disciplinary hearing for two complaints against licensee, Gejza Csoltko, P.E.

The first complaint alleged a violation of the law and Code of Ethics by Mr. Csoltko's approval and sealing design documents for the design and construction of a storm water management pond for a subdivision in New Castle County.

The second complaint alleged a violation of the law by Mr. Csoltko permitting a dangerous discrepancy to exist between an approved plan for the construction of a storm water management pond and its actual construction in connection with professional services provided for a project in the city of New Castle, Delaware.

This case was prosecuted by Deputy Attorney General Thomas H. Ellis, Esq. Deputy Attorney General Michael McTaggart, Esq. provided legal counsel for the DAPE Council.

After hearing the testimony of numerous witnesses and the presentation of evidence, the Council concluded that the allegations were not proven and the decision was in favor of Mr. Csoltko on both counts of the complaint.

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The Committee investigated the following complaints:

02/024 – Unlicensed practice – Insufficient evidence to support. Case closed.

02/037 -- Unlicensed practice --

Reinstatement of license approved; no grounds to support further action. Case closed.

02/039 -- Unethical conduct – Investigation concluded no validity. Case closed.

02/026 -- Unlicensed practice – Insufficient evidence to support complaint. Case closed.

02/027 -- Unlicensed practice – Insufficient evidence to support complaint. Case closed.

02/033 -- Publication listing – no C/A – Listing deleted. Case closed.

03/008 -- Dodge Report listing – no C/A -- Certificate of Authorization (C/A) issued. Case closed.

03/010 -- Phone book listings under "Engineering" – no C/A -- Listings to be deleted, Certificates of Authorization issued, or separate files opened for those unresolved. Case closed.

Numerous other concerns, complaints, etc. are in various stages of investigation.

###

ALASKAN PRESIDENTS'/MBA ASSEMBLY

NCEES sponsored its annual Board Presidents/Member Board Administrators assembly this year in Anchorage, Alaska on February 12-15, 2003. President Ross Harris, P.E., and Executive Director Peggy Abshagen represented Delaware.

This conference, funded by NCEES, is well attended and a very productive gathering of regulatory representatives. Although exam security was the main focus of this meeting, other topics such as strategic planning, mobility, an engineering licensure model, etc. were discussed.

NCEES is applauded for acknowledging the resourcefulness of each and every state board.

###

**PUBLIC OUTREACH PROGRAM/
COUNTY WORKSHOPS**

The Council of DAPE is committed to heightening the awareness of those that interface with the engineering profession of the lawful requirements of engineering; the resources available to the public; how to file an engineering complaint; etc.

Workshops were held in each of the three counties for permitting/building officials, developers, school authorities, state agencies, and other appropriate attendees.

Hosted by the External Affairs Committee, and the Law Enforcement/Ethics Committee, chaired by Larry J. Tarabicos, Esq., and Walter L. Frank, P.E., respectively, breakfast meetings were held at the Bellmoor Conference Center, Rehoboth, Delaware; Dover Downs Hotel, Dover; and the Christiana Hilton, Newark, Delaware.

President Ross Harris and Immediate Past President Gregory Moore led the discussions on the issues of:

- acquainting attendees with the requirements of the law;
- enforcement efforts of DAPE;
- resources available to assure appropriate licensure of firms and individuals;
- process to address engineering concerns and/or complaints;
- legal powers of Council in disciplinary matters;
- overlap of surveying and engineering practices;
- overlap of architecture and engineering practices;
- appropriate sealing of plans/documents;
- potential ethical violations;
- most common complaints forwarded to DAPE;
- sources of complaints;

Deputy Attorney General Laura Gerard participated in these workshops providing the legal perspective on the enforcement process and the work of the Law Enforcement/Ethics Committee.

At the New Castle County workshop, Carl Kent of Security Services International (SSI), the investigative firm employed by DAPE, was introduced and spoke briefly on the investigative process.

DAPE expects to continue hosting these workshops in the future, in its efforts to safeguard life, health, and property, and to promote the public welfare of the citizens of Delaware!

###

BALLOTS/PROPOSED BYLAWS REVISIONS ARE COMING!

Ballots for the 2003 Council election will be mailed by June 15th to those DAPE members living or working in Delaware.

The election is being held to fill the following Council seat vacancies:

- Electrical Engineering
- Private Consulting
- Kent County

Ballots are required to be returned by July 15th to be counted!

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Bylaws Revisions are proposed to:

- Permit Council acceptance of a written proxy vote from a Council member unable to attend a meeting, or by participation via telephone and/or video conference in that portion of the meeting that an important specific issue is addressed. Either of these methods would not be considered when establishing the necessary quorum of Council.

- Redefine **delinquent status** of licensee, when no written request for withdrawal from the practice of engineering is received by the Secretary of Council, as **three** months after expiration date to be consistent with §2806 of the law, and to streamline the administration of same;
- To implement a **delinquency fee** for holders of Certificates of Authorization, who have requested reinstatement from delinquent status, consistent with §2806 of the law;
- To implement a **reinstatement fee** for those holders of Certificates of Authorization, who have requested reinstatement from Inactive Status, consistent with §2806 of the law;
- To implement a **reinstatement fee** policy for those holders of Certificates of Authorization, who have requested reinstatement from delinquent status;

Reinstatement fees are the prorated portion of the annual/biennial renewal fees.

Delinquency fees for individuals have been approved as \$50/month (up to six months).

If the proposed bylaws revisions are approved by the membership for Certificate of Authorization holders, the delinquency fees would be \$100/month (up to six months).

The DAPE Council has endorsed these proposed revisions and seeks the support of its membership to enact these changes.

Look for your ballots/bylaws revisions in the mail! Make your vote count – mail your ballot to the DAPE office by July 15th!

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