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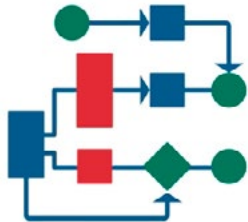
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PEG

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The PEG is not a technical, peer-reviewed publication. Although we publish items about accomplishments in research, we **do not** publish actual academic or scientific papers and presentations, even in summary form.

The PEG does not accept advertising.

Opinions published in *The PEG* do not necessarily reflect the opinions or policy of APEGA or its Council.

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Here's Looking at Another Successful Year of Improvements

BY **JANE TINK**, P.ENG., FEC, FGC (HON.)
APEGA President

As 2017 ends, it seems only appropriate that we review how we progressed through the year, leading to the revisions, tweaks, and renewed focus we need for 2018. It is something we are taught to do in our personal lives, our professional lives, and our business lives, and it is something APEGA does in its regulatory life, too, as we prepare for the year ahead.

Challenging, exciting, and occasionally bittersweet changes and developments have highlighted your Association's 2017.

APEGA AND ASET

I trust that over the last few months many of you have been able to participate in at least one of the numerous information sessions we have held to update Members and Permit Holders on the progress of the legislative review. If you did not have the chance to do so, I invite you to [watch the video](#) posted on APEGA's website that explains our position on changes proposed by the Association of Science and Engineering Technology Professionals (ASET). I also encourage you to [read APEGA's response to ASET](#), also posted on our site.

The Government of Alberta (GoA) had requested a joint submission from APEGA and ASET, but it became necessary for APEGA to act independently, submitting our proposals and the reasoning behind them without ASET's support. Currently, it appears unlikely that any changes to the *Engineering and Geoscience Professions Act* and *General Regulation* will occur before the next provincial election. However, the extensive review and discussions held with our Members and Permit Holders have prepared the Association to move forward when the GoA addresses our legislation.

APEGA's submission comprises more than 80 Council-endorsed recommendations, the result of work we began at the launch of the legislative review in 2014. These updates are important to the modernization and strengthening of APEGA's regulatory system. A consequence of this extensive review, when it is combined with the viewpoints of new public members on APEGA's Council, is that we have gained new insights into how the current legislation can be used more effectively. We also have a perspective on how other self-regulating organizations in Alberta are making their legislation work for them, despite their own needs for legislative modernization.

In our web materials, you will see a link to a survey to [submit your comments about the legislative review](#) positions of APEGA and ASET. If you have not already, please take the survey.

EXCITING CHANGES

In April, APEGA welcomed Jay Nagendran, P.Eng., QEP, BCEE, FEC, as our new Registrar & CEO. This newly created position combines the positions of Registrar and CEO to ensure that our regulatory roles and obligations, along with the business of running the Association, are more effectively balanced at the highest level. In this way, we ensure that important initiatives have the resources to succeed. Also new this year to the executive team is Sharilee Fossum, CPA, our new Chief Financial & Administration Officer.

Heidi Yang, P.Eng., FEC, FGC (Hon.), who served as our Interim CEO, has taken on the role of Chief Operating Officer. Matthew Oliver, CD, P.Eng., formerly our Director of Registration, is now Deputy Registrar & Chief Regulatory Officer.

“ We have gained new insights into how the current legislation can be used more effectively. We also have a perspective on how other self-regulating organizations in Alberta are making their legislation work for them, despite their own needs for legislative modernization. ”

These individuals, together with the rest of our staff, our Council, and our more than 1,500 volunteers, are moving APEGA towards being a stronger and more proactive regulator.

IMPROVED PRACTICE REVIEWING

APEGA is improving the processes for conducting reviews of Permit Holders and their respective Professional Practice Management Plans (PPMPs). These reviews help ensure that Permit Holders comply with their APEGA requirements and meet their professional responsibilities, along with the requirements and responsibilities linked to other stakeholders and their own organizations. They also enable APEGA to assist those Permit Holders and Responsible Members that need additional clarification and guidance in preparing PPMPs.

Efforts are being made to contact more individual Members who have failed to comply with our Continuing Professional Development (CPD) program. Even if you have submitted records of your CPD hours, you may also get a letter asking for supporting documentation. Being a strong regulator means holding Members accountable, and this is a big part of that work.

It is important to note that APEGA can assist and guide Members who may wish to declare themselves non-practising, or need clarification on what activities constitute CPD hours and how to document them.

STANDARDS UPDATING

In May, we released a major update of the professional practice standard entitled *Evaluation of Oil and Gas Reserves and Resources for Public Disclosure*. At the same time, we issued the new *Joint Standard to Regulate Professional Responsibilities in Completion and Assurance of Wetland Science, Design and Engineering Work in Alberta*.

Watch for more updated and new documents. With the participation of volunteers who are experts and experienced in the appropriate practice areas, staff members continue to review,



MORE INFORMATION[Video on Proposed ASET Changes](#)[Mentoring Program Information](#)[Volunteering Opportunities](#)[APEGA Job Board](#)[Career Resources](#)

update, and develop standards, guidelines, and bulletins.

As they are released, or whenever you need a refresher, please review the standards, guidelines, and bulletins that pertain to your area of practice. Electronic versions are available on our website under [Publications](#), for download and use by Members and others.

MENTORING NOW WIDELY AVAILABLE

We have expanded [APEGA's mentoring program](#) to serve all 10 of APEGA's Branches, making the program truly provincewide. After you have applied, taken the online training, and been accepted as a mentor or mentee, our online mentoring tool will help you connect with the person who meets your needs. Our tool allows you to search for a mentor at all stages of your career, not just when you are a Member-in-Training. Mentors and those mentees who have advanced to Professional Member status can claim mentoring under our CPD program.

The advent of technology like Skype and FaceTime means that you can meet with your mentor or mentee no matter where the two of you live. Our system does not restrict you to finding a mentor or mentee who lives or works nearby.

VOLUNTEERING YET?

APEGA offers many [volunteering opportunities](#), whether for Branch executive and activities, or for the full Association in its regulatory and non-regulatory roles. Perhaps you can volunteer with Outreach as a science olympics judge, or help prepare university students for the workforce by participating in a rapid resume review. Perhaps we need your expertise to assist in updating a critical standard. Perhaps you

have reached a stage in your career that allows you to commit to a busy, longer-term position on one of our statutory boards.

I encourage you to peruse the list of opportunities on our website. Time commitments vary from a few hours to a lot longer, but I think, no matter what you are accepted for, you will find that volunteering for APEGA is a worthwhile and invigorating use of your time. It also counts towards your CPD hours.

FURTHER MEMBER SERVICES

APEGA offers value-added professional development sessions. Organized and hosted by APEGA, these sessions encompass soft-skill and technical topics.

We also offer a [free online job board](#) for Members seeking employment. Unemployed Members may qualify for discounted pricing on our professional development sessions — simply let our staff know and they will see what they can do. You may also qualify for a reduction in your annual membership dues. For additional information, check out our [Career Resources](#) web page.

THE BITTERSWEET

In 2017, it has been bittersweet to see the retirement of some of the Association's long-term staff members. These people gave wonderful support to our Association and our many volunteers over many years.

I would like to thank those who have left the Association for their hard work and dedication, and wish them well in their new endeavours.

THANK YOU

In closing, I want to thank all our volunteers, Members, staff members, Councillors, and Permit Holders for their extraordinary commitment to APEGA. It has been and continues to be a privilege and honour to meet and work with you. I wish you all success and happiness in 2018, professionally and personally.

Questions or comments?

president@apega.ca

How Will You Serve Your Professions in 2018?

BY **JAY NAGENDRAN**, P.ENG., QEP, BCEE, FEC
APEGA Registrar & Chief Executive Officer

APEGA Council and staff are busy preparing for another year of serving the public — and serving you, too. At first glance, those two aspects of APEGA's role may seem contradictory. Can APEGA effectively act on behalf of both sets of stakeholders?

The answer is yes, but let me qualify that statement. We do not act on behalf of specific individuals in the way a union does. Rather, our Member services are about providing you with the tools and information to practise ethically, professionally, and successfully. That distinction is critical in enabling us to regulate objectively and effectively, through things like enforcement, discipline, registration, and our various reviews, investigations, and audits.

Our mission statement puts APEGA's role bluntly: "Regulate the practices of engineering and geoscience to serve the public interest in Alberta." That's a straightforward command — it tells us what we must do — and Members are not even mentioned. The nuance of what we are and how we regulate is found within our vision statement: "APEGA will earn the confidence of the public and instill pride in its Members." Those words hint at the complementary nature of the services we offer you.

Regulation does not operate in a vacuum. Certainly, regulation is about the organization known as APEGA, but it's also about you and your professional responsibilities and obligations. We don't earn the confidence of the public by simply regulating well. We earn the confidence of the public by regulating well *and* having engaged, ethical, properly educated and trained, and supportive Members. That is the essence of self-regulation. The more of you there is in that equation, the better we are.

We offer you tools and programs to make the partnership work, from [professional development events](#) through to our [mentoring program](#). We offer services to help you advance your career and succeed in a challenging economy. [We offer benefits](#) that enable you to leverage your buying power, insure against personal and professional risk at an affordable rate, plan your investments, and even travel less expensively. We provide volunteer avenues that allow you to play a role in making regulatory decisions, share your knowledge with future generations of Professional Engineers and Professional Geoscientists, and organize events in your own communities.

I'd also like to emphasize that internally, many of our functions support our overarching regulatory roles. There's an APEGA contingent whose work you rarely see, mostly in the areas of finance, information technology, and quality and performance management. No regulatory body of APEGA's size and scope can do its job without these parts of its operational foundation.

Many of you will want to tell me about all the disengaged and even disgruntled Members you know. I realize they are out there. There's also a large contingent of what I'd call minimally engaged Members. They pay their dues, they complete the requirements of our mandatory [Continuing Professional Development program](#), and they practise ethically and competently. But for whatever reason, that's the extent of it.

I look at engagement as a continuum. It starts on the low end, with Members who grudgingly comply with our regulations and standards — or don't even fully comply, requiring APEGA to exercise its regulatory obligations — and literally roll their eyes at any email request or new initiative from their Association. The continuum extends to fully engaged Members, who



AS YOU LOOK TO THE NEW YEAR AND YOUR FUTURE AS A PROFESSIONAL, CONSIDER WHAT YOUR ROLE IS IN SELF-REGULATION. WHERE ARE YOU ON THE MEMBER ENGAGEMENT CONTINUUM? ARE THERE A FEW SMALL COMMITMENTS YOU CAN MAKE TO MOVE YOURSELF A LITTLE MORE TOWARDS THE FULLY ENGAGED END?

commit to self-regulation in a big way. They serve on Council or other boards or committees. They volunteer in our [Outreach program](#). They organize luncheons for [APEGA Branches](#). They are on the lookout for opportunities to participate in APEGA events and otherwise support APEGA.

I realize you have other career and personal obligations in your lives, and I'm not asking that each one of you leap to the fully engaged end.

I do ask this. As you look to the New Year and your future as a professional, consider what your role is in self-regulation. Where are you on the continuum I've described? Are there a few small commitments you can make to move yourself a little more towards the fully engaged end?

As we close in on our 100th anniversary in 2020, why not do something in 2018 to increase your personal investment in APEGA? Take part in some of our activities, regulatory or otherwise, that advance the APEGA professions. Include us in your plans. Help us and your peers fulfill the APEGA mission and vision.

WHAT ABOUT THE ORGANIZATION'S PLANS?

What is APEGA doing to deserve this 2018 commitment I'm asking for?

Our plans centre on being a better regulator and continuing to strengthen our organizational foundation. That's very much consistent with what I've said in the first part of this column.

The main guiding document for all of this is our strategic plan — you could call it the marching orders we receive from you, via your elected Council. The strategic plan that continues to guide us in 2018 is [Strategy 2017–2022: Towards a Century of Service](#). We, your staff, use this document to create an operational plan.

What you'll see in 2018 is a continuation of many of the initiatives begun or worked on in 2017. We're building and strengthening our foundation through improved quality management, financial performance management, and information technology development. And we'll continue to become a better regulator, through the updating and adding of practice bulletins, guidelines,

and standards, by improving our mandatory Continuing Professional Development program, and by improving our Permit Holder practice reviews.

Also under the better regulator banner, we'll continue to improve enforcement and discipline, whether we're dealing with complaints against individuals and companies not licensed to practise who misrepresent themselves or practise illegally, or complaints of unskilled practice or unprofessional conduct against those who are licensed. Watch also for continued improvements in the way we license and register Members and Permit Holders.

Those are the broad sweeps. For a detailed look at how we've done in 2017, I encourage you to attend the APEGA Annual General Meeting, April 20, 2018, in Edmonton. Before the AGM, watch for the *2017 APEGA Annual Report*, which will be available online in early April.

If you've never done either before — gone to the AGM or read the [Annual Report](#) — perhaps those two efforts will be your commitment to engaging more with APEGA in 2018. It's a great start.

DUES INCREASE

You'll read elsewhere in this *PEG* and on [apega.ca](#) about a dues increase of \$32 that Council approved on November 30. Dues increases are never popular, but this time I like to think I'm the bearer of good rather than bad news. This increase has a non-operational and specific purpose, and I think it's a purpose many of you will relate to: improving risk management.

We are committed to putting and keeping our financial house in the best order possible. Part of that commitment is being prepared for unforeseeable threats. A huge lawsuit or challenge to your right to self-regulation, for example, could jeopardize the future of APEGA.

The experts have told us that we need better protection in this area, much of it in the form of money we set aside for the purpose. It needs to be done, however, and I hope we have your support.

We also recognize that some of our Members have still not recovered from the economic downturn. In an unprecedented move, Council has extended a dues reduction for unemployed Members for a third year in row.

LEGISLATIVE REVIEW UPDATE

A key component of being a better regulator is our legislative review. We have made our submission to the provincial government, but the Association of Science and Engineering Technology Professionals of Alberta (ASET) has made a separate submission. The two organizations differ in what the path forward should be when it comes to regulating technologists.

The crux of our disagreement is this: ASET would like to be a self-regulating body for technologists who take responsibility for their own work, without APEGA's involvement. APEGA has always held, and continues to hold, that public safety is not properly protected if ASET has self-regulatory independence.

We will, however, continue to work with ASET to try to reach an agreement on the matter. In the meantime, we have fully functional legislation, and the government has in its possession a wide-ranging set of recommendations to eventually make it even better.

I encourage you to click on the links below to read our materials on this matter. Also, check out the latest legislative review story in this edition of *The PEG*.

[Legislative Review Site](#)

[ASET & APEGA Proposed Changes](#)

HOLIDAY WISHES

Finally, I'd like to wish all of you the best of the season. And if I may, let me add special best wishes to Council and APEGA staff, who have been forthright and supportive in my development and growth as the APEGA Registrar & Chief Executive Officer.

I'm excited about what we've accomplished in my first eight months in the role, and I look forward to many more accomplishments to come. Thank you!

Questions or comments?

Registrar_CEO@apega.ca



NOTICE OF ANNUAL GENERAL MEETING

In accordance with APEGA Bylaw 16(20) of the *Engineering and Geoscience Professions Act*, official notice of the 2018 APEGA Annual General Meeting is hereby given.

Friday, April 20, 2018 | 2 p.m.
Shaw Conference Centre | Edmonton, Alberta

Luncheon 11:30 a.m. – 1:40 p.m.

Attendance Qualifies for CPD Credit

Further details on the APEGA Annual General Meeting and Conference 2018 will appear on www.apega.ca as they become available.



APEGA Council Election

Have your say in how APEGA is governed. Cast your vote in the Council election.

The 2018 APEGA election runs from Friday, February 16, 2018, at 9 a.m. to Monday, March 19, 2018, at 12 noon

Just before polling begins, APEGA's secure elections provider will email you voting instructions and a unique, personal link. Your primary email address will be used for this message, as it appears in the Member Self-Service Centre.

If your primary email address is out of date, please update it now.

Your vote, your Council. Take part in this important part of self-regulation.



Nominating Committee Announces Candidates For APEGA’s Election 2018

The list of candidates for APEGA’s Election 2018 is set. The annual nomination period is over, and Nominating Committee interviews and recommendations are also complete. In all, 12 APEGA Professional Members are seeking three-year Council terms. Three other Members are running for positions on the APEGA Executive.

The rest is up to you, as Professional Members of APEGA. Find out which candidates you support. Vote during the polling period. And encourage your professional peers to do the same.

In January, full candidate information and detailed voting instructions will be available online and promoted in the e-PEG. Also, to supplement written materials candidates may choose to have APEGA post a video about who they are and why they are running.

Names of candidates in each category appear below in alphabetical order.

EXECUTIVE CANDIDATES

Of the three candidates, the one with the most votes becomes President-Elect and the runner-up becomes Vice-President. Each term is for one year, but the President-Elect automatically becomes President in 2019, serving a one-year term in that position, followed by a third year on the executive, as Past-President.

- George Eynon*, P.Geo.
- Tim Joseph*, P.Eng.
- Shawn Morrison*, P.Eng.

COUNCIL CANDIDATES

- Craig Clifton*, P.Eng.
- Jennifer Enns*, P.Eng.
- Tim Hohm*, P.Eng.
- Walter Kozak*, P.Eng.
- Keith McCandlish*, P.Geol.
- Jim McCuaig*, P.Eng.
- Zobayur Rahman, P.Eng.
- Hasan Rizvi, P.Eng.
- Bob Rundle*, P.Eng.
- Muhammad Tayyab, P.Eng.
- Jason Vanderzwaag*, P.Eng.
- Claudia Villeneuve*, P.Eng.

Polling runs from:

Friday, February 16, 2018, at 9 a.m.
to
Monday, March 19, 2018, at 12 noon

Members will cast votes for up to four Council candidates and one candidate for President-Elect/Vice-President.

Your next President was decided in the 2017 election. Nima Dorjee, P.Eng., officially takes over as President in Edmonton on Friday, April 20, 2018, at the APEGA Annual General Meeting.

ELECTRONIC VOTING

APEGA is using an experienced and secure third-party to run the election. Before polling begins, you will be emailed a unique, personal link and instructions from a company named Scytl Canada Inc. It’s part of the worldwide Scytl group, an industry leader that has managed more than 1,700 election technology implementations and 100,000 elections in more than 40 countries.

Make sure right now that you have a current, primary email address listed in the Member Self-Service Centre — one that you monitor regularly. If you have forgotten your password, follow the prompts.

If you have questions about the election, please call us at 1-800-661-7020. You can also email us anytime at elections@apega.ca and we will get back to you within two business days.

*candidates endorsed by the Nominating Committee

Second Phase of Permit Dues Increases Takes Effect on July 1, 2018

As you may be aware, APEGA Council approved a change in its permit dues model in December 2016. Permit dues increase with the size of the company, as measured by the number of APEGA Members employed, as per APEGA's permit files.

The Permit Holder dues formula is \$500 times the square root of the number of registered APEGA Members employed. Types of Members used in the calculation are Professional Members, Licensees, Professional Licensees, restricted practitioners, Provisional Licensees, Members-in-Training, and exam candidates. The new rate structure is a more equitable reflection of the costs required to regulate Permit Holders than the one it replaces. In the past, there was one dues amount, no matter the size of Permit Holder.

We staggered implementation of the increase to give smaller companies more time to prepare for this change. For Permit Holders employing six or more Members, the increase was effective July 1, 2017. For Permit Holders employing five or fewer Members, however, it is effective July 1, 2018, about six months from now.

To help in this transition, APEGA updated its Company Self-Service Centre (CSSC) to allow the designated Chief Operating Officer on APEGA's permit file to view and edit the list of APEGA Members employed with the company. A Permit Holder can update its information at any time and is encouraged to keep its permit file current, including names of APEGA Members and Responsible Members, and contact information.

A dues estimator also appears in the CSSC, to help you determine how much your company will be paying.

To keep Permit Holders informed, APEGA sends its first permit dues notification to Permit Holders 60 days in advance of the due date, allowing the Permit Holder one month to modify its APEGA Member list. At 30 days prior to the due date, APEGA sends the final invoice and then allows the Permit Holder 30 days to make payment.

MORE INFORMATION

For permit questions, please email permits@apega.ca.

Legislative Review — Now and Tomorrow

APEGA's recommendations are in the Government of Alberta's hands, but the actual government rewrite of our legislation will likely take place several years from now. Still, work needs to be done. Joint regulation and scope of practice for technologists will be the focus of discussions between APEGA and the Association of Science and Engineering Technology Professionals of Alberta (ASET) in 2018

LOOKING BACK, LOOKING AHEAD

We began our legislative review project in 2014, at the request of the provincial government.

Three years and five rounds of APEGA stakeholder consultations wrapped up this year, with more than 6,000 Professional Members sharing their feedback on proposed changes to the *Engineering and Geoscience Professions Act (EGP Act)* and *General Regulation*.

Your input was collected through surveys, face-to-face meetings, webinars, emails, and video conferences. A champions collaborative made up of Members representing APEGA Branches ensured that the conversation reached every corner of the province.

Earlier this year, Council submitted more than 80 proposed recommendations to the Government of Alberta (GoA) for its approval — but there's still important work to complete in 2018 and beyond.

Although the government likely won't move forward with amendments to our legislation before the next election, the completed work is important and is not lost.

KEY HIGHLIGHTS

The current Act is not broken. But it is 35 years old and the legislative review project was an opportunity to improve it — to give APEGA better tools so we

can better regulate in the public interest. It was an opportunity to make the Act and regulations better and align them with modern professional legislation.

Many of our proposed changes seek to clarify our authority: to make explicit what is currently implied. Modern professional regulatory legislation enshrines this explicit authority in the legislation itself. To name a few, these proposed changes:

- clarify the Registrar's authority to make certain administrative decisions so they don't need to be brought to Council (for example, some of the items that currently go through our policy and standards task force)
- grant explicit authority of delegation, where appropriate
- grant Council authority to approve terms of reference for statutory committees
- grant Council authority to approve practice standards

Having these authorities specifically laid out in the legislation will benefit the Association by reducing confusion and reducing potential legal challenges.

A modernized *EGP Act* will also support reciprocal notification of incidents with Occupational Health & Safety, the Alberta Energy Regulator, and other government ministries and regulators. These

actions will be allowed when significant events occur that involve engineering or geoscience. The benefits to the public and the government include:

- faster resolution of matters
- cost effectiveness
- less duplication of effort
- harmonious work with other regulators to protect Albertans and the environment

Another key recommendation was to authorize APEGA's Registrar to initiate complaints and investigations in the absence of formal written complaints, when the public, workers, or the environment are at risk. This authority is currently implied, but making it explicit will eliminate doubt.

We have proposed enhancing the investigative powers of investigators and practice reviewers when investigating complaints and conducting practice reviews into engineering and geoscience activities. This will improve our ability to obtain relevant information to effectively regulate in the public interest.

Another key proposal is to increase the maximum fines that can be awarded against individuals and companies. Public expectations have changed, and the current \$10,000 maximum fine is inadequate when major events occur. We need fines that are progressive, proportionate, and effective. We have also proposed that the legislation be amended to grant us explicit authority to impose creative sanctions, in addition to or instead of fines. It is important that there be other tools available to assist in correcting a behaviour — fines alone may not accomplish this.

Another area we looked at was the practice of the professions and how we can better regulate in the public interest, to improve the health of the professions generally while also helping our Members and Permit Holders improve their professional practices. This includes:

- introducing the concept of mandatory practice standards and bulletins
- authorizing practice reviewers to assess against practice standards and make recommendations, including suggestions to help Members and Permit Holders improve their practice

- authorizing practice review panels to make orders for failing to comply with practice standards and bulletins

Another proposal was clarifying authentication requirements in the legislation, to include definitions for authentication and professional documents.

Additional proposals were made regarding Permits to Practice, including clarifying the responsibilities of Responsible Members, and enhancing APEGA's authority to apply conditions or restrictions on Permit Holders and their Permits to Practice.

BETTER TOOLS, BETTER REGULATOR

As mentioned, the current Act still works, but it needs an update to align it with other, modern professional legislation. We believe the recommendations we've submitted to the government will give us better tools to serve the public interest.

Input from Members and Permit Holders was vital to the development of these recommendations, but there were other benefits to these conversations. Our legislative review consultations increased your engagement with APEGA in a positive way.

We learned, from conducting these consultations, that many Members didn't know about certain requirements under our current legislation. The consultations helped raise their awareness. This will help them in their individual and corporate practices, under the current legislation, and will help improve the health of the profession overall. The surveys that accompanied each round of consultations also were a positive engagement tool. Although not all Members agreed with our recommendations — and there were certainly some hot-button items that generated both significant support and significant opposition — they did result in Members being engaged. That is always a positive thing for APEGA and Members.

COMING SOON: PRACTICE STANDARD CONSULTATIONS

We are carrying the momentum we built with the legislative review consultations into upcoming

consultations on updated practice standards. APEGA is actively working on updating our authentication standard and we expect it to generate lively Member and Permit Holder engagement.

The legislative review project has been a large-scale endeavour involving extensive work and effort. A lot of good work and stakeholder engagement has gone into getting us where we are today, providing significant value to the Association.

There is a deeper understanding of the current legislation, which will lend itself well to the advancement of APEGA and the professions in the coming years, as we move forward on regulatory initiatives.

The guiding principles and intent won't change, and when the government is ready to move ahead, the work is done.

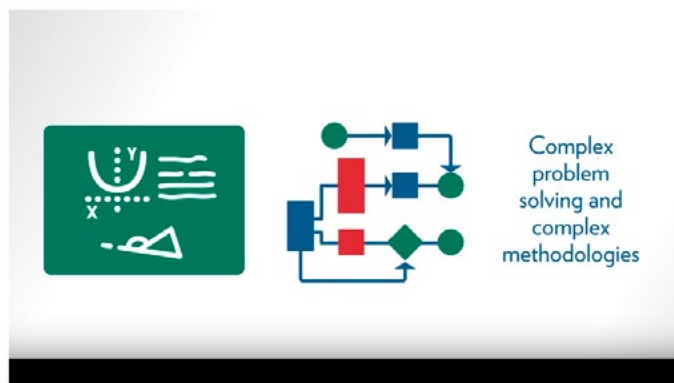
WHAT'S NEXT

- Continue to build relationships with the government and ASET
- Be aware of the *General Regulation* expiration in 2021
- Continue the conversation with Members and Permit Holders

SHARE YOUR OPINION: APEGA AND ASET

This fall, we held information sessions with APEGA Members and Permit Holders to seek feedback on proposed changes to the Act that have been submitted by the Association of Science and Engineering

Technology Professionals of Alberta (ASET). Under the Act, APEGA and ASET have a shared responsibility to jointly regulate the province's more than 800 Professional Technologists (P.Tech.s).



APEGA has created a video that outlines our concerns about ASET's proposals in more detail. So far, almost 2,000 Members have watched the video.

Our concerns are also summarized in our FAQ and we posted a response on our website. We're still collecting your input through an online survey.

We hope APEGA Members take the time to learn more about this important issue and share their thoughts with us. We'll continue to engage Members, ASET, the GoA, and other stakeholders in informed and constructive conversations.

FIND MORE INFORMATION ONLINE

Review the full list of endorsed recommendations, along with the supporting briefing notes and other documentation, at apegalegislativereview.ca.

Risk Management Need Addressed Through Dues Increase

On November 30, Council approved a Member dues increase for 2018 to enable APEGA to improve the way it mitigates risk, as the organization progresses in its efforts to become a stronger regulator and a more resilient organization. Dues for Professional Engineers, Professional Geoscientists, and Professional Licensees will increase by \$32 to \$392, plus GST, from \$360, plus GST. Dues in other membership categories are also increasing.

Council directed staff to place revenues from the increase in a new regulatory risk-management reserve. No portion of the increase is being used to fund operations.

"We must be sure we are capable of handling severe risks, such as lawsuits, protecting title, ensuring compliance, and enhancing public protection," said APEGA President Jane Tink, P.Eng., FEC, FGC (Hon.) "The reasoning behind this increase is sound, particularly in light of the extra emphasis we have been putting on strengthening our foundation and becoming a better regulator."

She continued: "This is the second dues increase in a row, and I know it is going to be difficult for some of our Members to accept. An enormous amount of work by staff, the Audit Committee, and Council went into this decision. I want our Members and Permit Holders to know that Council never takes dues increases lightly. We all know that it is still tough out there, and if it were not necessary, we, Council, would not approve an increase."

In an unprecedented move, Council also passed a motion for an additional one-year extension to APEGA's dues reduction for unemployed Members. The maximum timeframe for a Member to make use of the reduction is three consecutive years. If they remain unemployed, Members who are currently paying reduced dues can apply for an extension in 2018.

Dues for Professional Engineers and Professional Geoscientists in Canada range from \$220 to \$450 a year, based on recent data. With the increase, APEGA dues will rank fourth among 13 engineering and geoscience regulators. In addition, APEGA's dues are on the lower end of the spectrum compared to many other self-regulating professional organizations in Alberta.

"Ultimately, APEGA and our Members are all serving the public interest. We believe that self-regulation is the right model for doing this effectively, so managing risk is paramount," said Ms. Tink.

When Members are invoiced at the new rate depends on when they first registered. You'll be invoiced one month before the anniversary of your registration.

WHY SUCH A CONCERN ABOUT RISK?

[Study, Design, Frame - PEG Spring 2016](#)

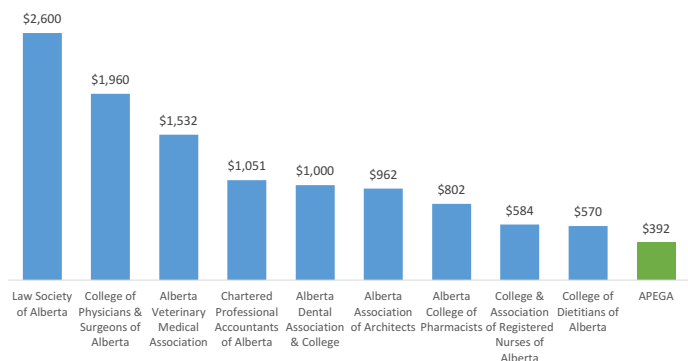
[The Privilege of Self-Regulation - PEG Fall 2016](#)

Member Dues in Canada Professional Engineers and Geoscientists



As of November 27, 2017. Amounts do not include taxes.

Member Dues of Other Alberta Professions



As of November 27, 2017. Dues do not include GST.

Movers & Shakers

ENGINEERING STUDENTS HIT THEIR PAYLOAD AT ROCKET SCIENCE CRASH-COURSE

For University of Alberta engineering student **Callie Lissinna**, an APEGA university student member under our ASAP program, some highlights particularly stand out after her mid-October visit to the Andoya Space Center on the far northern tip of Norway, a few degrees north of the Arctic Circle:

1. Eating waffles that were, figuratively speaking, out of this world.
2. Watching a spectacular aurora borealis display with other, equally thrilled engineering and astrophysics students.

Oh, wait. One other thing: launching a rocket into space. “Who would’ve imagined that U of A students could travel to Norway for a crash-course in rockets?” says Ms. Lissinna.

The students were part of the 14th annual Canada-Norway Student Sounding Rocket (CaNoRock) exchange program, a partnership between the universities of Alberta, Calgary, and Saskatchewan, the Royal Military College, the University of Oslo, and the space centre.

Ms. Lissinna, along with fellow engineering students **Kinza Malik** and **Suey Fong**, and engineering

COUNTDOWN TO LAUNCH
Callie Lissinna and a Norwegian student (left) prepare for launch in the telemetry and data collection room at Andoya Space Center.



-photo courtesy Callie Lissinna

physics student **Taryn Haluza-DeLay** — all ASAP participants, too — were the U of A’s first all-female team to take part in CaNoRock. Three students from the University of Calgary’s Department of Physics and Astronomy, four students from the University of Saskatchewan, and 10 Norwegian students also took part.

Working together, they built a single-stage sounding rocket to collect data about the atmosphere. “It flew sensors for temperature, pressure, magnetic field strength, light, and acceleration,” explains Ms. Lissinna.

After the launch, the students initially thought the rocket wasn’t working, because of a few anomalous data points they discovered. But a rocketry expert deemed their data very clean, explaining that such results were typical and even expected.

This wasn’t Ms. Lissinna’s first rocket mission. She’s a veteran of the AlbertaSat student team, which built and launched the Ex-Alta 1 satellite that’s currently orbiting Earth and measuring space weather patterns.



ARE THOSE ROCKS ACTUALLY TALKING? SORT OF — WHEN THIS APEGA MEMBER TELLS THEIR STORIES

Rocks tell the story of the Earth's history. **Keith Diakiw, P. Geo.**, wants to share these stories through a unique new business venture, Talking Rock Tours. The company is a geo-educational hiking and sightseeing adventure company — with a twist.

"By launching Talking Rock Tours, I'll not only teach people about Alberta's geological wonders, but also showcase the associated First Nations and Métis histories and storytelling from a time before Canada 150," explains Mr. Diakiw.

Based in Edmonton, Mr. Diakiw will lead discovery tours across Alberta. His list includes Banff, Nordegg, Elk Island Park, the Badlands, and even his own backyard, Edmonton's scenic river valley.

A proud descendant of historical Métis leader Gabriel Dumont, Mr. Diakiw says tourism ventures like his are one way that Indigenous peoples can reclaim and share their culture and heritage. Talking Rock Tours gives him the chance to pass along his lifelong passion for the Earth sciences with fellow Albertans and tourists from around the globe.

He was one of six entrepreneurs invited to pitch their business ideas to a live audience at an ATB BoostR Tourism event in Banff on October 21. He wasn't crowned the champion, but he did make \$10,205 through a successful crowdfunding campaign — enough to pay for a new tour van.

Mr. Diakiw's company name — Talking Rock Tours — was inspired by Big Rock, the famous glacial erratic near Okotoks in southern Alberta. It's a location of great spiritual significance to

ROCK TALKER

—photo courtesy Keith Diakiw, P. Geo.

Above, left The famous Okotoks erratic, or Big Rock in Blackfoot stories, is the inspiration behind the tour company name Talking Rock Tours. *Above, right* Keith Diakiw, P. Geo., shows off a rock formation along the Bow River in Banff.

the Blackfoot people. "This sacred rock was not only used as a landmark and meeting place, but also as a spiritual medicine centre," explains Mr. Diakiw. Indigenous pictographs of people and shapes are found on both halves of the rock, which is split down the middle.

A Blackfoot story explains how the huge rock ended up in two pieces in the middle of the Prairie. Napi, a supernatural trickster, gave his buffalo robe to the rock as a gift. When a cold wind blew, he took it back. The angry rock rolled after him, so Napi ran for his life and called on his bat friends for help. They dived at the rock, stopping it and breaking it in two.

This story explains, mythologically speaking, why bats have flat faces. And, says Mr. Diakiw, it's also an important moral tale of why you shouldn't take back what you've given away.

PEG readers might recognize Mr. Diakiw's name. He was an auxiliary firefighter who helped battle the Fort McMurray wildfire and was featured in the winter 2016 edition of the magazine. He's also inspired hundreds of young rock hounds as an APEGA Outreach volunteer.

CHAMPION FOR CHANGE: GAIL POWLEY, P.ENG., HONOURED WITH U OF A ALUMNI AWARD

When she graduated with a chemical engineering degree from the University of Alberta Faculty of Engineering in 1984, **Gail Powley, P.Eng.**, didn't set out to become a champion for women in the profession. She just wanted to make a difference — as engineers do. And she wanted to build her career.

Turns out, she ended up doing all three. Her efforts have been celebrated with a prestigious University of Alberta Alumni Award. Ms. Powley was among 21 of the school's most influential alumni recently honoured for their professional achievements, community service, and innovation.

Women in the engineering profession were an anomaly when Ms. Powley entered the workforce. About 90 per cent of her colleagues at the time were male. She got used to being the only female engineer on the job site or in the boardroom. Still, she was optimistic that more women would enter the profession and that the numbers would eventually balance out.

When that didn't happen, Ms. Powley decided she could make a difference in another way — as a change

leader. She joined WISEST (Women in Scholarship, Engineering, Science & Technology), a U of A group that empowers women in STEM fields. She helped found WISER (Women in Science, Engineering & Research), BESTT (Bridge for Engineering, Science, and Technology Talent), and MentorUP Alberta. All these groups support under-represented professionals in science and engineering.

Her volunteer work with the Alberta Women's Science Network earned her the Mentor of the Millennium award.

In 2011, she was founding chair of the Women in APEGA advisory group, which aims to increase female representation in the engineering and geoscience professions. In this role, she led development of *Managing Transitions Before, During and After Leave*, a best-practices guide for employees and employers that supports the retention of women after maternity leave. In 2016, the document was adapted and jointly published by Engineers Canada and Geoscientists Canada.

Ms. Powley's work to build a more diverse, inclusive, and innovative work force also earned her the Women in Engineering and Geoscience Champion APEGA Summit Award in 2014.



CHAMP AMONG WOMEN —
AND A CHAMP FOR WOMEN
Gail Powley, P.Eng., receives her 2014 APEGA
Summit Award from the APEGA President of
the day, Colin Yeo, P. Geo., FGC, FEC (Hon.).

FROM ARTS AND CULTURE TO OIL AND GAS: CCE AWARDS HONOUR INNOVATIVE PROJECTS AND PROFESSIONALS

A sweat lodge, a national music centre, and a game-changing oil sands technology — these were among the leading-edge Alberta projects recognized at the 2017 Canadian Consulting Engineering (CCE) Awards gala, October 24 in Ottawa.

Among the night's big winners was **Stantec Consulting**. The firm took home three awards, including the Engineering a Better Canada Award for its work on Studio Bell, home of the National Music Centre in Calgary. This award — one of five special achievement awards — honours a project that best showcases how engineering enhances the social, economic, or cultural quality of life of Canadians. Stantec shared the award with **Read Jones Christoffersen Ltd.**

Studio Bell, in Calgary's East Village, is the only building of its kind in North America. Dedicated to Canadian music, it's home to the National Music Centre Collection and the Canadian Country Music Hall of Fame. A performance hall, a music education centre, a recording studio and a broadcast centre are also found inside a six-storey structure with nothing but curved or inclined surfaces. Judges lauded the building for its sophisticated integration of mechanical, acoustic, and structural engineering.

Stantec was also presented an award of excellence for its work on a traditional sweat lodge at Edmonton's Amiskwaciy Academy, a school that offers academic programming within an Aboriginal context. Designed in collaboration with school elders and students, the sweat lodge was built almost entirely from wood, with steel anchors. **Ledcor** completed the construction of the lodge. Neither company charged for their services.

A second award of excellence went to Stantec for its work in Fort McMurray following the 2016 wildfire. Stantec worked closely with the **Regional Municipality of Wood Buffalo** on wastewater and stormwater recovery efforts, overcoming many challenges facing the community. This included an innovative biomass transplant to help return biological systems at Fort McMurray's wastewater treatment plant to normal. The transplant was accomplished by trucking in activated sludge from the Red Deer

wastewater treatment plant. Stantec also used GIS technology to track water entering the storm sewer systems to see if it was contaminated from ash and debris.

Two other APEGA Permit Holders receiving awards of excellence were **Klohn Crippen Berger (KCB)** and **CIMA+**.

After a fire destroyed the Mayerthorpe Rail Bridge on April 26, 2016, KCB was contracted by CN Rail to complete an emergency bridge replacement. Time was of the essence: the 335-metre, timber-trestle bridge was a critical link in CN's rail system. KCB collaborated with CN and other contractors to fast-track construction. The goal was to have the line back in service within three weeks. Over 190,000 metric tonnes of material were used for the bridge, constructed from steel, concrete, and fill. Rail service was restored on May 15.

CIMA+ was awarded for its TEMPUS Online Migration Tool, a new technology developed for use at Suncor Energy's secondary extraction Plant 4 near Fort McMurray. The tool allowed CIMA+ to update the plant's centrifuge control system without a shutdown. Centrifuges are used to separate impurities from bitumen steam during a critical stage of oil sands production. TEMPUS is a faster, safer, and cheaper option than the previous method, which required taking the control system offline.

Michael Walker, P.Eng., was also recognized at the CCE Awards gala. A University of Alberta civil engineering grad, Mr. Walker received the 2018 Allen D. Williams Scholarship. The scholarship is presented to a young professional who's demonstrated leadership in the advancement of consulting engineering.

Originally from Calgary, Mr. Walker is employed by **McElhanney Consulting** as a division manager. Recently tasked with launching the company's Regina office, he has worked on large infrastructure projects across Canada, and he played a key role in trail reconstruction after the 2013 Calgary floods. He's active in industry associations, as well as provincial, national, and international young professional networks.

BRIDGE THEN, BRIDGE NOW
 The Mayerthorpe trestle rail bridge goes up in flames (*right*), but less than a month later, the first train crosses its replacement (*below*). APEGA Permit Holders Klohn Crippen Berger (KCB) and CIMA+ received 2017 Canadian Consulting Engineering Awards for their work on the project. The awards are put on the Association of Consulting Engineering Companies — Canada and *Canadian Consulting Engineer* magazine.

-photos courtesy Klohn Crippen Berger



ASTECH AWARDS CELEBRATE SCIENCE AND TECHNOLOGY INNOVATION

The Alberta Science and Technology Leadership (AS^Tech Foundation) handed out its annual awards on November 3, and not surprisingly several APEGA Members took home some shiny new hardware for their mantels. The awards, held at TELUS Spark in Calgary, celebrate outstanding innovation in Alberta's science and technology community.

First up: the Schulich Engineering Education Outreach Team, which won the Excellence in Science &

Technology Public Awareness Award. Team members — faculty and students from the U of C's Schulich School of Engineering — have joined forces to deliver engineering outreach programs for youth. Their goal is to enhance understanding of science, technology, and engineering by promoting diversity and inspiring more girls to choose careers in engineering.

STORY CONTINUES ON NEXT PAGE >>

Accepting the award were faculty members **Laleh Behjat, P.Eng., PhD, Mohammad Moshirpour, E.I.T., PhD**, and Milana Trifkovic, along with graduate students **Emily Marasco, E.I.T.**, and **Stephanie Hladik, E.I.T.**

Dr. Behjat is a professor in the Department of Electrical and Computer Engineering and APEGA's 2015 recipient of the Women in Engineering and Geoscience Champion Award. Dr. Moshirpour is a software engineering instructor at the school.

One of their most recent outreach initiatives was a Google-funded program called Google Ignite, a computer programming workshop for high school students. Elementary students have also been taught to code — skills that are in high demand in today's digital world.

Three other awards were presented to people and companies who are leading the way in oil and gas technology innovation.

Christopher Clarkson, P.Eng., PhD, a professor in the U of C's Department of Geoscience and Research Chair in Unconventional Gas and Light Oil Research, was honoured for Outstanding Achievement in Applied Technology and Innovation. He's a world-renowned expert in rate-transient analysis (RTA), a method petroleum engineers use to analyze production data from oil and gas reservoirs.

RTA methods were originally created for conventional reservoirs, in which fossil fuels are relatively easy to recover. Dr. Clarkson's pioneering research helped adapt and standardize RTA for use in unconventional reservoirs — ones that require hydraulic fracturing for oil and gas recovery. His work is critical to Alberta's oil and gas industry, as more and

more of the province's oil and gas supply comes from unconventional reservoirs.

The University of Alberta's **Mohamed Gamal El-Din, P.Eng., PhD**, is the recipient of the Innovation in Oil Sands Research Award. He's spent the last decade developing new sustainable methods to treat oil sands tailings water, a byproduct of oil sands extraction. It's one of the biggest environmental challenges facing the oil sands industry.

Currently, this process-affected water — a complex mixture of sand, silt, salt, heavy metals, and organic compounds — is stored in tailings ponds covering more than 220 square kilometres of land.

Dr. Gamal El-Din, a professor of environmental engineering in the Department of Civil and Environmental Engineering, is developing multi-barrier treatments that use physical, chemical, or biological means to filter, treat, and reclaim the water. One example is a biofiltration system he developed that uses all three approaches — and very little energy — to detoxify the water.

Edmonton-based Interface Fluidics was the recipient of the Outstanding Science and Technology Start-Up Award. Accepting the award was the company's CEO Stuart Kinnear and **Tom de Haas, P.Eng.**, its Chief Operating Officer. Interface is using nanotechnology, in lab settings, to test how chemicals will react in oil and gas wells. It's a much quicker and less expensive option than traditional downhole field tests, which can cost millions of dollars.

SCIENCE AND TECH LEADERS

ASTech Award winners include (from left, photo left) Stuart Kinnear and Tom de Haas, P.Eng., and (photo right) Dr. Mohamed Gamal El-Din, P.Eng.



-photos courtesy ASTech



SCIENCE AND TECH LEADERS

ASTech Award winners include Dr. Christopher Clarkson, P.Eng., (top, centre) and members of the Schulich Engineering Education Outreach Team.

-photos courtesy ASTech

'PEOPLE AS FAR AS THEY EYE CAN SEE' — AN APEGA MEMBER KEEPS HELPING THE WORLD'S REFUGEES FIND WATER

Paul Bauman, P.Eng., P.Geoph., is no stranger to the harsh reality of refugee camps. He's volunteered his technical skills in places like the Kakuma Refugee Camp, using geophysics to help find water wellsites for 200,000 people living in Kenya's Turkana desert. His work there and elsewhere earned him the 2016 APEGA Summit Award for Community Service and a cover story, *Seeking Water in a Harsh Land*, in the fall 2016 issue of *The PEG*.

But even that experience didn't quite prepare him for his latest humanitarian trip, this time to refugee camps in Bangladesh. In recent months, the population of Rohingya refugees living in the country has exploded — from 300,000 to nearly one million — as people flee ethnic violence in Myanmar.

"You may have heard (about) it or read it, but the repeated phrasing is true, people as far as the eye can see, in all directions," Mr. Bauman writes in a Facebook post.

Before the crisis escalated in August, he was already contracted by the UN High Commissioner for Refugees (UNHCR) to do a water exploration program in the region. The project scope was expanded and fast-tracked when thousands more refugees began arriving.

Mr. Bauman and four colleagues spent about three weeks in the camps, starting in early November. Joining him were fellow Calgarian's **Alastair McClymont, P.Geo., PhD**, **Colin Miazga, G.I.T.**, **Eric Johnson, P.Geo.**, and Vancouver's **Chris Slater, P.Geo.**

They had two goals: to identify aquifers in Southern Teknaf Peninsula to supplement surface water supplies; and to explore for deeper aquifers in Kutupalong, an expansion camp that has over 6,000 shallow wells, most contaminated with *E. coli* and other bacteria.

Working each day in stifling heat — laying heavy seismic cables across rice fields, through crowded streets, and next to families living in makeshift homes — was mentally and physically exhausting.

Even more challenging was seeing people — children especially — living in appalling conditions, and hearing their stories about the violence they fled.

"I can somewhat comfortably absorb the deplorable and insane conditions we are now seeing daily," Mr. Bauman wrote, early in the trip. "The fact that the lack of clean and sufficient volumes of water has a technical solution, and we are here trying to do something about it, makes it easy to dive back into the chaos each day."

The team's efforts paid off. They were able to locate aquifers using electrical resistivity tomography to gather and analyze subsurface images. Drilling and well testing by UN agencies will determine just how high the water yield is at each site.

"Working together in a team under such harsh conditions, as I did with my four geophysicist colleagues, is a profound team-building and professionally and personally satisfying experience," Mr. Bauman says. "At the end of each day, we would all have enormous awe for how (the refugees) could persevere under such harsh conditions, after the trauma that they had already endured."

It's possible that future missions to the region will be required. "The camps are ever-expanding, and there are deeper aquifers, for which there is significant interest to explore," says Mr. Bauman.

For others who are interested in working in Bangladesh, he suggests visiting the website reliefweb.int for current opportunities.

And for those who can't travel, Mr. Bauman notes that there are other ways to make an impact, like donating to a charity that fit your values and interests. "There are non-governmental organizations and UN agencies working in every sector imaginable: water, sanitation, child protection, gender-based violence, microloans, education, health, maternal health, vocational training," he says. "Above all: do something! You will feel better."



-photos courtesy Paul Bauman, P.Eng., P.Geo.

WATER WORKS

Top From left, Dr. Alastair McClymont, P.Geo., Colin Miazga, G.I.T., Paul Bauman, P.Eng., P.Geo., and Chris Slater, P.Geo., take a break in Bangladesh. Behind them is a bamboo rig drilling for water to 230 metres depth. *Above* The Balukhali area of the 450,000-person Kutupalong extension camp in Bangladesh. Makeshift homes, built from tarps and bamboo, are the only option for thousands of Rohingya refugees.



GOOD CITIZENRY EARNS PAST-PRESIDENT THE ALBERTA ORDER OF EXCELLENCE

What does it take to be a good citizen? Three things top the list for APEGA Past-President **Dr. Steve E. Hrudehy, P.Eng., FEC, FGC (Hon.), FCAE, FRSC, FSRA, IWAF.**

“A good citizen is somebody who is willing to participate and take ownership of common problems,” he says in an online interview at lieutenantgovernor.ab.ca. “You need to, above all else, act with integrity in everything you do. If you do that, you’ll be a good citizen.”

It’s safe to say Dr. Hrudehy meets his criteria.

On October 19, he was among eight Albertans to receive the Alberta Order of Excellence, the province’s

HOME SWEET HOME

Dr. Steve Hrudehy, P.Eng., is APEGA Past-President, an author, a world-renowned drinking water expert, a Canmore resident — and, now, an Alberta Order of Excellence recipient.

highest civilian honour. Since 1979, when it was first awarded, only 165 people have been named to the order, which recognizes those who have served Albertans with excellence and distinction. He joins 15 APEGA Professional Members who were previously inducted.

A respected researcher, educator, and author, Dr. Hrudehy says that being a Professional Engineer is about identifying, understanding, and solving real-world problems.

Dr. Hrudehy has spent his career addressing drinking water challenges in Alberta, across Canada, and internationally, becoming a world-renowned expert in the area. With a focus on environmental sustainability and protection of human health, he has served on 28 expert panels on public policy issues, 10 of them as chair.

One of the more high-profile panels he served on was the research advisory panel for the Walkerton Inquiry in Ontario. The inquiry was held after a May 2000 E. coli outbreak contaminated the Town of Walkerton’s water supply, killing seven people and making thousands ill. More recently, he has served on panels looking at First Nations’ drinking water, and the environmental and health impacts of the oil sands industry.

Among Dr. Hrudehy’s other public service roles is a 13-year stint on Alberta’s Environmental Appeals Board, including four years as chair and the first non-lawyer in the role.

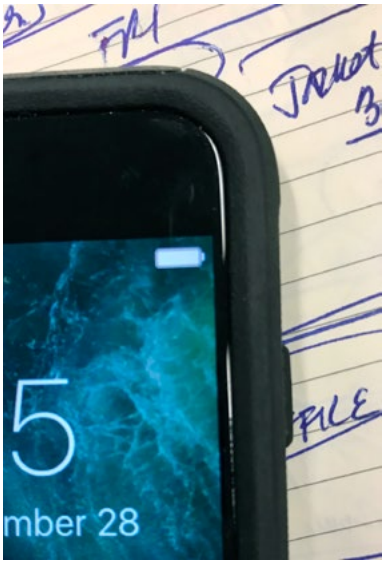
Although retired from teaching at the University of Alberta Department of Civil Engineering, Dr. Hrudehy remains a professor emeritus in analytical and environmental toxicology for the Faculty of Medicine and Dentistry. He’s an active volunteer with APEGA, currently serving on the executive as Past-President. A Canmore resident, he has also taken on the role of director for the southern Alberta branch of the Canadian Parks and Wilderness Society, leading initiatives that promote and preserve natural landscapes.

Movers & Shakers

SMART GRID RESEARCH GRANT LOOKS TO THE FUTURE

The explosion of new technology — like that smartphone charging on your desk — is putting a strain on Canada’s aging electrical grid. Integrating renewable energy into the traditional power supply mix is also proving a challenge for electrical system operators.

Yunwei (Ryan) Li, P.Eng., wants to change that. An electrical and computer engineering professor with the University of Alberta Faculty of Engineering, he was awarded a \$2.5-million grant to help fund a new, \$6.27-million Future Smart



Grid Technologies Lab at the school. The unique facility will enable Dr. Li and his fellow researchers to test prototype smart grid technologies, which are critical to sustaining a stable supply of high-quality electricity.

Expected to open next year, construction has already started on the lab. Governments, utility companies and renewable energy manufacturers will surely be keeping a close eye on the research taking place there. In Canada alone, the estimated cost of upgrading the nation’s electrical grid will hit \$300 billion over the next two decades.

Funding for the Future Smart Grid Technologies Lab comes from the federal government’s Canada Foundation for Innovation (CFI). The lab was one of 117 new infrastructure projects to receive CFI funding in October. A total of \$554 million in grants were awarded to 61 universities, colleges, and research hospitals across Canada, for projects involving artificial intelligence, quantum science, brain health, renewable energy, and much more.

Alberta’s share was more than \$44 million, for 14 projects at the U of A, six at the University of Calgary, and one at the University of Lethbridge.

Notice of Dues Increase

On November 30, 2017, APEGA’s Council approved a Member dues increase. For Professional Engineers, Professional Geoscientists, and Professional Licensees, the new dues are \$392 plus GST.

That’s an increase of \$32 from \$360, plus GST, in 2017.

All revenues generated by this increase will be placed in a new regulatory-risk management reserve. None of the increase will go towards 2018 operations.

[MORE INFORMATION](#)



KILLAM PROFESSORS ADVANCE HIGHER LEARNING IN CALGARY AND EDMONTON

Three of Alberta's top engineering professors have been recognized for research and teaching excellence with their appointment as Killam professors by the Killam Trust, a private, philanthropic trust supporting the advancement of higher education in Canada.

At the University of Calgary, these include **Josephine Hill, P.Eng., PhD**, and **Michael Kallos, P.Eng., PhD**, both with the Schulich School of Engineering.

Dr. Hill is an accomplished scholar, educator, and leader in the field of catalysis and chemical engineering — and a two-time APEGA Summit Award recipient. Earlier this year she received the Research Excellence Summit Award, and in 2012 she was presented the Women in Engineering and Geoscience Champion Summit Award. Dr. Hill established and leads the Laboratory for Environmental Catalytic Applications in Schulich's Department of Chemical and Petroleum Engineering.

Dr. Kallos is the Director of the Biomedical Engineering Calgary Initiative and a professor in the

Department of Chemical and Petroleum Engineering. A leader in stem cell research, he's helping develop groundbreaking techniques to treat diseases like Parkinson's and multiple sclerosis. He's also part of a team working on stem cell strategies to regenerate skin following severe burns and other traumatic injuries. He's won numerous teaching awards from his students and the Department of Chemical and Petroleum Engineering.

APEGA's third 2017 Killam professor hails from Edmonton. **Robert Driver, P.Eng., PhD**, is a professor at the University of Alberta's Faculty of Engineering in the Department of Civil and Environmental Engineering. Just over a year ago, in October 2016, Dr. Driver was named inaugural director of the university's new Canadian Institute of Steel Construction Centre for Steel Structures Education and Research. He was also selected as the first Supreme Steel Professor in Structural Engineering Education and Innovation.

Like his fellow Killam professors in Calgary, Dr. Driver is the recipient of several teaching awards, including an APEGA Excellence in Education Summit Award in 2009.



Help Unlock Someone's Full Potential!

Discover the rewards of mentoring. Support another Member's professional growth while earning CPD hours.

With APEGA's online matching software, you can connect with a mentee in a few clicks.

Become a **mentor** with APEGA's Mentoring Program and share your expertise.

Sign up at www.apega.ca/mentoring.



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The Buzz

FUTURE GREATNESS?

The doors will close soon on the old coliseum, looking suitably desolate on this winter's day. Demolition is one option the City of Edmonton is considering, but it hasn't quite closed the door on something transformative for the building itself.

GRETZKY BUILT IT – SHOULD THE CITY UNBUILD IT?

It's been named many things, but with its most rights in that department expired, its former hockey tenants operating elsewhere in Edmonton, and its future uncertain, this is known: Northlands Coliseum won't be serving up hockey and concerts anytime soon. Edmonton City Council has voted unanimously to close the arena's doors on January 1, 2018, as it continues to ponder the future of the building and site.

A lot of ghosts lurk within that concrete shell. An Edmonton landmark since 1974, the coliseum has attracted major musical acts from every genre — Elton John, the Weeknd, Celine Dion, Taylor Swift, Blake Shelton, Rush, Jay-Z, Bruce Springsteen, Carrie Underwood, Bryan Adams, Carly Rae Jepsen, and hundreds upon hundreds more. Most famously,

however, it was the House that Gretzky Built: home to the five-time Stanley Cup-winning Edmonton Oilers, including the 1984-85 iteration, recently named the greatest NHL team of all time. But with the Oilers based in a sparkly new downtown arena, the aging facility has lost its allure. That means the dollars have not exactly been rolling in.

Another facility on the Northlands site, the Edmonton Expo Centre, will remain operational under the wing of the Edmonton Economic Development Corporation. But the city is debating what to do with the retired 497,700-square-foot arena, which, for the record, has an attendance capacity of 16,839 people. One option is demolition, which could cost \$25 million.

What was the original, unadjusted construction cost? Try \$17.3 million.

CALGARY CITY COUNCIL CONSIDERS A THIS-CENTURY OLYMPICS DREAM

City leaders continue to ponder whether Calgary should throw its big white cowboy hat in the ring for the 2026 Winter Olympics. The bid could rekindle the kind of excitement generated back in 1988, when the Games first took place in the Alberta city.

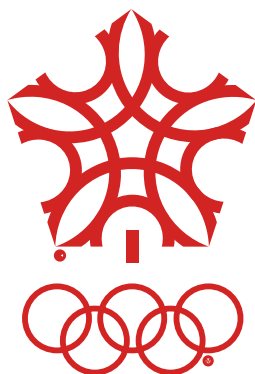
Earlier this year, the 17-member Calgary Bid Exploration Committee spent thousands of hours and \$3 million assessing the economic costs and benefits of hosting the Games. When the committee's final report failed to make a recommendation this fall, city council voted to spend another \$1 million on exploring a bid. The city plans to decide in 2018.

Meanwhile, on another sports and entertainment front, a pessimist might say that the future of NHL hockey in Calgary is uncertain. Mayor Naheed Nenshi — re-elected in October — and

the Calgary Flames owners group are far from reaching an agreement on replacing the aging Soctiabank Saddledome. Built in 1983 to replace the Stampede Corral in time for the 1988 Olympics, the Saddledome is among the oldest arenas in the NHL and widely considered to be past its prime.

To cover the \$555 million estimated cost of a new arena, Mr. Nenshi has proposed a three-way split between owners, ticket buyers, and the city. The owners would get full control of the arena and 100 per cent of its revenues. But they say paying property taxes, or lease or rental charges, cuts too deeply into revenue to make the proposal acceptable, especially when combined with a ticket surcharge.

What was the original, unadjusted construction cost of the Saddledome? Try \$97.7 million.



Calgary '88

HIGHWAY IMPROVEMENTS WILL BOOST THE ECONOMY AND IMPROVE SAFETY IN NORTHWESTERN ALBERTA, PROVINCE SAYS

Nearly \$200 million in highway improvement projects should make for safer, easier journeys in northwestern Alberta. Over the next three years, the province will invest in 18 different projects along Highway 40, between the Yellowhead Highway and Grande Prairie.

About 180 km of roadway will receive upgrades such as grade widening, repaving, improvements to safety rest areas, new climbing lanes, and culvert repairs. Also, two bridges in the Grande Cache area will be replaced.

The Government of Alberta hopes to make transportation safer and easier for residents and commercial enterprises. Benefiting economic sectors will include oil and gas, forestry, and tourism.

WE'RE READY TO START PRODUCTION, CHEVRON SAYS OF DUVERNAY BASIN

After three years of exploratory drilling along the Duvernay shale basin, Chevron, an APEGA Permit Holder, has announced that it will begin commercial development there. The formation, which stretches across east-central and northern Alberta, is a potential source of natural gas and high-value liquids like condensate, a sought-after diluent used in the oil sands.

Initially, the Calgary-based company will develop around 55,000 of the 330,000 acres it controls in the region. It has a 70 per cent interest in the area near Fox Creek, about 260 kilometres northwest of Edmonton.

DESPITE OUTCRY, WATERTON'S NEW VISITOR CENTRE IS TOWNSITE BOUND

Parks Canada plans to go ahead with building a new visitor centre in the townsite of Waterton Lakes National Park in southern-most Alberta, even though many locals don't like the idea. The park's 60-year-old visitor centre was damaged in a September wildfire, but the federal government had already announced — two years ago, in fact — that a \$7.6-million replacement was in the works.

Many residents and business owners continue to oppose the project, saying that the new building should be erected at the outskirts of the community, like the previous visitor centre was. A popular playground and splashpad will have to be moved, and the move will



SMOKE AND FIRE

Smoke is in the air in this early August view of Waterton townsite and beach, in a photo shot before a wildfire ravaged the national park in September. A new visitor centre is slated for the townsite.

also result in parking congestion and threats to public safety, they say.

Parks Canada, however, says the old centre's site can't support the 400,000 visitors a year that Waterton attracts, creating congestion and safety problems of its own. Also, the new location aligns with the park's community and management plans.

CHINA'S PURCHASE OF AECON AWAITS GOVERNMENT DECISION

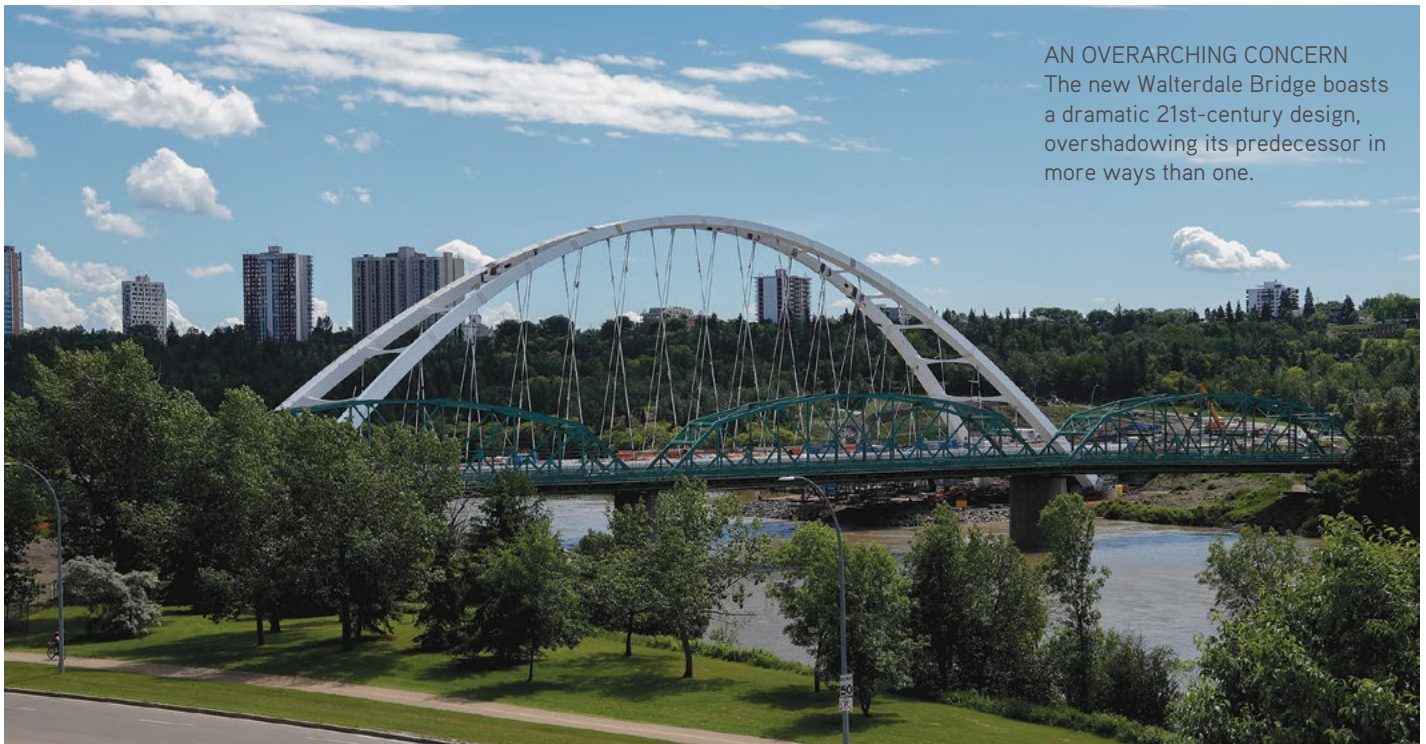
Canadian construction giant Aecon Group Inc. — a multidisciplinary, 140-year-old company with offices all over the country — has signed a deal to be acquired for \$1.5 billion by a state-run Chinese company. The buyer is China Communications Construction Co. Ltd. (CCCC).

The deal, which requires Government of Canada approval before it goes ahead, would allow the APEGA Permit Holder to retain its name, its Canadian head-

quarters, and its Canadian management team. The acquisition could pave the way for freer trade with China, opening Aecon up to a massive Chinese market. Analysts do warn, however, that there could be a trade backlash from the U.S., given the political climate there.

CCCC is among the world's biggest construction companies. Published reports say revenues last year were \$82.2 billion. Aecon, meanwhile, has around 1,900 employees and revenues of more than \$3 billion a year.

TWO BRIDGES — PHOTOGRAPHS AND MEMORIES



AN OVERARCHING CONCERN
The new Walterdale Bridge boasts a dramatic 21st-century design, overshadowing its predecessor in more ways than one.

It was a striking picture, albeit one that Edmontonians had to watch develop over four-plus years instead of two-plus years. A new, dramatic-looking bridge arose beside an old, much smaller, and far less modern one. They spanned the North Saskatchewan River, side by side near the city's downtown, representing different transportation needs, different esthetic sensibilities, and different times.

Half that picture has disappeared. After the opening of the new Walterdale Bridge in September, crews began systematically dismantling its predecessor, a century-old truss bridge with a steel grating deck and plenty of history.

Built in 1913, the old Walterdale Bridge was named after John Walter, a settler who'd operated a ferry service at about the same location. The bridge ended up serving Edmonton for 104 years, as the provincial capital grew from a prairie outpost of fewer than 70,000 people to a metropolis of about 900,000.

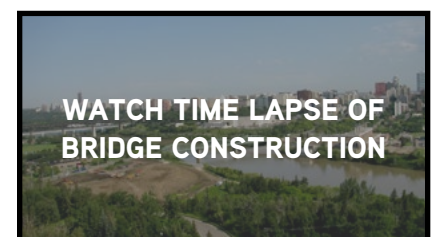
So, now what? The city is considering preserving portions of the old structure, like its historic plaque, steel posts, railing grating, trusses, and box beams. Because of their nostalgic appeal, the materials could

be repurposed in many a variety of ways. Among the ideas being circulated are public art, a river valley lookout, and landscaping features in various parks. There's no hard-and-fast salvaging plan in place yet — public consultation will happen first.

The new bridge, meanwhile, has a shorter past. But it's somewhat storied. Construction began in early 2013 and was supposed to be wrap up in late 2015. More than two years late, the opening took place in two stages in September 2017. Late shipments and uncooperative weather were the culprits, but the \$155-million bridge did come in on budget.

The new bridge features dramatic, 58-metre-high arches that span 206 metres across the river, supported by thrust blocks on both banks. That means in-water support beams are not necessary.

Permit Holders involved in the project include DIALOG, ISL Engineering and Land Services, and Buckland & Taylor.



PROVINCE ADDRESSES HUMAN COST OF PHASING OUT COAL

A year after announcing a plan to phase out the use of coal to generate electricity by 2030, the Government of Alberta is promising \$40 million in income support for workers facing job losses from mine closures. The province is also petitioning the federal government to allow coal workers to receive income from the new program without decreases in their Employment Insurance benefits.

Along with support under the Coal Workforce Transition Fund, the province is offering resources for workers to retrain for new careers. These include:

- direct support from facilitators who will meet with workers, their unions, and their employers to connect them with further support
- vouchers to help cover post-secondary education costs
- third-party programs for employment placement, job matching, and exposure to other jobs and careers
- professional certification courses



COAL'S FUTURE

The end of coal-fired electricity generation in Alberta will reduce the mining of this stuff in the province. The government does, however, have a number of programs and partnerships planned to help people and their communities make the transition.

The new initiatives are in addition to those covered by the Coal Community Transition Fund. Project proposals under that fund, from First Nations and municipalities, are under review. The projects that earn approval will focus on regional partnerships and economic diversification in Alberta's coal communities.

KEYSTONE XL WINS NEBRASKA APPROVAL — SORT OF

APEGA Permit Holder TransCanada Corp. has cleared another hurdle in its quest to build the controversial Keystone XL pipeline, now that Nebraska regulators have granted it approval. The state's Public Service Commission voted 3-2 in favour of the project. The vote follows U.S. President Donald Trump's issuing of a permit in March, which reversed a rejection by the last administration.

Rather than green-lighting TransCanada's preferred route, however, the commission went with an alternative route that pushes the line further northeast. TransCanada is assessing how the change will affect the project's cost and schedule.

Keystone XL would essentially duplicate but shorten an existing route to Steele City, Nebraska, from Hardisty, Alberta, with larger, 36-inch pipe. The crude oil pipeline would ship up to 830,000 barrels a day and connect to existing lines in the overall Keystone project, which extends all the way to the Gulf Coast of Texas.

When XL was first announced in July 2008, the estimated cost was about \$7 billion, and it was expected to be operational in 2009. Approvals — especially U.S. ones — have taken much longer than the company expected, however, and the total cost today is probably more like \$10 billion, published reports suggest.

CALGARY SET TO DOUBLE CANCER TREATMENT CAPACITY

Cancer touches everyone, it's said, and some far more deeply than others. The statistics reveal that almost half of all Canadians will be diagnosed with some form of the disease in their lifetimes. So it's great news when a city can say that's its treatment capacity is doubling.

That's the word in Calgary, with construction of the new Calgary Cancer Centre now underway.

The \$1.4-billion health-care facility at the site of the Foothills Medical Centre in the northwest will include 100 patient examination rooms, 160 inpatient beds, more than 100 chemotherapy chairs, and 15 radiation vaults. By the time it opens in 2023, the centre will have created 1,500 new jobs for Calgarians.

Excavation, shoring, and piling work will continue

into the spring of 2018, followed by construction of the building's foundation and parkade.



CANCER TREATMENT'S FUTURE

Visitors to the site of the Calgary Cancer Centre will see something like this — in 2023.

-artist's rendering courtesy Alberta Infrastructure

AMAZON CHOOSES ALBERTA ONCE — BUT WILL THEY CHOOSE IT AGAIN?

Alberta hasn't landed Amazon's much-buzzed-about, second North American headquarters. Yet. However, there's this news to consider: the mega-retailer of just about everything has chosen a quaint little hamlet near Calgary for its seventh Canadian facility.

Balzac, which is not far from Calgary International Airport, and therefore Airdrie and Calgary, will be home to a 600,000-square-foot distribution warehouse. The new facility will create about 750 full-time jobs, which is good news for a region that lost thousands of jobs to low oil prices.

Of course, the warehouse is small beans compared to the e-commerce superstar's second North American home base. Edmonton and Calgary are among 54 cities bidding for that opportunity. Amazon says it plans to invest about \$5 billion and hire 50,000 employees for its new base, making it even larger than its massive one in Seattle, which employs 40,000 people across 33 buildings.

Will proximity to a nice airport and a new distribution warehouse have anything to do with that decision? Watch this space. Or any other media space in Alberta.



-photo by iStock.com/jahcottontail143

CALGARY BRANCH CALENDAR

LUNCHEONS

WEDNESDAY, JANUARY 31, 2018

AGM & Luncheon

Project Execution: It's a Whole New World
John Myer, P.Eng., Husky Oil Operations Limited

THURSDAY, FEBRUARY 15, 2018

President's Visit

Jane Tink, P.Eng, FEC, FGC (Hon.)

THURSDAY, MARCH 15, 2018

Topic TBA

David Erickson, Alberta Electrical System Operator

Luncheons held at: Fairmont Palliser Hotel, 133 Ninth Ave. SW

Schedule: 11:15 a.m. Registration
11:45 a.m. Lunch

Cost: Members & Guests — \$50
Students — \$25
ASAP (APEGA Student Advantage Program) — \$15

To register: apega.ca/events

SPONSORS



EDMONTON BRANCH CALENDAR

LUNCHEONS

THURSDAY, JANUARY 11, 2018

Delta Edmonton South, 4404 Gateway Blvd

Branch AGM & Luncheon

Todd Hirsch, Chief Economist ATB

WEDNESDAY, FEBRUARY 21, 2018

Fairmont Hotel MacDonald, 10065 100th Street

President's Visit

Jane Tink, P.Eng., FEC, FGC (Hon.)

Schedule: 11:30 a.m. Registration
12 p.m. Lunch
12:30 p.m. Presentation

Cost: Members — \$35 (\$40 at door)
Non-Members — \$40 (\$45 at door)
Students — \$20

To register: apega.ca/events

SPONSORS

Platinum



Gold



Silver



APEGA Mentoring Program Goes Provincial

APEGA's Mentoring Program has expanded to all 10 Branches, allowing Members from across Alberta to connect with mentors and mentees within their regions. We've also launched distance mentoring, bringing together professionals from different communities — no travel required

Volunteering on APEGA's Peace Region Branch Executive is one way that Youssef Iskandar, E.I.T., is developing his skills as a young professional. He took on the role of Vice-Chair shortly after moving to Grande Prairie from Montreal in 2016, and this year he stepped up as Branch Chair.

It was an opportunity to meet and socialize with fellow professionals, but the experience has also helped him build valuable leadership skills.

As his career advances, Mr. Iskandar is looking for other opportunities to grow as a professional. The recent expansion of APEGA's Mentoring Program is helping him do just that.

In October, the program expanded to all 10 of APEGA's Branches provincewide, from Lethbridge to Fort McMurray and beyond. Previously, it was only available to Members in Edmonton and Calgary. Mr. Iskandar was one of the first Members from a satellite Branch to sign up. He's seeking a mentor to guide him in his mechanical engineering career.

"I'm hoping to be linked with someone in a similar field," says Mr. Iskandar, Sawmill Maintenance Team Lead at the local Weyerhaeuser plant. "Most of the Professional Engineers I meet locally are working in consulting or in oil and gas, so engineers with senior mechanical engineering experience are scarce."

Because of that, he's open to finding a distance mentor, which is a new option for participants who can't find a local match. APEGA's online matching soft-

ware can connect them with professionals outside their region. Conversations between distance mentors and mentees can be conducted using technology such as FaceTime, Skype, phone, or email — whatever works best.

That suits Mr. Iskandar just fine. "My priority (for a mentor) is their background and what field they work in. Location is less important."

For those who prefer a local match, we ask for your patience while the expanded program matures. It may take time to build a list of mentors within the new areas, due to their smaller populations. But as the database grows, we expect there will be more local matches to choose from.

BUILDING ON A STRONG FOUNDATION

[APEGA's Mentoring Program](#) launched in 2005 and has a strong history of connecting experienced Professional Members with less-experienced Members through formal mentoring partnerships. Participants sign an agreement that outlines their commitment, including expectations and measurable goals.

Mentees are often looking for senior professionals who can share their insights on essential workplace skills or provide career advice. Many mentees are international graduates interested in learning more about Canada's workplace culture. And many mentors are also international graduates, offering the perspective of someone who has made the transition into a professional and societal cultures. They're invaluable to the program because of the success stories and advice they share.

Improvements to the Mentoring Program over the past few years have helped us make it even better. Technology — like the previously mentioned online

QUESTIONS?

Email mentoring@apega.ca

matching software, introduced in 2016 — has made the program more accessible and user-friendly.

Technology also made the recent expansion possible. Before, new participants had to attend an in-person orientation to learn about program expectations. Because of logistical challenges, the orientation was offered in Calgary and Edmonton only.

Now, all new participants must watch a series of five online orientation videos instead, meaning that they get their required training without leaving home. Once we've confirmed that they've watched the videos, they can start searching the database for a mentoring partner.

As part of their online profile, mentor applicants are asked what skills they can share with mentees. Mentee applicants are asked what areas they want to be mentored in. To improve the likelihood of a successful match, all participants are asked to share details about themselves such as:

- discipline
- location
- industry
- gender

- education
- employment status
- languages spoken

Applicants must upload a short personal and professional summary, and a resume. If they want to, they can add a photograph. The process should take them five or 10 minutes.

DEVELOPING BETTER PROFESSIONALS

Mentoring is a shared opportunity for learning and growth that benefits both mentors and mentees, and ultimately enhances and strengthens the professions, too.

Mentors have an opportunity to give back to their profession and pass on their knowledge to eager mentees. Plus, they too can learn from their mentees, who often come from different backgrounds and have different perspectives to share.

Being a mentor is also a great way to earn credits that can be put towards APEGA's mandatory Continuing Professional Development (CPD) program. Mentors can claim up to 20 CPD hours for each year of active mentoring.

WHO CAN JOIN APEGA'S MENTORING PROGRAM?

The program is open to APEGA Members in good standing.

- To become a mentor, you must be a Professional Member
- To become a mentee, you must be an Examinee, Member-in-Training, or Professional Member

Currently, the program is not open to students or applicants.

QUICK FACTS

About **400 mentors** and **300 mentees** participate in the APEGA Mentoring Program, most in Edmonton and Calgary.

More than **1,500 APEGA Members** have been matched since the program launched in 2005.

HOW DO I APPLY?



1. Visit apega.ca/mentoring.
2. Click on Become a Mentor or Become a Mentee.
3. Fill out the online form and submit your application.
4. Once accepted, you'll be required to watch a series of orientation videos.
5. We'll confirm you've watched the videos. If you are a mentee, you will now pay a non-refundable \$50 fee. If you're a mentor, there's no charge.
6. Log into your account and start searching for a mentoring match.

If you find that a match is unsatisfactory, you can close that relationship and keep looking.

New Name, Changing Vision

The APEGA Foundation expands its mandate, with an added focus on strengthening and engaging the engineering and geoscience communities

The APEGA Education Foundation has a new and shorter name to better reflect its expanding mandate. Now known simply as the [APEGA Foundation](#) (AF), the charitable organization has changed its name to reflect a broader vision of the foundation's future.

"We're continuing to evolve as an organization, and our new name reflects the new direction we're heading in," explains Mike Smyth, P.Eng., FEC, FGC (Hon.), President of AF's volunteer board of directors and a past-president of APEGA. "We'll continue to support engineering and geoscience education through scholarships, bursaries, and outreach funding, which we've done for over 20 years. Moving forward, we want to do so much more than that."

A major long-term goal for AF is to inspire and enable the development of innovative engineering and geoscience solutions to address society's most critical challenges. Details are still being worked out, but one idea is to award grants or prize money for innovative projects with real-life applications, in Canada and around the world.

"We want to focus on strengthening and engaging the engineering and geoscience community, increasing the public's understanding of the impact our professions make in improving their quality of life," says Mr. Smyth. "That's the reason we exist."

The new name is the latest in a series of changes the foundation has undertaken over the past few years. Others include the hiring of a new executive director — the foundation's first — and approving new vision and mission statements to guide the board's strategic decision-making.

"We're in the process of imagining a new organization, and we're just in the beginning phase," says Mr. Smyth.

AMBASSADORS NEEDED

As part of its strategy to engage with Professional Members, AF is seeking engineering and geoscience

MISSION

The APEGA Foundation instills pride in APEGA members by investing in engineering and geoscience related initiatives in Alberta for the benefit of the professions and society.

VISION

Strong, diverse, sustainable professionals that are understood and valued.

APEGA Foundation In 1-2-3

- 1 Founded in 1996 as the APEGA Education Foundation; renamed APEGA Foundation in 2017.
- 2 Governed by an independent Board of Directors made up of APEGA Member volunteers — who are also community leaders.
- 3 A charitable organization incorporated under the *Alberta Societies Act*.



'It's all about breaking the model of what we were doing before and getting people thinking about what could be possible.'

MICHAEL SMYTH, P.ENG.
AF President

volunteers to serve as foundation ambassadors. "We'd like 35 volunteers to start, and possibly up to 100, to help guide the organization's direction," says Mr. Smyth.

Ambassadors will be key to the success of the foundation's new, fund-development initiatives and its vision of becoming a trusted custodian of endowment and legacy contributions from APEGA Members. The role of the ambassadors will be to reach out to Members to discuss AF's growing mandate and to request donations.

Until recently, the foundation relied primarily on Members making donations on their APEGA dues renewal form. "We very much appreciate these donations and they've made a huge impact, but to be sustainable the foundation needs new income sources," says Mr. Smyth.

This has become even more important over the past few years, with donations dropping considerably during

the economic downturn. "It's been a challenge for the whole non-profit sector," the foundation president says.

Another way volunteer ambassadors can help is by sharing their thoughts and opinions at an upcoming idea jam — a creative brainstorming session. To be held early in 2018, it will help set the direction of the organization. Two or three top ideas arising from the session will be chosen for future implementation.

"It's all about breaking the model of what we were doing before and getting people thinking about what could be possible," says Mr. Smyth.

BUILDING A STRONG FOUNDATION

AF's new mandate will only be fulfilled with the support of APEGA Members. But people will only support an organization if they understand its mission. That's why enhanced communication with Members will also be a strong AF focus in the new year.

"We've got a very large and prosperous potential donor pool, but we need to communicate better with them," says Mr. Smyth. "We need to connect with them, so they know that by supporting the foundation, they're investing in important initiatives for the benefit of the professions and society."

HOW TO DONATE

Your gift to the APEGA Foundation recognizes our proud professional history and is an investment in the inspired future that we share.

1. Attach a cheque for the APEGA Foundation to your annual APEGA membership renewal form and mail it in.
2. Donate online at apegafoundation.ca.

Consider becoming a monthly donor to break your annual donation into more manageable monthly payments. And if your employer has a donation matching program, don't forget to apply!

QUESTIONS?

Email: info@apegafoundation.ca

Phone: 1-888-262-3688

Visit: www.apegafoundation.ca



-photo courtesy BrainSTEM Alliance

Two of the Three Little Pigs Really Needed These Children

BY-THE-BOOK POTENTIAL ENGINEERS
 BrainSTEM Alliance founder D’Andre Wilson-Ihejirika, P.Eng., (centre), Wood Buffalo Regional Library staff, and a whole bunch of READesign individuality and potential share their joy with the camera in Fort McKay. READesign lets kids design solutions to the challenges faced by storybook characters.

With support from the APEGA Foundation, a program called READesign taps into the power of a good story — while introducing children to solutions-based engineering

If her life so far were a storybook, becoming a Professional Engineer would be quite a stretch. After all, as a girl growing up in Nassau, Bahamas, D’Andre Wilson-Ihejirika, P.Eng., had limited exposure to career possibilities in science, technology, engineering, and math (STEM).

Take, for example, READesign, an initiative she started in Alberta. READesign captures the imaginations of young girls and boys by combining storytelling, literature, and hands-on experiences in engineering. But in the Bahamas, none of that was going on. “There were zero opportunities like this

when I was growing up,” Ms. Wilson-Ihejirika says.

With support from the APEGA Foundation (formerly the APEGA Education Foundation), she has helped make READesign programs possible in Fort McMurray, Fort McKay, and High River. More are planned for Alberta, and other organizations from across the country are looking at replicating READesign or doing something similar.

An article about a program called Novel Engineering inspired Ms. Wilson-Iherjirika to create READesign. The program, at Tufts University Center for Engineering Education and Outreach in Medford, Massachusetts,

challenges young people to use engineering strategies to solve problems they find in novels. “I thought it was such a cool idea, to combine reading with engineering and design,” says the Fort McMurray resident and Suncor professional.

Ms. Wilson-Iherjirika reached out to Tufts and received permission to adapt the university’s concept. The university even provided online training. The delivery vehicle in Alberta would be an organization she’d previously founded, called the [BrainSTEM Alliance](#). Ideal for the job, BrainSTEM is a network of consultants — all of them volunteers — who work with not-for-profit organizations, charities, and educational institutions to create and customize curricula for youth in STEM, leadership, and entrepreneurship.

Ms. Wilson-Iherjirika was partway through developing READesign when the now-notorious 2016 wildfire ravaged Fort McMurray. Everyone there was affected in some way — Ms. Wilson-Iherjirika lost her home. Children, of course, are among any community’s most vulnerable residents in times of crisis.

Yet from this mass evacuation and destruction arose a bright idea. “I thought it would be good to tie this new program to the relief efforts here, as well as in High River, which was rebuilding after the 2013 floods in southern Alberta,” Ms. Wilson-Iherjirika explains. READesign would offer a happy distraction from the stresses children faced, while restoring and building their confidence by allowing them to tackle new challenges and make new friends.

HIGH RIVER’S NEXT CHAPTER

After the floods, the High River Library had become an important community hub. It was there, in the fall of 2016, that Ms. Wilson-Iherjirika and the BrainSTEM Alliance piloted their new program. Financial support from the APEGA Foundation, the Alberta Women’s Science Network, and the Suncor Energy Foundation made the pilot possible, and volunteer help came from APEGA professionals like Gillian Hurst, P.Eng.

A mechanical engineer at Agrium, Ms. Hurst learned of the BrainSTEM Alliance in a winter 2015 *PEG* article about the organization’s first program, Operation SMART, which features female mentors introducing 10-to-14-year-old girls to



WILL THIS DO THE TRICK?
A High River READesign participant shows off her solution for a “client” she found in *Matthew and the Midnight Tow Truck*.
-photo courtesy BrainSTEM Alliance

engineering disciplines. “I was interested in doing something similar in High River because there’s nothing like this available in the less urban areas outside of Calgary,” says Ms. Hurst, who has also volunteered for APEGA, as a science olympics work group member.

The concept of READesign, which targets girls and boys, intrigued her: “You get to combine literacy with giving children hands-on experience designing things.”

Every Tuesday in October, a dozen children aged nine to 13 gathered at the newly renovated library, alongside library staff and a handful of volunteers from the engineering world. After reading a book and identifying or being assigned a problem facing the central character, kids in small teams tackled their challenges, using a variety of craft supplies and construction toys like LEGO, K’NEX, and littleBits.

One of Ms. Hurst’s favourite workshops, during a later offering of the program in February 2017, involved the picture book *Curious George Discovers Space*, a story about the iconic and precocious monkey visiting a space centre. After reading the book, the class was



-photo courtesy BrainSTEM Alliance

PLOT POWER

A boy tests out a motor at Wood Buffalo Regional Library, a design solution for *The Sea Chest*.

GIRLS IN THE STORY

The story today is that more women choose engineering than ever before in Canada, even though the profession is far from achieving gender parity. Recent data from Engineers Canada suggest that just 13 per cent of practising, licensed engineers in Canada are women.

In a program adapted from one started by APEGA, Engineers Canada — the country’s national voice for engineering regulators — promotes an initiative called 30-by-30. It seeks to increase the proportion of newly licensed women in engineering to 30 per cent by 2030.

Perhaps the message is having an effect. Engineers Canada recently reported that female enrolment in undergraduate and graduate engineering programs in Canada reached new heights last year, at about 21 per cent and 25 per cent of total enrolment, respectively, up from about 18 and 23 per cent in 2012.

READesign, meanwhile, was created with both genders in mind. But overall, it’s storytelling approach

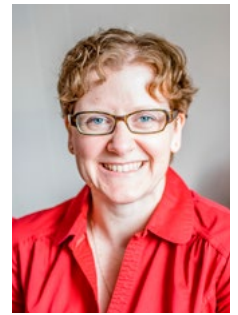
may resonate more with girls, says its creator, D’Andre Wilson-Iherjirika, P.Eng. “Some studies show that girls prefer the storytelling aspect in the sense that you see more girls playing with dolls and role-playing. They like to tell a story or be part of a story.”

A growing number of organizations, in fact, are looking to stories to engage girls in science, technology, engineering, and math (STEM). They may be onto something. An article in *Scientific American* in 2013 hypothesized that storytelling would help bridge those girls who are strong in both verbal communication and math to STEM. Research at the University of Pittsburgh and the University of Michigan shows that girls with that combination of aptitudes more often choose non-STEM careers than their male counterparts do.

How could society fix that? Perhaps by appealing to their verbal aptitude with stories and their STEM aptitude with subject matter.

‘Your ideas are not going to work all the time, and you need to be able to learn from your failures and try again. Or you need to take what you’ve learned and apply it to the next situation that comes up.’

GILLIAN HURST, P.ENG.



-photo by C. Gillanders Photography

given a different challenge each session, like building a Mars rover or creating a machine to push four buttons at once. Curious George was cast as the project client. “That’s basically what you do as an engineer,” says Ms. Hurst. “You have clients or stakeholders, and you need to provide creative solutions for them.”

NORTHERN EXPOSURE

Children and parents liked the first READesign sessions so much that the volunteer team offered it the next month, too, and again in February 2017. The program then spread to Fort McMurray, with help from the city’s Boys and Girls Club, and then to Fort McKay, a small indigenous community about 60 kilometres from town. To help host the program in Fort McKay, Ms. Wilson-Iherjirika connected with the Canadian Red Cross and the Wood Buffalo Regional Library, which regularly puts on events there.

Says Kim Fecteau, Rural Services Coordinator for the library: “One of the biggest things we promote is not just library services, but literacy — everything from math to critical thinking. We feel that READesign really fits what the library represents and that it’s a fun way to learn.”

In July 2017, Ms. Fecteau, Ms. Wilson-Iherjirika, and two other volunteers delivered a two-hour workshop at Fort McKay’s community centre. The team took with them boxes of books and supplies, tons of snacks, and a boatload of optimism that the children would be receptive. About 16 children aged six to 12 greeted them — and neither volunteers nor children were disappointed.

“It was amazing to see them get into it. It was chaos, but it was so much fun,” says Ms. Fecteau.

CURIOS CHILDREN, CURIOUS GEORGE
When Curious George leaves Planet Earth, he counts on a lot of engagement from young readers. Building off the story *Curious George Discovers Space*, this boy finds out whether a contraption for pushing four buttons at once will deliver.

-photo courtesy BrainSTEM Alliance



After being divided into small groups, the children were asked to choose a book with an engineering challenge they could relate to. Ms. Fecteau's group landed on a story about a teacher who fears heights. The kids were challenged to design and build a device to get the character safely across a river. Like real engineers, they were given a budget (made up of a fixed number of credits) and had to pick their supplies carefully.

In the end, her group designed and built a boat with a working motor, during the two-hour workshop. The team faced setbacks, finding out that the boat was too heavy to float and not particularly waterproof. The big challenge for the kids, then, was to manage their disappointment — and regroup to find new solutions.

"We kept it exciting," says Ms. Fecteau. "If we saw them getting a bit frustrated, we'd say, let's take a breather and think about this." Most kids enjoyed the workshop and stuck it out to the end. A handful didn't want to stop when the allotted time ran out. All of them learned a lot about cooperation, collaboration, and team-building. "It was a huge success," says Ms. Fecteau.

TRIAL AND ERROR, LEARNING AND GROWTH

Ms. Hurst has also watched children struggle with setbacks during READesign workshops. Learning from failure, she points out, is a big part of growing up — and a big part of engineering. "Your ideas are not going to work all the time, and you need to be able to learn from your failures and try again. Or you need to take what you've learned and apply it to the next situation that comes up."

Many kids struggle with disappointment when their devices don't work as planned. But while trying and failing, most of them learn to persevere. Ms. Hurst remembers a boy who left a session frustrated but refused to give up. "As soon as he got home, he pulled out his Meccano set and kept working on his project."

Grownups can find it hard to watch children struggle. "You have to sit on your hands sometimes, but you have to dive in other times. It's a delicate balance," says Barbara Madden, P.Eng., a geotechnical engineer and BrainSTEM volunteer. She's helped with READesign sessions in Fort McMurray.

Even when things don't go entirely as planned, most kids leave the workshop with a sense of accomplishment, Ms. Madden says. "They've solved a problem."

Kids also come away with an improved sense of what engineers do. Most of them — even those in Fort McMurray, where there's a high concentration of engineers and engineering projects — don't always grasp what engineering is about. Ms. Madden herself had little awareness of it as young person. She stumbled across engineering when her uncle, a videographer, screened a promotional piece at a family function.

The video featured a female engineer. "Something clicked for me," she says. Still, Ms. Madden wasn't sure she'd enjoy the profession, but she enrolled in engineering just the same. "Now I think it's great fun." And so is sharing her profession with a new generation.



'You have to sit on your hands sometimes, but you have to dive in other times. It's a delicate balance'

BARBARA MADDEN, P.ENG.

THE STORY WRIT LARGE

Ms. Wilson-Iherjirika is delighted by the response from volunteers and kids to READesign, and she notes that it's already expanding across Canada, thanks in part to former coworkers in other cities. The first READesign in Sarnia, Ontario, has taken place, with sponsorship from Suncor and Enbridge. And there's interest in Regina, Saskatchewan, and Cape Breton, Nova Scotia.

In Alberta, READesign continues to spread to new communities — a trend that won't let up in 2018. Support from the APEGA Foundation is helping make the Alberta versions possible, along with the volunteer power within the Association itself.

"It's been so great to work with APEGA and the foundation," says Ms. Wilson-Iherjirika. "There's this huge network of engineers who want to give back and work with kids to spark an interest in engineering."

The Role of Luck

Many young people — particularly girls — don't consider engineering as a career. Without a little luck, that would have been the case for D'Andre Wilson-Iherjirika, P.Eng. "It was only by chance that I decided to study engineering," she says.

Growing up in Nassau, Bahamas, she had little exposure to engineering. Ms. Wilson-Iherjirika was in her last year of high school, in fact, and was researching careers when she stumbled upon chemical engineering. The profession, it seemed to her, was a combination of two loves, chemistry and mathematics. Maybe she should give it a try.

In 2006, Ms. Wilson-Iherjirika took a calculated risk by moving to Canada to pursue a degree in chemical engineering at McGill University in Montreal. Her expectations were met and the decision paid off. After earning her second degree, a master's in applied science at the University of Toronto, she became a process engineering intern at Suncor Energy in Fort McMurray. Today, she's a process safety engineer with the company.

A good profession and position did not stop her from thinking about her lack of early exposure to careers in science, technology, engineering, and math (STEM). She decided to find ways to help young people discover their own abilities and learn about engineering's vast potential.

Ms. Wilson-Iherjirika got involved in outreach. In a big way.



D'ANDRE'S STORY

Choosing a STEM path is not nearly as likely to happen for girls as it is boys — even more so in her home country of the Bahamas, says D'Andre Wilson-Iherjirika, P.Eng. She's made STEM outreach a mission in her professional career so far.

In 2014, she cofounded the Bahamas Engineering and Technology Advancement Camp, a five-day summer camp introducing teens to engineering disciplines. Two years before that, she created the BrainSTEM Alliance, a Canadian organization that works with non-profits, charities, and educational institutions to create STEM outreach initiatives for youth. One of BrainSTEM's latest initiatives is READesign. *See main story.*

EnGenious Dreams Bigger, Returns in 2018

Updates and redevelopments are on their way for the online engineering and geoscience gaming platform, thanks to a new partnership with First Mobile Education

After a brief hiatus, APEGA is proud to announce the return of EnGenious, our online engineering and geoscience gaming platform. The project began in 2011 to help make the fields of engineering and geoscience more engaging and relevant to students in Grades 7 to 9.

EnGenious exposes students to real-life scenarios to encourage them to think critically and employ the skills used by Professional Engineers and Professional Geoscientists in their projects and workplaces.

In partnership with Engineers Canada, we officially launched EnGenious in 2013. Game content was developed in consultation with practising APEGA Members who drew on their diverse professional experience, incorporating real-world scenarios and tangible applications. The project was originally sponsored by Canadian Natural Resources Limited, Cenovus, the Government of Alberta, Pembina Pipelines, and the SPE Canadian Educational Foundation.

Thanks to a partnership with First Mobile Education in New Brunswick, EnGenious is making a comeback. Development will continue to make it a more comprehensive resource. Through updates, First Mobile will implement current coding standards and improve hosting stability for the website. Once this is complete, the focus will shift to development of new games and new levels for existing games, ensuring the platform continues to grow with its audience. APEGA will continue to provide educational content and expertise.

EnGenious provides an immersive gaming experience, while also serving as an informative career resource. When students are not working in their gaming world to prevent earthquake damage to homes or to provide designs for safe, energy-efficient appliances, they can learn more about the careers behind these challenges — and the education required to pursue them. The career portion of the website outlines the different disciplines of engineering and geoscience, and gives examples of their impact in everyday life. It outlines some of the benefits of pursuing a career in engineering or geoscience, specifically highlighting the

industries' abilities to increase quality of life, here and around the globe.

The 10 mini-games currently offered require gamers to use their problem-solving skills and think creatively. Topics cover waste and water management, oil and gas exploration and processing, and much more. Many of the challenges encourage students to not only focus on the end goal, but also on the economic, environmental, and societal implications of their decisions. EnGenious is a bilingual game, and it can be used by students, parents, and teachers across the country.

The EnGenious tagline says it all: Dream Bigger. The renewed gaming platform seeks to do just that, inspiring the next generations of Professional Geoscientists and Professional Engineers to pursue their passions and use their skills, and propel us all into a better world.

HOW DO I ACCESS ENGENIOUS?

EnGenious is available online at www.EnGeniousGames.com.

EnGenious offers two modes of gameplay: Arcade Mode and Career Mode. Immediately following the relaunch, EnGenious will only be available in Arcade Mode, meaning that users will be able to play each of the 10 mini-games, but they will not be able to save their progress. They will be able to access EnGenious anytime: both online and offline.

Career Mode will return in a later update, providing users the extra excitement and functionality of being able to create their own avatars, and become engineers or geoscientists living and working in the world of EnGenious! Users will learn about the different industry sectors in their world, and use their creative thinking skills to mitigate issues within them. In addition to earning EnGenious Bucks and notching other achievements, users will personally contribute to the well-being of their gaming world.

Make an Impact

Build the Future by Volunteering

Volunteer Opportunities

- Boards, Committees, and Panels
- Community, University, and Youth Outreach
- Mentoring
- Special Events

Current APEGA volunteer opportunities are posted on the volunteering section of the APEGA website

Volunteer Benefits

- Earn Continuing Professional Development Credits
- Expand Your Business Network
- Develop Skills, Knowledge, and Experience
- Give Back to Your Profession
- Have Fun

Note: Your acceptance in a particular volunteer position depends on space being available and the suitability of your qualifications.

Contact APEGA Volunteer Management

1-800-661-7020, Ext. 1556

volunteer@apega.ca



Share Your Knowledge and Experience

APEGA Members are needed for the following volunteer opportunities

Appeal Board Panel

Committee members are needed for the Appeal Board, which provides Members and the public protection of their statutory right of appeal and their right to natural justice.

Discipline Committee

Committee members are needed for the Discipline Committee, which hears and decides on complaints of unskilled practice and unprofessional conduct against APEGA Members and Permit Holders, brought before it by the Investigative Committee.

Subject Matter Expert Panel — Outsourcing of Professional Work

APEGA seeks panel members who are subject matter experts on the sourcing of professional work. The panel will help enhance Members' awareness of outsourcing issues by combining two existing practice guidelines into one, the *Professional Practice Standard for Outsourcing of Professional Work*.

Wetlands Science and Engineering Working Group

APEGA seeks geoscience and engineering Professional Members to join the Wetlands Science and Engineering Working Group. This working group will produce a practice guideline to implement the Alberta Wetlands Policy.

Branch Executive Committee

Executive Committee Members are needed to join the APEGA Branches, an important and integral part of APEGA operations. With 10 Branches across the province, the Branches function as the conduit between APEGA's offices in Calgary and Edmonton and APEGA Members.



Environmental Practice Standards Panel, Environmental Professional Standards Subcommittee

Environmental Professional Standards Panel and subcommittee members are needed to help us ensure that APEGA Professional Practice Standards, Guidelines, and Bulletins related to the environment properly protect the public interest.

Geoscience and Engineering Professional Standards Subcommittee

Subcommittee members are needed for the Geoscience and Engineering Professional Standards Subcommittee. This subcommittee ensures that APEGA Professional Practice Standards, Guidelines, and Bulletins related to the professional practice of engineering are adequate to protect the public interest.

Mentors

APEGA invites experienced Professional Members to volunteer their time to mentor less-experienced Members and Members-in-Training. Mentors are matched with mentees to provide guidance in many areas of career and professional growth.

More volunteer opportunities

Requirements-for-Registration Seminars

Presenters are needed to deliver in-person requirements-for-registration seminars for the APEGA Outreach department. These seminars inform internationally trained applicants and others about APEGA's registration process. Volunteers must present at least twice between July 2018 and June 2019, usually in Edmonton or Calgary.

Permit to Practice Seminar

Presenters are needed to deliver in-person Permit to Practice seminars, which inform Responsible Members of their duties and provide guidance on the creation of their Professional Practice Management Plans. Volunteers must present at least twice between September and June, usually in Edmonton or Calgary.

Edmonton and Calgary – University Outreach Events

APEGA Members and human resources professionals are invited to use their valuable knowledge and experience at fun and worthwhile university student events, aimed at helping students prepare for their entry into the workforce.

Special Events Photographers

APEGA needs volunteers to shoot photos at special events in Calgary and Edmonton.

Science Olympics Volunteers

Share your passion for your profession by helping to inspire the next generation of professionals! APEGA needs volunteers to facilitate hands-on challenges for students in Edmonton (February 24, 2018) and Calgary (May 12, 2018).

Subject Matter Expert – Registration Committee

APEGA is looking for Members to act as subject matter experts (SMEs) on the Registration Committee. An SME's primary duty on this committee is to review and provide recommendations on whether an applicant for professional registration has met the requirements for registration.

Expert Witnesses in Geoscience

APEGA Compliance seeks two geoscience expert witnesses for short-term contract positions. These individuals will assist APEGA's Compliance Department with specific compliance cases.

National Professional Practice Exam Question Authors

APEGA seeks volunteers to help produce new, high-quality examination questions to add to the National Professional Practice Exam item bank to be used on future administrations of the exam.

For further information on any of the opportunities listed here — or other APEGA-related volunteer opportunities — please contact:

APEGA Volunteer Management
1-800-661-7020, Ext. 1556
volunteer@apega.ca

You can also check out the [volunteer section of the APEGA website](#).

Recommended Orders

Date: November 16, 2017

Case No.: 17-013-RDO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF MICHAEL STAPLE, P.ENG.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of Michael Staple, P.Eng. (the “Member”) with respect to a complaint initiated by [Complainant A] (the “Complainant”) dated May 30, 2016 (the “Complaint”).

A. THE COMPLAINT

This complaint is regarding two adjacent homes located in southwest Calgary, Alberta. An excavation to repair a damaged sewer line was conducted at the front of the Complainant’s home in the fall of 2013, which allegedly caused damage to the neighbour’s foundation.

The Complainant’s neighbour witnessed the excavation that bordered the property line and noted the soils of the excavation site had significantly settled and appeared similar to a sinkhole. The neighbour also noted cracks in their foundation wall and attached sunroom. The neighbour sought engineering opinions to assist with her concerns and retained Michael Staple, P.Eng. (the Member), from [Company B].

The Complainant alleged that the Member engaged in unprofessional conduct and/or unskilled practice arising from the Member’s inspections and subsequent reports. The Member’s reports directly attributed the neighbour’s foundation concerns to the Complainant’s excavation and lack of surface water management. The Complainant further alleges that the reports were based on visual inspections only and did not entail any engineering work to substantiate the findings.

The findings documented in the Report led to a costly civil suit that was launched by the neighbour against the Complainant that was ultimately unsuccessful.

The Investigative Committee conducted an investigation with respect to the following allegations outlined in the Complaint:

1. Whether the Member engaged in unprofessional conduct or unskilled practice when he authored an inspection report, dated June 8, 2015, and a subsequent report dated August 24, 2015. The neighbour retained the Member a second time to review a report that was completed by [Company C], dated June 12, 2015. [Company C] was retained by the Complainant. The Panel investigated whether the Member:
 - a. Conducted an inspection and made determinations and recommendations regarding cracks in a concrete foundation wall based only on a visual inspection and the testimony of his client.
 - b. Based on the visual inspection, determined the neighbour’s foundation problems were caused by the Complainant’s excavation to repair the sewer line.
 - c. Formed conclusions that did not accurately consider the soil conditions and the zone of influence.
 - d. Did not consider and/or provide other possible reasons or causes as to why the neighbour’s foundation or sunroom incurred cracks or settlement.
 - e. Erroneously referred to the soils of the area as consisting of silty sand overlying gravel.
 - f. Provided recommendations for repair to the homeowner that were based on unconfirmed site and soil conditions.

*Case No. 17-013-RDO continued***B. AGREED STATEMENT OF FACTS****Background**

2. The Member was retained by [Complainant A's neighbour] (the "Client"), to provide an inspection regarding cracks she observed in the home's basement foundation wall and on the stucco wall of their attached sunroom. The Member conducted an onsite inspection on May 30, 2015.
3. The Member was informed by the Client that an excavation took place at the front of the Complainant's yard and it was located near the property line of the neighbour.
4. The Member learned that the excavation was needed to repair a damaged sewer pipe on the Complainant's property, shortly after the floods had swept through the Calgary area in June 2013.
5. Based on the information provided to him by his Client and by his own visual review, the Member provided his report which contained his opinion as to the probable cause that would have created stress on the foundation of the Client's home.
6. In his Report dated June 8, 2015, the Member indicated:
 - a. The material used as backfill in the excavation was native silty sand.
 - b. There were no eavestroughs located on the Complainant's home and surface grading appeared to drain surface water towards the excavated area.
 - c. The stratigraphy of the area consisted of silty sand overlying gravel and that water can easily flow through the soils, leading to the migration of fine soils into the underlying gravel.
 - d. As the fine soils washed away, a small sinkhole appeared. This movement of the silty sand has led to the softening of the foundation soils and ultimately caused the cracking of the neighbor's foundation.
 - e. The sinkhole, if not repaired, will continue to increase in size and further damage the client's residence.
 - f. Repairs for the sinkhole could be made and he provided recommendations.
7. On October 3, 2014, the Client filed a Civil Claim against the Complainant for damages to their home as a result of the Complainant's excavation. The Client relied on the Member's reports which confirmed the damages and their cause.
8. In defence of the Civil Claim, the Complainant retained [Company C] in the spring of 2015 to inspect and provide their assessment of the neighbour's allegations. A site visit was completed and a Report was produced dated June 12, 2015. The findings of the Report contradicted the Member's findings, stating: *"Based on the information gathered during this assessment, a settlement analysis due to excavation using current methods indicated that the noted excavation should and would not cause any settlement to the Plaintiff's (Client's) House."*
9. A follow-up inspection report was completed by the Member on August 24, 2015. The report consisted of a review of the [Company C] report that was commissioned by the Complainant. The Report indicated:
 - a. That based on the Member's company's work history in the area, the soils consist of silty sand or sandy silt.
 - b. The Member maintained their original assessment; that being that water could flow through the soils due to the Member's previously identified conditions:
 - i. lack of compaction
 - ii. improper lot grading
 - iii. overall lack of water management.
 - c. The sinkhole was growing in size as more surface water was allowed to flow into the area.
 - d. Ponding water has led to washing out the fines of the backfilled material and thus created spaces within the sand. Undisturbed soils on the edge of the excavation have now moved into the excavated area and have caused settlement of the foundation and cracking of the foundation wall.
 - e. Due to the movement of soils, the gas meter of the client's home has pulled away from the exterior of the home.
 - f. That unmanaged water from the Complainant's lot and the lack of compaction of the excavated area has created the Client's problems.

Case No. 17-013-RDO continued

10. Realizing he was now being sued, the Complainant retained [Company C] a second time on December 14, 2015, this time to conduct a geotechnical investigation of the soils located in his front yard.
 - a. A test hole was drilled to 7.6 metres and soil samples were obtained.
 - b. One soil sample taken at a depth of 2.3 metres was taken for lab testing.
 - c. Silty clay was encountered below the topsoil and extended to 3.7 metres below the ground surface.
 - d. [Company C] also installed a standpipe to monitor the groundwater level at the site. The level was found to be dry to a depth of 5.2 metres.
11. [Company C]'s investigation concluded:
 - a. The settlement of the excavation was not a sinkhole and should not cause any adverse effects to the footings of the Plaintiff's (Client's) house.
 - b. Based on the soils found, there would be no loss of soils by groundwater movement in the upper 3.4 metres of the soil and this would not cause the settlement of the Plaintiff's (Client's) house.
 - c. The excavation was not deep enough or close enough to the Client's home to be in the zone of influence for bearing pressure under the foundations of the Client's home.
12. On December 9, 2015, the Complainant also retained [Company D] who reviewed the settlement that had occurred in the front yard of the Complainant's home. They concluded:
 - a. The settlement that has occurred at the location of the sewer repair or sinkhole has had no effect on the settlement of the neighbour's porch nor on the cracks observed in their foundation walls.
13. On May 11, 2016, a written decision regarding the Civil Claim was signed by the Provincial judge, ruling in favour of the Complainant and awarding costs.
14. On May 30, 2016, the Complainant submitted the Complaint to APEGA.

15. The Complaint was referred to the Investigative Committee, and a Panel was appointed to investigate the Complaint.

Panel Findings

16. The Panel conducted an investigation, and issued its report on May 17, 2017. The Panel concluded that there was sufficient evidence to refer the following two matters to hearing:
 - a. The Member issued two reports as a professional engineer, providing professional opinions that were to be relied upon by the public; however, these reports were not based on sound engineering principles, specifically:
 - i. There were no soils tests conducted.
 - ii. The erroneous reference to the soils being silty sand.
 - iii. No groundwater tests were completed.
 - iv. A lack of reference to the zone of influence and the probability of the excavation affecting the neighbour's home.
 - v. Information known to the Member only by the word of his Client was presented in the report as factual information, apparently confirmed by the Member.

C. CONDUCT

17. The Member freely and voluntarily admits that:
 - a. The report dated June 8, 2015, did not adequately contain engineering work to justify and support its conclusions and recommendations.
 - b. The report completed on August 24, 2015, did not adequately contain engineering work to justify and support its conclusions and recommendations.
 - c. The Member acknowledges that the conduct described above constitutes unprofessional conduct as defined in the Act:

44 (1) *Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline Committee or the Appeal Board*
(a) *is detrimental to the best interests of the public;*

Case No. 17-013-RDO continued

- (b) *contravenes a code of ethics of the profession as established under the regulations;*
- (c) *harms or tends to harm the standing of the profession generally;*
- (d) *displays a lack of knowledge of or lack of skill or judgment in the practice of the profession, or;*
- (e) *displays a lack of knowledge of or lack of skill or judgment in the carrying out of any duty or obligation undertaken in the practice of the profession,*

whether or not that conduct is disgraceful or dishonourable, constitutes either unskilled practice of the profession or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.

- d. The Member also acknowledges that the conduct described above contravenes Section 44(1)(b) Rule of Conduct #3 of the *Code of Ethics*:

3 *Professional engineers and geoscientists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.*

D. RECOMMENDED ORDERS

18. On the recommendation of the Investigative Committee, and by agreement of Michael Staple,

P.Eng., and following a discussion and review with the Discipline Committee's Case manager, the Discipline Committee hereby orders that:

1. Michael Staple shall receive a letter of reprimand to appear in the Member's APEGA file;
2. Michael Staple is to write a letter of apology to the Complainant within 30 days of being informed that the Recommended Discipline Order has been approved;
3. Michael Staple shall pay a fine in the amount of \$2,500 within 30 days of being informed that the Recommended Discipline Order has been approved;
4. If orders are not completed within the 30 days, the Member and the Permit Holding company will be suspended from practice until completion of such orders;
5. The details of this matter will be published on APEGA's website and/or in *The PEG* magazine with names.

Signed,

MICHAEL STAPLE, P.ENG.

KEVIN WILLIS, P.ENG.

Panel Chair, APEGA Investigative Committee

DEAN MULLIN, P.ENG.

Case Manager, APEGA Discipline Committee

Date: November 16, 2017

Date: November 10, 2017

Case No.: 17-014-RDO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF [PROFESSIONAL MEMBER A], P.ENG.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of [Professional Member A], P.Eng. (the “Member”). The investigation has been conducted with respect to a complaint initiated by [Complainant B], who submitted a letter of complaint dated December 16, 2015.

A. BACKGROUND

The Complainant lodged a complaint against the Member regarding structural work that was completed on [Facility C].

[Facility C] is a two-storey building with a building area of 454.1 sq. m. It was constructed with insulated concrete foundation (ICF) walls and was completed with wooden engineered roof and floor trusses. The construction began in late 2013 and had been stopped at the framing stage in February 2015 as a result of a dispute between the Builder and Owner.

The Owner’s lawyer retained an engineer in May of 2015 to prepare a report for the purposes of potential litigation. The Owner retained a second contractor to complete [Facility C]. The Complainant was retained by the second contractor to rectify any structural deficiencies that were identified, and according to the Complainant the report prepared for the Owner’s lawyer was the driver for his involvement. The Complaint was made on December 16, 2015. The Owner has since commenced legal proceedings.

In his complaint of December 16, 2015, the Complainant alleged that the Member had signed off the *Alberta Building Code’s Structural Schedule C-2* for the shell and floor structure, allowing occupancy when half of the roof structure and part of the floor structure was unsafe and in a state of imminent collapse. The Complainant later acknowledged that his initial assessment was overstated in terms of the bearing issues he had identified.

B. THE COMPLAINT

The Investigative Committee appointed an Investigative Panel to conduct an investigation into whether the Member engaged in unprofessional conduct and/or unskilled practice arising from the field inspection conducted by the Member with respect to the structural components of [Facility C]. A Notice of Investigation was sent to the Member on February 23, 2016, particularizing the items the Investigative Panel intended to consider, including:

- a. Whether the Member failed to identify that the roof trusses installed were bearing less than the minimum required 4 inches on the ICF exterior north wall.
- b. Whether the Member failed to identify that floor joists, supporting the 2nd floor, were only bearing on a supporting beam by $\frac{3}{4}$ -inch.
- c. Whether the Member failed to identify that the Simpson H2.5AZ uplift anchors were also not installed as required by the truss drawings.

C. AGREED STATEMENT OF FACTS

1. The Member has been a member of APEGA since 1967 and has had no prior findings of unprofessional conduct or unskilled practice since he has been a Member.
2. The Member has a master’s degree in electrical engineering. His background and experience were primarily in the electrical field and not in the structural discipline of the residential or commercial construction field, although in recent years he has been involved in residential and small office building construction.
3. The Member was the Registered Professional of Record for the structural components of [Facility C]. As such, he was responsible for the field review with respect to the *Alberta Building Code’s Structural Schedule C-2* requirements.

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4. The Member was aware of the minimum bearing requirement of 4 inches for the roof trusses as indicated in the roof truss drawings.
 5. The Member did not identify during his field review that the roof trusses installed on the building's exterior ICF north wall did not meet the minimum 4-inch bearing requirement on the building's exterior ICF north wall as indicated in the roof truss drawings.
 6. The Member did not identify during his field review that the floor joists (supporting the 2nd floor) were only bearing on a supporting beam by 3/4-inch at the location where the 3-ply beam transitions to a 2-ply beam.
 7. The Member did not confirm in his field review that the Simpson H2.5AZ uplift anchors, meant to be installed at the ends of the trusses, were installed as required.
 8. Per the *Alberta Building Code*, [Facility C] is classified as a Division B, Group D Occupancy as it contains two storeys, each greater than 250 sq. m. As such it requires professional involvement by an architect and an engineer, therefore requiring appropriate schedules.
1. The Member shall receive a letter of reprimand and a copy to be retained on his APEGA file.
 2. The Member shall pay a fine in the amount of \$4,000 to be paid within 90 days after the Discipline Committee's Case Manager approves the Recommended Order.
 3. The Member has agreed not to act as a Registered Professional of Record for the structural elements of a project and shall state such in a letter to APEGA to be retained on his APEGA file.
 4. Should the Member fail to pay the fine in the period specified, or should he not submit the letter, his registration will be suspended until such time as he does.
 5. Although the Investigative Committee and the Member understand and acknowledge that APEGA's usual policy is to publish Recommended Discipline Orders in a manner that identifies the Member by name, the parties understand that the decision to publish with or without name is discretionary. The parties submit that publication without name is appropriate, given the specific facts in this case, including the following:
 - a. The Member has been in good standing as a Member of APEGA since 1967 and has had no prior findings of unprofessional conduct or unskilled practice since he has been a member;
 - b. [Facility C] is currently the subject of proceedings in the Court of Queen's Bench of Alberta.

D. CONDUCT

9. The Member freely and voluntarily admits that:
 - a. During his field review he did not identify the items set out in paragraphs 5, 6 and 7 of the Agreed Statement of Facts and thereby demonstrated a lack of skill in carrying out a duty required by the *Alberta Building Code*.
10. The Member acknowledges that the conduct is a breach of section 44(1)(e) of the *Act* and therefore constitutes unskilled practice as defined in the *Act*.

E. RECOMMENDED ORDERS

11. On the recommendation of the Investigative Committee, and by agreement of [Professional Member A] and following a discussion and review with the Discipline Committee's Case Manager, the Discipline Committee hereby orders that:

Signed,

[PROFESSIONAL MEMBER A], P.ENG.**ALLAN YUCOCO**, P.L.(ENG.)

Panel Chair, APEGA Investigative Committee

D.F. COX, P.ENG.

Case Manager, APEGA Discipline Committee

Date: November 10, 2017

Date: October 16, 2017

Case No.: 17-012-RDO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF STEPHEN PETROVICH, P.ENG.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of Stephen Petrovich, P.Eng. (the “Member”), with respect to a complaint initiated by [Complainant A] (the “Complainant”), dated May 30, 2016.

A. THE COMPLAINT

This complaint is regarding two adjacent homes located in southwest Calgary, Alberta. An excavation to repair a damaged sewer line was conducted at the front of the Complainant’s home in the fall of 2013, which allegedly caused damage to the neighbour’s foundation.

The Complainant’s neighbour witnessed the excavation that bordered the property line and noted the soils of the excavation site had significantly settled and appeared similar to a sinkhole. The neighbour also noted cracks in their foundation wall and attached sunroom. The neighbour sought an engineering opinion to assist with her concerns and retained Stephen Petrovich, P.Eng., (the Member) from [Company A].

The Complainant alleged that the Member engaged in unprofessional conduct and/or unskilled practice arising from the Member’s inspections and subsequent reports. The reports directly attributed the neighbour’s foundation concerns to the Complainant’s excavation. The Complainant further alleges that the reports were based on visual inspections only and did not entail any engineering work to substantiate the findings.

The findings documented in the reports led to a costly civil suit that was launched by the neighbour against the Complainant that was ultimately unsuccessful.

The Investigative Committee conducted an investigation with respect to the following allegations outlined in the Complaint:

1. Whether the Member engaged in unprofessional conduct or unskilled practice when he authored an inspection report, dated April 29, 2014, and a

follow-up inspection report dated September 16, 2015, in which the Member:

- a. Conducted an inspection and made determinations and recommendations regarding cracks in a concrete foundation wall based only on a visual inspection and testimony of the neighbour.
 - b. Based on the visual inspection, determined the neighbour’s foundation problems were caused by the Complainant’s excavation to repair the sewer line.
 - c. Formed conclusions that did not accurately consider the soil conditions and the zone of influence.
 - d. Did not consider and/or provide other possible reasons or causes as to why the neighbour’s foundation or sunroom incurred cracks or settlement.
 - e. Inappropriately referenced the settled soils of the excavated area as a “sink hole” when it was an area that incurred normal settlement as a result of uncompacted fill that was put back into the excavated hole.
 - f. Provided a non-standard recommendation for residential properties to remove native fill from the excavation and replace it with engineered gravel.
2. That the Member’s permit holding company, [Company A], was not registered with APEGA at the time his first report was issued and as such was not in compliance with APEGA’s permit requirements.

B. AGREED STATEMENT OF FACTS

Background

3. In the spring of 2014 the Member was retained by [Neighbour B], the Complainant’s neighbour (the

Case No. 17-012-RDO continued

- “Client”), to provide an inspection regarding cracks she observed in the home’s basement foundation wall and on the stucco wall of their attached sunroom.
4. The Member was informed by the Client that an excavation took place at the front of the Complainant’s yard and it was located near the property line of the neighbor.
 5. The Client informed the Member that the area excavated was 10 feet deep and 3-feet away from the front corner of her home.
 6. The Member learned the excavation was needed to repair a damaged sewer pipe on the Complainant’s property shortly after the floods had swept through the Calgary area in June 2013.
 7. As the sewer repair did not resolve all the sewer issues, an additional repair was required in October 2013.
 8. Based on the information provided to him by his Client, the Member determined, upon visual review, it was reasonable to conclude that the excavation would have created stress on the foundation of the Client’s home.
 9. In his report dated April 29, 2014, the Member indicated:
 - a. There was significant settling of the (Client’s) home, specifically the northeast corner.
 - b. The settlement was due to a large-diameter but shallow sinkhole created by the Complainant’s excavation.
 - c. The sinkhole was clearly due to the improper backfill and lack of compaction at the excavation site.
 - d. The excavation contributed to the cracking seen in the basement of the Client’s home and to the sinking of the northeast corner of the front sunroom.
 - e. The lack of compaction of the sinkhole is why the fill is settling and not supporting the concrete foundation walls of both homes.
 - f. Repairs to the Client’s home are needed as a result of the improper excavation that was completed by the neighbour.
 - g. The Member recommended repairs for mitigation of the sinkhole.
 10. A follow-up inspection report was completed by the Member dated September 16, 2014. The site visit consisted of a visual inspection only. The report indicated:
 - a. The sinkhole is expanding.
 - b. There are signs of continued cracking in the Client’s basement walls.
 - c. The stress to the foundation walls is due to the movement in the soils from the original 2013 excavation.
 - d. It is clear that unmanaged water from the Complainant’s roof is creating the sinkhole and compacting the fill.
 - e. The roof water will continue to move the fines in the soil from the sinkhole to the front of the street. Erosion of the grade below will continue to compromise both adjacent front porches and the foundation walls of both homes.
 - f. The Member recommended repairs.
 11. On October 3, 2014, the Client filed a Civil Claim against the Complainant for damages to their home as a result of the Complainant’s excavation. The Client relied on the Member’s reports, which confirmed the damages and their cause.
 12. In defence of the Civil Claim, the Complainant retained [Company C] in the spring of 2015 to inspect and provide their assessment of the neighbour’s allegations. A site visit was completed and a report, dated June 12, 2015, produced. The findings of the report contradicted the Member’s findings, stating:

“Based on the information gathered during this assessment, a settlement analysis due to excavation using current methods indicated that the noted excavation should and would not cause any settlement to the Plaintiff’s (Client’s) House.”
 13. Realizing he was being sued, the Complainant retained [Company C] a second time on December 14, 2015, this time to conduct a geotechnical investigation of the soils located in his front yard.
 - a. A test hole was drilled to 7.6 metres and soil samples were obtained.
 - b. One soil sample taken at a depth of 2.3 metres was taken for lab testing.

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- c. Silty clay was encountered below the topsoil and extended to 3.7 metres below the ground surface.
 - d. [Company C] also installed a standpipe to monitor the groundwater level at the site. The level was found to be dry to depth of 5.2 metres.
14. [Company C]’s investigation concluded:
- a. The settlement of the excavation was, “not a ‘sink hole’ and should not cause any adverse effects to the footings of the Plaintiff’s (Client’s) house.”
 - b. Based on the soils found, there “...would be no loss of soils by groundwater movement in the upper 3.4 metres of the soil and would not cause the settlement of the Plaintiff’s (Client’s) house.”
 - c. Further, the excavation was not deep enough and was too far away from the Client’s home to be in the zone of influence.
15. On December 9, 2015, the Complainant also retained [Company D], who reviewed the settlement that had occurred in the front yard of the Complainant’s home. They concluded:
- “...the settlement that has occurred at the location of the sewer repair or ‘sinkhole’ has had no effect on the settlement of the porch... nor on the cracks in the foundation walls...”
16. On May 11, 2016, the written decision regarding the Civil Claim was signed by the provincial judge, ruling in favour of the Complainant and awarding costs.
17. On May 30, 2016, the Complainant submitted the Complaint to APEGA.
18. The Complaint was referred to the Investigative Committee, and a Panel was appointed to investigate the Complaint.

Panel Findings

19. The Panel conducted an investigation, and issued its report on May 17, 2017. The Panel concluded that there was sufficient evidence to refer the following two matters to hearing:
- a. The Member issued two reports as a professional engineer, providing professional

- opinions that were to be relied upon by the public; however, these reports were not based on sound engineering principles, specifically:
 - i. There were no soils tests conducted.
 - ii. No reference to the type of soil that was present at the site.
 - iii. No groundwater tests were completed.
 - iv. No confirmation of the exact location of the excavation was determined.
 - v. A lack of reference to the zone of influence and the probability of the excavation to affect the Neighbour’s home.
 - vi. Information known to the Member only by the word of his Client was presented in the report as factual information, apparently confirmed by the Member.
- b. The Member was practising engineering through [Company A] without having a valid Permit to Practice.
 - i. A review of [Company A]’s Permit to Practice revealed that [Company A] joined APEGA as a valid Permit Holder on September 1, 2014. This was after the Member’s report was printed on [Company A] letterhead (dated April 29, 2014).
 - ii. A Member providing engineering services through a corporate entity is required to obtain a permit to practice.
 - iii. Section 2(1) of the *Engineering and Geoscience Professions Act* (the “Act”) states that: “Except as otherwise provided in this Act, no individual, corporation, partnership or other entity, except a professional engineer, a licensee so authorized in the licensee’s license, a permit holder so authorized in its permit or a certificate holder so authorized in the certificate holder’s certificate, shall engage in the practice of engineering.”

C. CONDUCT

20. The Member freely and voluntarily admits that:
- a. The report dated April 29, 2014, did not adequately contain engineering work to justify and support its conclusions and recommendations.

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- b. The report dated September 16, 2015, did not adequately contain engineering work to justify and support its conclusions and recommendations.
- c. [Company A] engaged in the practice of engineering without having a permit to practice, in contravention of s. 2(1) of the *Act*. The Member acknowledges that he ought to have applied for a permit to practice prior to engaging his services under the corporate name and that the failure to do so constitutes “unprofessional conduct” pursuant to s. 44 (1) (b) of the *Act* and pursuant to Rule of Conduct #4 of the *Code of Ethics*, which states that “professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practices.”

- d. The Member acknowledges that the conduct described above constitutes unprofessional conduct as defined in the *Act*:

44(1) *Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline Committee or the Appeal Board:*

- a)** *Is detrimental to the best interests of the public;*
- b)** *Contravenes a code of ethics of the profession as established under the regulations;*
- c)** *Harms or tends to harm the standing of the profession generally;*
- d)** *Displays a lack of knowledge of or lack of skill or judgment in the practice of the profession;*
- e)** *Displays a lack of knowledge of or lack of skills or judgment in the carrying out any duty or obligation undertaken in the practice of the profession,*

whether or not that conduct is disgraceful or dishonourable, constitutes either unskilled practice of the profession, or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.

- e. The Member also acknowledges that the conduct described above contravenes Section

44(1)(b) Rule of Conduct #3 and #4 of the *Code of Ethics*:

- 3** *Professional engineers and geoscientists shall conduct themselves with integrity, honesty, fairness and objectivity in their professional activities.*
- 4** *Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practice.*

D. RECOMMENDED ORDERS

21. On the recommendation of the Investigative Committee, and by agreement of Stephen Petrovich, P.Eng., and following a discussion and review with the Discipline Committee’s Case manager, the Discipline Committee hereby orders that:
1. Stephen Petrovich shall receive a letter of reprimand to appear in the Member’s APEGA file;
 2. Stephen Petrovich is to write a letter of apology to the complainant within 30 days of being informed that the Recommended Discipline Order has been approved;
 3. Stephen Petrovich shall pay a fine in the amount of \$3,000 within 30 days of being informed that the Recommended Discipline Order has been approved;
 4. If orders are not completed within the 30 days, the Member and the Permit Holding company will be suspended from practice until completion of such orders;
 5. The details of this matter will be published on APEGA’s website and/or in *The PEG* magazine with names.

Signed,

STEPHEN PETROVICH, P.ENG.

KEVIN WILLIS, P.ENG.

Panel Chair, APEGA Investigative Committee

JOHN VAN DER PUT, P.ENG.

Case Manager, APEGA Discipline Committee

Date: October 16, 2017

Date: October 11, 2017

Case No.: 17-010-RDO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT, AND IN THE MATTER OF THE CONDUCT OF SE DESIGN AND CONSULTING INC.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of [Contact A], the primary contact on behalf of SE Design and Consulting Inc. (SE Design). The investigation has been conducted with respect to a complaint initiated [Complainant B], who submitted a letter of complaint dated June 22, 2015.

A. BACKGROUND

The Complainant was involved in residential development since 1985, having developed over 250 residential lots in the Bonnyville area.

The Complainant through his company [Company C] retained the services of SE Design in 2010 to develop 3 phases (Phases IV, V, and VI) of a land development project called [Project D] (the "Project") which consisted of 56 lots.

The Complainant's letter of complaint contained allegations of unskilled practice and unprofessional conduct regarding services provided by SE Design and numerous disputes encountered.

SE Design is a civil/municipal engineering firm that was formed in 2004. The firm is located in Cold Lake, Alberta, and employs approximately 20 people specializing in a wide range of planning, engineering, and construction services.

[Contact A] referred to the Complainant's concerns as always being related to the cost of work. He disputes the allegations made by the Complainant, indicating SE Design is a reputable company that was recently recognized by the local business chamber for their exemplary work done in the [Project D] community, earning a Business of the Year Award for a large business in 2015.

B. THE COMPLAINT

The Investigative Committee conducted an investigation with respect to the following allegations to determine if the actions of [Contact A] and SE Design (collectively herein referred to as "SE Design") contravened Section 44(1) of the *Engineering and Geoscience Professions Act*: Specifically, the Investigative Panel considered whether:

1. SE Design was competent and had the necessary means and experience to complete the land development work required for the Project.
2. The execution of the required services was completed as per the contractual obligations and in a professional and/or skilled manner. Specifically:
 - a. Whether services for Phase IV were allegedly installed on the wrong side of the lot, when comparing the original drawings (May 12, 2010) to the "as built" drawings (July 13, 2010).
 - b. Whether the project completion dates for Phase V were satisfied and if not, that the consequences for not meeting the deadlines were fulfilled as outlined in the contract.
 - c. Whether the water leak discovered in Phase V was a result of unskilled practice.
 - d. Whether the incomplete status of the lane and its elevations (located on the north side of six lots in Phase V) were not completed as per the contractual agreement.
 - e. Whether SE Design overbilled and/or was deceitful to [Complainant B] regarding the invoicing related to the sanitary sewer servicing for Phase VI — specifically SE Design billed [Complainant B] \$60,000 in excess of the original contract price of \$420,000.

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- f. Whether SE Design exhibited unskilled practice for having to bury the sanitary lines an additional metre deep.
 - g. Whether SE Design acted unprofessionally with regards to the circumstances related to the storm pond versus sceptor systems. Specifically, did SE Design disregard [Complainant B's] preference of wanting a sceptor system?
 - h. Whether SE Design billed [Complainant B] for the storm pond designs even though they were not wanted or required.
 - i. Whether SE Design overbilled and/or was deceitful to [Complainant B] regarding the invoicing for electrical supplies. Specifically, billing [Complainant B] \$14,000 higher than the original contracted price of \$97,000.
 - j. Whether SE Design failed to complete the sidewalk and street pavement located alongside a corner lot as per the contract. Note: The lot is located in Phase VI — on the southeast corner of [the Project D community]. The orientation of the lot was changed from facing east to facing south.
3. SE Design acted in an unprofessional manner with regards to continued correspondence with [Complainant B's son], despite the father's requests to cease correspondence.
 4. SE Design engaged in unprofessional conduct and/or unskilled practice that contravened Section 44(1) of the *Engineering and Geoscience Professions Act*.

C. AGREED STATEMENT OF FACTS

5. SE Design was retained by [Company C, Complainant B, and Complainant B's son] (the Client) to provide land development services for the development of 56 lots located in the [Project D community] in the Bonnyville area.
6. Issues of contention between SE Design and the Complainant ranged from contractual matters to overall allegations of unskilled practice and unprofessional conduct.
7. SE Design was competent and had the necessary means and experience to complete the land development work required for the Project, having been directly involved in the construction

and development of over 2,000 single family and multifamily lots.

8. The primary source leading to the Complainant's allegations was based on miscommunication.
9. SE Design had an obligation to convey, in a clear and concise manner, various details of what their scope of work was. Some scope of work details were not clearly communicated to the client.
10. SE Design had an obligation to convey and explain in a clear and concise manner the costs of certain components of the Project. As an example, the matter of the sanitary sewer servicing for Phase VI, and the allegation that SE Design billed the Complainant \$60,000 more than the original contract price:
 - a. Although this matter may be viewed as contractual in nature, it could not be determined if SE Design effectively communicated that the original cost of the sewer servicing was a tendered price, based on preliminary engineering plans, and that it was used to enable the developer to establish costs and to arrange/schedule the contractor for summer construction.
 - b. SE Design had an obligation to effectively communicate any contingencies that might arise during the course of work that would affect the initial contract price. This needed to be clearly communicated to the Client.
 - c. SE Design had an obligation to effectively communicate with its client, [Company C], in a timely and appropriate manner about any potential material changes to the contract price.

Panel Findings

11. The Panel determined there was insufficient evidence of unprofessional conduct or unskilled practice with respect to the *Code of Ethics* Rules #1, #2, #3, and #5 to refer the matter to a disciplinary hearing.
12. The investigation determined SE Design engaged in extensive communication with the Complainant. However, much of this did not adequately resolve misunderstandings between the Complainant and SE Design. Despite a great deal of back-and-forth communications, the content did not effectively

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clarify scope, conditions, contractual matters, and other obligations. SE Design had an obligation to communicate in a professional manner until their client is clear on what was happening, and what the cost implications were.

13. It was determined that SE Design requires a more formal communication process, either included its standard clauses for provision of engineering services to clients and/or in its Professional Practice Management Plan (PPMP). This then would establish a guideline that may increase the chances of their being able to formally rectify any misunderstanding or differences of opinion that arise.
14. These are essential matters that the Panel found lacking in SE Design's Professional Practice Management Plan (PPMP).
15. As per APEGA's *Guideline for Professional Practice Management Plans v1.4*:
Section 1, "If the public is to have confidence in the quality of the services of professional engineers...there needs to be a structured process in place for managing professional practice."; and
Section 3.4, The PPMP should describe, "Policies and procedures on dispute/conflict resolution between professionals and with clients."
16. The Panel determined there was sufficient evidence that SE Design did not have an adequate Professional Practice Management Plan (PPMP) in place (as per Section 48(1)(d) of the *Engineering and Geoscience Professions Act*) that might have provided further direction and guidance to more effectively communicate their scope of work and related responsibilities to their client. This is in contravention of the *Code of Ethics*, Rule #4 in the *Act*.
4 Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practice.
17. The Panel realizes not all situations may be addressed through a Professional Practice Management Plan (PPMP); however, the investigation revealed a deficiency in the procedures of SE Design, (e.g., in the area of dispute/conflict resolution). Formally addressing

this deficiency in a revised PPMP should work towards ensuring more meaningful communication takes place between SE Design and their clients, particularly in matters relating to differing interpretations of key items, as well as dispute/conflict resolution.

C. CONDUCT

18. SE Design's primary contact freely and voluntarily admits that:
 - a. SE Design's Professional Practice Management Plan (PPMP) was not sufficiently detailed in terms of outlining their policies and procedures to more effectively address communication issues with their clients.
 - b. SE Design requires a more robust process to improve their communication procedures with their clients. Specifically, to address and clarify items such as:
 - i. ensuring sufficient detail in scope of work and specific responsibilities/obligations.
 - ii. Specific and clear pricing for work to be done.
 - iii. Identification of pricing that may be contingent on various factors.
 - iv. A more formal dispute resolution process should communications breakdown.
 - c. The primary contact acknowledges that the conduct described above constitutes unprofessional conduct as defined in the *Act*.
 - d. The primary contact also acknowledges that the conduct described above contravenes Section 44(1)(b) Rule of Conduct #4 of the *Code of Ethics*:
4 Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practice.

D. RECOMMENDED ORDERS

19. On the recommendation of the Investigative Committee, and by agreement of the primary contact and SE Design and following a discussion and review with the Discipline Committee's Case manager, the Discipline Committee hereby orders that:

Case No. 17-010-RDO *continued*

1. SE Design is to submit to APEGA's Practice Review Board a revised Professional Practice Management Plan that outlines a suitable process to ensure the section on quality control addresses appropriate communication procedures for future business clients. Upon approval of the PPMP, the matter will be concluded.
2. If this order is not completed within 30 days after the Case Manager reviews the matter with the primary contact, the Permit Holding company (SE Design) will be suspended from practice until completion of such order.

3. This matter and its outcome will be published by APEGA as deemed appropriate and such publication will name SE Design and Consulting Inc.

Signed,

[CONTACT A]

Primary Contact, SE Design and Consulting Inc.

HANAN SAMAN, P.ENG.

Panel Chair, APEGA Investigative Committee

WANDA GOULDEN, P.ENG., P.GEO.

Case Manager, APEGA Discipline Committee

Date: October 11, 2017

Date: September 18, 2017

Case No.: 16-014-RDO

IN THE MATTER OF THE ENGINEERING AND GEOSCIENCE PROFESSIONS ACT AND IN THE MATTER OF THE CONDUCT OF [PROFESSIONAL MEMBER A], P.ENG.

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has conducted an investigation into the conduct of [Professional Member A] (the "Member") with respect to a complaint initiated by [Complainant B] (the "Complainant"), dated August 5, 2014, (the "Complaint").

A. THE COMPLAINT

The Complainant alleged that the Member engaged in unprofessional conduct and/or unskilled practice arising from an inspection conducted by the Member with respect to the installation of stone veneer to the exterior of a rental property owned by [Complainant B] in Calgary, Alberta (the "Property").

The Investigative Committee conducted an investigation with respect to the following allegations outlined in the Complaint:

1. Whether the Member had the permission of [Complainant B] or his tenant to enter the residential lot at [Address C] in Calgary, Alberta,

for the purposes of conducting an inspection of the stone cladding;

2. Whether the Member improperly engaged in the practice of engineering through [Company D] or [Company E] without obtaining a permit to practice;
3. Whether the Member engaged in unprofessional conduct or unskilled practice when he authored an inspection report, dated April 12, 2013, in which the Member concluded that "the stone veneer material installation had met the manufacturer's specification."

B. AGREED STATEMENT OF FACTS**Background**

4. The Complainant retained [Contractor F] (the "Contractor") to undertake renovations and repairs with respect to the Property.
5. The work done by the Contractor included the installation of stone cladding on the exterior of the Property.

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6. The Contractor retained the Member to conduct an inspection of the Contractor’s installation procedure for the stone cladding, in accordance with the City of Calgary’s requirements.
7. The City of Calgary did not require that a Form A be completed. However, at the relevant time, the City of Calgary required that a field review be conducted during construction to inspect the exterior wall cladding system to ensure that the procedure conformed with the cladding manufacturer’s installation procedure for (a) cladding support, movement control and thermal expansion and (b) moisture management including protecting from precipitation and water ingress control.
8. The Member attended at the Property with [Contractor F] on or about April 12, 2013, to conduct a field review. At the time he attended the Property, installation of the stone veneer was underway but was not finished. The initial substrate work was completed, and a few rows of veneer had been installed.
9. Subsequent to his attendance at the Property, the Member issued and authenticated a letter (the “First Letter”) on behalf of [Company D], dated April 12, 2013, addressed to the Contractor. The First Letter stated the following:

“[Company D] has completed a site review of the stone cladding veneer inspection and confirm that this stone veneer material installation had met the manufacturer’s specification.

“[Company D] confirmed that the installation procedure as follow [sic]:

 1. *Remove existing wall siding.*
 2. *Install base trim at the bottom of the stone veneer wall.*
 3. *Install 3/4” exterior grade sheathing on top of the existing exterior wall.*
 4. *Install building paper.*
 5. *Install steel wire mesh.*
 6. *Install stone veneer with mortar.*
 7. *Install top flashing to cover the top of the veneer wall.”*
10. On August 15, 2013, the Complainant filed a Statement of Claim against the Contractor alleging breach of contract for deficient renovation work on the Property (the “Civil Claim”). The Civil Claim alleged defects with respect to a number of aspects of the work performed by the Contractor, including installation of the stone veneer.
11. In or about September of 2013, [Contractor F] requested that the Member return to the Property to advise whether there was any indication of a problem with the stone veneer work. The Member returned and conducted a further inspection at [Contractor F’s] request, and issued and authenticated a second letter dated September 24, 2013 (the “Second Letter”).
12. On August 5, 2014, the Complainant submitted the Complaint to APEGA.
13. The Complaint was referred to the Investigative Committee, and a Panel was appointed to investigate the Complaint.
14. The Panel conducted an investigation, and issued its report on December 16, 2015. The Panel concluded that there was sufficient evidence to refer the following two issues to hearing:
 - a. Whether the Member issued a letter, dated April 12, 2013, that relayed information that was apt to be misinterpreted since it stated the stonework was installed according to directions when the stonework had not been completely installed at that time; and
 - b. Whether the Member was practising engineering through [Company E] without having a valid permit to practice.
15. The Panel determined that there was insufficient evidence to refer the following matters also raised in the Complaint to a hearing:
 - a. Whether the Member inappropriately or incorrectly issued a report indicating that the stone veneer material installation had met the manufacturer’s specification; and
 - b. Whether the Member attended at the Property for the purpose of conducting a field review without the Complainant’s consent.
16. On or about February 25 and March 2, 2015, a trial was held with respect to the Civil Claim in the

Case No. 16-014-RDO *continued*

Provincial Court of Alberta. Upon conclusion of the trial, the Civil Claim against the Contractor was dismissed.

17. The Complainant subsequently appealed the dismissal of his claim against the Contractor. The appeal was heard in the Court of Queen's Bench of Alberta on April 22, 2016. The Justice in Chambers upheld the trial judge's dismissal of the Civil Claim, including the trial judge's finding that the work performed by the Contractor was satisfactory.

Facts Relating to Allegation #2 — Whether the Member improperly engaged in the practice of engineering through [Company D] or [Company E] without obtaining a permit to practice

18. The Member incorporated a company called [Company D] in September of 2003. [Professional Member A] was the sole shareholder of [Company D], which was struck from the corporate register in March of 2013.
19. The Member also incorporated a company called [Company E], in 1998. [Professional Member A] is the sole Director and Shareholder of [Company E] (the "Corporation"), which is an active corporation.
20. [Company D] is a trade name of [Company E].
21. Neither [Company D] nor the Corporation has ever applied for or obtained a practice permit from APEGA.
22. Section 2(1) of the *Engineering and Geoscience Professions Act* (the "Act") states that: "Except as otherwise provided in this Act, no individual, corporation, partnership or other entity, except a professional engineer, a licensee so authorized in the licensee's license, a permit holder so authorized in its permit or a certificate holder so authorized in the certificate holder's certificate, shall engage in the practice of engineering."
23. The Corporation has been engaged to provide design/build and engineering services to clients on a number of occasions since 1998, including the submission of Forms A and C to the City of Calgary.

24. The Member contacted APEGA on several occasions to inquire as to whether if he is carrying on business as a sole proprietor, he must obtain a Permit to Practice. The Member was advised on each occasion that it was not necessary for him to obtain a practice permit.
25. Although a Member who provides engineering services through a sole proprietorship is not obliged or eligible to obtain a practice permit, if a Member is providing engineering services through a corporate entity, it is necessary to obtain a permit to practice. At the time he contacted APEGA, the Member did not advise APEGA that he was a director and shareholder in a corporate entity, or that he was providing some services and issuing invoices for non-engineering services through the corporate entity.
26. The Member states that he incorporated the Corporation for the purpose of reporting income relating to project management and other activities that do not specifically involve the practice of engineering. The Member also states that he reported income to the Canada Revenue Agency for engineering services he provided on his personal tax return, and that the income he earned for project management, estimating services, and construction was reported on the income tax returns for the Corporation.
27. Although the Member states that he did not intend to practise engineering through the Corporation and was not aware that his use of his tradename could cause others to believe he was in contravention of s. 2(1) of the Act, the Member acknowledges that some of the activities that he engaged in, including the field review resulting in the letter dated April 13, 2013, constitute the "practice of engineering." The Member admits that the suffix "Inc." was and is inappropriate for a sole proprietorship, and was and is liable to cause confusion in this regard.

Facts Relating to Allegation #3 — Whether the Member engaged in unprofessional conduct or unskilled practice when he authored an inspection report, dated April 12, 2013, in which the Member concluded that "the stone veneer material installation had met the manufacturer's specification."

Case No. 16-014-RDO continued

28. The Court of Queen's Bench upheld the finding of the Provincial Court of Alberta that the work performed by the Contractor, including the installation of the stone veneer, was satisfactory. The Investigative Committee did not refer that issue to a hearing.
29. The matters in issue relate solely to whether the wording of the First Letter and the Second Letter was appropriate in light of the scope of the Member's retainer and the activities he performed.
30. At the time the First Letter was authored, the City of Calgary required an inspection to be performed by an appropriate professional during construction, so that the professional could opine on matters relating to moisture control.
31. The Member admits that the First Letter did not clearly confirm the scope of his retainer or the timing of his field review. In particular, while the First Letter expressly referred to and confirmed "the installation procedure," it did not clarify that:
 - The purpose of the field review was limited to reviewing the Contractor's installation procedure for the exterior wall cladding system for cladding support, movement control and thermal expansion and moisture control; or
 - The field review was conducted while installation of the stone veneer was still in progress.
32. Similarly, the Member admits that the Second Letter did not specifically confirm the scope of his retainer, the purpose for conducting a second field review, or that the installation of the stone veneer had been completed at the time of the second field review.
33. Although the Contractor understood the scope of the Member's retainer and the timing of both field reviews, the Member acknowledges that both the First and the Second Letter ought better to have included clarification with respect to the purpose and scope of his retainer, and the timing of the field reviews that were undertaken on both occasions. The Member acknowledges that the lack of clarity, although unintentional,

could potentially create confusion for others who reviewed the letters after they were authored.

C. CONDUCT

34. The Member freely and voluntarily admits that:
 - a. He should not have issued correspondence under the name [Company E] or [Company D] related to the practice of engineering, and that he ought to have applied for a practice permit if he intended to do so.
 - b. The letter dated April 12, 2013, did not adequately clarify the scope of the retainer or the purpose for the field review, and did not adequately clarify that the installation of the stone veneer was still in progress at the time the field review was conducted.
 - c. The letter dated September 24, 2013, did not adequately clarify the scope of the retainer or the purpose of the field review, and did not clarify that the installation of the stone veneer was complete at the time of the field review.
 - d. The Member acknowledges that the conduct described above constitutes unprofessional conduct as defined in the Act:

44(1) *Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline Committee or the Appeal Board:*

 - a)** *Is detrimental to the best interests of the public;*
 - b)** *Contravenes a code of ethics of the profession as established under the regulations;*
 - c)** *Harms or tends to harm the standing of the profession generally;*
 - d)** *Displays a lack of knowledge of or lack of skill or judgment in the practice of the profession;*
 - e)** *Displays a lack of knowledge of or lack of skills or judgment in the carrying out any duty or obligation undertaken in the practice of the profession,*

whether or not that conduct is disgraceful or dishonourable, constitutes either unskilled practice of the profession, or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.

Case No. 16-014-RDO *continued*

- e. The Member also acknowledges that the conduct described above breaches Rule of Conduct #4 of the *Code of Ethics*:

4 *Professional engineers and geoscientists shall comply with applicable statutes, regulations and bylaws in their professional practice.*

D. RECOMMENDED ORDERS

35. On the recommendation of the Investigative Committee, and by agreement of [Professional Member A], P.Eng., with that recommendation, following a discussion and review with the Discipline Committee's Case manager, the Discipline Committee hereby orders that:
1. [Professional Member A] shall receive a letter of reprimand;
 2. [Professional Member A] shall pay a fine in the amount of \$1,500 within 30 days of being informed that the Recommended Discipline Order has been approved;
 3. As of the date that [Professional Member A] executes this Recommended Discipline Order, he will not cause or permit [Company E] or [Company D] to engage in the practice of engineering prior to submitting a permit to practice application to APEGA on behalf of [Company E] and being notified that a practice permit has been granted to [Company E]; and
 4. The details of this matter will be published on APEGA's website and/or in *The PEG* magazine without names or any other information that would identify [Professional Member A], the Complainant, or the Contractor.
36. Although the Investigative Committee and [Professional Member A] understand and

acknowledge that APEGA's usual policy is to publish Recommended Discipline Orders in a manner that identifies the Member by name, the parties understand that the decision to publish with or without name is discretionary. The parties submit that publication without name is appropriate, given the specific facts in this case, including the following:

- a. [Professional Member A] has been a Member of APEGA since August 20, 1993, and has had no prior findings of unprofessional conduct or unskilled practice since he has been a Member;
- b. [Professional Member A] intended to practise engineering as a sole proprietor and he was unaware that his failure to apply for a practice permit on behalf of [Company E] could be regarded as a contravention of s. 2(1) of the Act. Any breach of s. 2(1) was both unintentional and inadvertent.
- c. The Court of Queen's Bench determined that the work performed by the Contractor was satisfactory. Therefore, the unprofessional conduct arising from the letters prepared by [Professional Member A], dated April 12, 2013, and September 24, 2013, relates solely to the manner in which the letters were drafted.
- d. [Professional Member A]'s conduct was not disgraceful or dishonourable.

Signed,

[PROFESSIONAL MEMBER A], P.ENG.

REX PERCHARD, P.ENG.

Panel Chair, APEGA Investigative Committee

GRANT HALLAM, P.ENG.

Case Manager, APEGA Discipline Committee

Date: September 18, 2017

Decision Summaries

Date: July 20, 2017

Case No.: 16-006-FH

REGARDING THE CONDUCT OF A PROFESSIONAL MEMBER, P.ENG., AND A PERMIT HOLDER

Under the *Engineering and Geoscience Professions Act*, RSA 2000, c E-11, a hearing into this matter was held by a Hearing Panel of the Discipline Committee on June 23, 2017. The hearing addressed the conduct of a Professional Member, P.Eng., and a Permit Holder. The Professional Member, P.Eng., was at all material times in regard to this hearing a principal and one of the Responsible Members for the Permit Holder. At all relevant times the Permit Holder held a valid Permit to Practice.

The hearing dealt with the following charges:

1. The Professional Member, P.Eng., and the Permit Holder were charged with accepting deviations from the specifications for a residential building project in Calgary, Alberta, as specified on two specific items on one drawing, without ensuring proper change controls or the documentation of proper change controls as required by the Professional Practice Management Plan for the Permit Holder.

It was alleged that the above-referenced conduct constituted unprofessional conduct as set out in section 44 of the *Engineering and Geoscience Professions Act*.

The Investigative Committee and the Professional Member and Permit Holder proceeded by way of Agreed Statement of Facts and Acknowledgement of Unprofessional Conduct. The Agreed Facts included that the Professional Member, P.Eng., and the Permit Holder were engaged to provide architectural and mechanical engineering services for a series of residential condominium complexes in Alberta. One of the stamped and signed drawings of the Professional Member, P.Eng., included specifications about insulation of water piping.

The mechanical contractor did not follow the specifications on the drawing concerning the insulation.

The contractor did not insulate the hot water branch piping in the parkade; substituted half-inch closed cell foam insulation for half-inch fiberglass insulation; and substituted alternative domestic hot and cold water branch piping in the parkade. Both the Professional Member, P.Eng., and the Permit Holder were aware of the alternative piping and insulation that had been used, which did comply with the *Alberta Building Code*. The Professional Member, P.Eng., and Permit Holder issued Schedules C-1 and C-2 under the *Alberta Building Code*, but neither schedule enclosed documentation of the omission of insulation or the substitutions. The Professional Member, P.Eng., and Permit Holder felt that, as long as the changes were code-compliant, the change documents were not required with the Schedules.

However, the Permit Holder's Professional Practice Management Plan (the "PPMP") provided that the Permit Holder would, for each project, create a project delivery strategy outlining change controls, and that procedures for handling change requests would be the responsibility of the Professional Member. The Hearing Panel noted that the professional engineer stamp and signature of the Professional Member, P.Eng., were on both Schedules on behalf of the Permit Holder. The Hearing Panel also examined the Permit Holder's PPMP in context with APEGA's *Practice Standard for Authenticating Professional Documents v3.0*, which addresses change controls.

The Hearing Panel accepted the Agreed Statement of Facts and accepted the admission of unprofessional conduct by the Professional Member, P.Eng., and the Permit Holder.

The parties also made a joint submission on sanction. The Hearing Panel accepted the joint submission and ordered the following:

1. Both the Professional Member, P.Eng., and Permit Holder shall receive a formal reprimand for the unprofessional conduct with the written decision of the Hearing Panel to serve as the formal reprimand.
2. The Professional Member, P.Eng., shall pay a fine in the amount of \$500 within 1 month of the Discipline Committee's written decision, failing which his

Case No. 16-006-FH *continued*

registration shall be suspended until he pays the fine.

3. The Permit Holder will pay a fine in the amount of \$500 within 1 month of the Discipline Committee's written decision, failing which its Permit to Practice shall be suspended until it pays the fine.
4. The Permit Holder shall pay costs of the hearing in the amount of \$1,000 within 1 month of the Discipline Committee's written Decision, failing which its Permit to Practice shall be suspended until it pays the costs.
5. Details of this matter will be published in *The PEG* magazine and on the APEGA website without identifying the Professional Member, P.Eng., or Permit Holder by name. The Hearing Panel agreed that publication on a named basis would meet no goal of discipline that would be proportionate to the damage that named publication would cause.

It was the view of the Hearing Panel that these orders would protect the public, educate the membership, and uphold the standing of the profession generally. The nature of the conduct that led to findings of unprofessional conduct was relatively minor in the range

of discipline findings. There was no actual damage resulting from the conduct. Of note, the Professional Member, P.Eng., cooperated throughout the investigation and hearing process. The Professional Member, P.Eng., was also prepared to adopt a practice to ensure the proper paperwork was in place as required. Finally, neither of the parties had prior discipline findings.

The Hearing Panel communicated that, while Professional Members cannot be perfect, each must take their role in maintaining the reputation of the Profession seriously. Self-regulation is a privilege that requires each Professional Member to perform duties both concisely and efficiently.

Signed,

DAVID EVANS, P.GEOL.

Panel Chair, APEGA Discipline Committee

TIM MORAN, P.ENG.

Panel Member, APEGA Discipline Committee

MARC SABOURIN, P.ENG.

Panel Member, APEGA Discipline Committee

Date: July 20, 2017

Date: June 26, 2017

Case No.: 16-001-FH

REGARDING THE CONDUCT OF A PROFESSIONAL MEMBER, P.ENG.

Pursuant to the *Engineering and Geoscience Professions Act*, an APEGA Disciplinary Hearing was held on April 19, 2017. The hearing addressed a complaint against the conduct of a Professional Member, P.Eng. (the "Member"). The hearing proceeded by way of an Agreed Statement of Facts, Admission of Unprofessional Conduct and Joint Submission on Sanctions.

The Member was engaged to prepare plans and specifications for a municipal local improvement involving the installation of a sanitary sewer main and upgrades to the water main and to administer the tender on behalf of the municipality and to review and inspect the work being executed by the successful contractor.

The amended charge that was presented to the Hearing Panel by the parties was that:

Your management and administration of the Project failed to identify errors that resulted in certification of payments for work that had not been verified by you, and payments to a contractor by your client for that work.

In the Agreed Statement of Facts and Admission of Unprofessional Conduct the Member admitted that:

- a. the Member verified and asked the municipality to pay for 7 gasline crossings and 1,200 tonnes of crushed gravel and 200 tonnes of pitrun gravel, despite not having verified that those items had been used and required payment;
- b. while the second and final payment recommendation addressed the overpayment for the crushed gravel and pitrun gravel, it again failed to identify the overpayment for the 7 gas line crossings that were not installed but had been certified for payment;
- c. for several years the Member provided a credit of \$3,500 to the municipality in respect to the 7 gas line crossings that were not installed; and

Case No. 16-001-FH continued

- d. this admitted conduct constituted unprofessional conduct in the practice of engineering.

The Hearing Panel accepted the Member's admission of unprofessional conduct. In the opinion of the Hearing Panel, the admitted conduct was serious enough to constitute unprofessional conduct. A client must be able to rely on recommendations made by a Professional Member, and it is unprofessional to recommend payment for work that the Professional Member has not verified.

The Hearing Panel also noted that in this case the delay in the Member providing all relevant documents on a timely basis meant that the Member did not make clear to the Investigative Committee the scope of the work undertaken for the Project. As a result, it was only when the Member provided the additional information that the Investigative Committee was able to understand the more limited scope of the work which resulted in the amended charge. The Hearing Panel emphasized that it is essential that a Member under investigation cooperate with the investigation by providing all relevant documents on a timely basis.

The Hearing Panel also accepted the Joint Submission on Sanctions made by the parties and made the following orders:

- a. the Member was issued a letter of reprimand;
- b. the Member was fined \$250 payable within 60 days of receipt of the written decision of the Hearing Panel;
- c. the decision was to be published to the membership and made available to the public without the name of the Member; and
- d. the Member, as Chief Operating Officer of his permitted corporation, was required to submit a revised Professional Practice Management Plan to the Director of Enforcement and Permits of APEGA within 60 days of receipt of the written decision of the Hearing Panel, and the Director will forward this revised Professional Practice Management Plan to the Practice Review Board for follow-up in accordance with their process.

The Hearing Panel determined that a reprimand was appropriate to make clear that greater care should

have been taken to verify the work and to document that verification. The fine of \$250 was also appropriate to recognize that such conduct was unacceptable but fell within the low end of the scale of potential unprofessional conduct. The Hearing Panel noted that if there had been additional instances of such conduct proven, a more serious fine may have been required.

The Hearing Panel agreed that publication was appropriate to provide the public and the profession with information concerning what has occurred and to make clear to the profession the importance of ensuring that clients are not advised to pay for work that has not been verified by the Professional Member. The Hearing Panel accepted the joint submission of the parties to publish the decision without the name of the Member. The Hearing Panel recognized that joint submissions on sanctions by the parties must be given significant weight by a hearing panel and should only be rejected if they are clearly unreasonable or unfit to deal with the findings on unprofessional conduct made by the hearing panel. In this case, in view of the Member's very long career, the Member's cooperation and acknowledgment of the conduct, and the Member's personal circumstances, the Hearing Panel agreed that there was no need to mention the Member by name in the publication.

The Hearing Panel also accepted the proposal that the Member, as Chief Operating Officer of the Member's permitted corporation, submit a revised Professional Practice Management Plan. It was clear from the evidence that more steps could have been taken to document the scope of work of the Project and the management and inspection of the Project. The revised Professional Practice Management Plan to be reviewed by the Practice Review Board will help to ensure that the errors that lead to this hearing are not repeated.

Signed,

ROBERT SWIFT, P.ENG.

Panel Chair, APEGA Discipline Committee

PAUL RUFFELL, P.ENG.

Panel Member, APEGA Discipline Committee

DIANA PURDY, P.GEOL.

Panel Member, APEGA Discipline Committee

Date: June 26, 2017

Date: June 16, 2017

Case No.: 16-010-FH

REGARDING THE CONDUCT OF DAVID DROVER, P.GEO.

Pursuant to the *Engineering and Geoscience Professions Act*, an APEGA Disciplinary Hearing was held on August 15 and 16, 2016. The hearing addressed six allegations of unprofessional conduct concerning David H. Drover, P.Geo. Although he was served with the Notice of Hearing, Mr. Drover refused to attend the hearing and suggested that the Hearing Panel had no jurisdiction to proceed. The Hearing Panel determined that it did have the jurisdiction to proceed and the hearing proceeded in Mr. Drover's absence.

After hearing the 4 witnesses called by the Investigative Committee and reviewing the evidence that was produced and entered by the Investigative Committee, the Hearing Panel found that Mr. Drover was guilty of unprofessional conduct contrary to s. 44(1) of the *Engineering and Geoscience Professions Act*, in have failed to conduct himself with integrity, honesty, fairness, and objectivity; or in having failed to uphold and enhance the dignity and honour of his profession by acting in a manner that harms or tends to harm the standing of the profession generally, and which contravenes Rules 3 and 5 of the *Code of Ethics*, in respect to the following allegations:

- 1(a) Commencing in February 2015 and continuing thereafter on an ongoing basis sending numerous emails which are unprofessional, both in content and tone, to various individuals, corporations, and agencies, including APEGA, the Alberta Securities Commission, and the College of Paramedics, alleging improper conduct on the part of [Complainant A];
- 1(b) Commencing in June 2015 and continuing thereafter on an ongoing basis sending numerous emails which are unprofessional, both in content and tone, to various individuals, corporations and agencies, including APEGA, the Alberta Securities Commission, and the College of Paramedics, alleging that [Company B] is involved in illegal activities;
2. Sending numerous emails which are unprofessional both in content and tone

commencing June 2015 and continuing thereafter on an ongoing basis to employees and representatives of APEGA;

3. Sending communications which are unprofessional in both tone and content to individuals and agencies, including APEGA, the Royal Canadian Mounted Police, the Alberta Securities Commission, and the College of Paramedics commencing in June 2015 and continuing thereafter;
4. Sending an email dated November 20, 2015, which was unprofessional in both content and tone to [Person C], copying members of the Board of Directors of [Company D];
- 5(a) Acting in an abusive, harassing and vulgar manner toward [Complainant E] before, during and after a meeting of [Company F] on June 30, 2015;
- 5(b) Making crude and vulgar comments about [Complainant E]'s wife during or after a meeting of [Company F] on June 30, 2015;
6. Publishing blog posts which are unprofessional in both content and tone at [website blog G] commencing in February 2016 and thereafter on an ongoing basis.

In its decision the Hearing Panel found that making allegations of criminal conduct against an individual and a corporation based only on speculation and sending these allegations to family, business associates, other shareholders, and regulators, with the express intent of damaging [Complainant A], was clearly unprofessional. The Hearing Panel noted that Mr. Drover made these allegations as statements of fact in numerous complaints to regulators in Canada and the United States and in the many emails sent to individuals. He continued to make these allegations, despite the fact that the allegations were reviewed and not accepted by the Alberta Securities Commission, the RCMP, the Canada Revenue Agency, and the Toronto Stock Exchange. The Hearing Panel stated that harassing individuals and public agencies with a continuous flow of threats and accusations was clear and serious unprofessional conduct.

In respect to the allegations relating to emails sent to the employees and representatives of APEGA, the Hearing Panel found that the accusations made by

Case No. 16-010-FH continued

Mr. Drover of incompetence, stupidity, misconduct, collusion with [Complainant A], conspiracy to cover up illegal activity, and suggestions of responding to political interference were groundless and showed a blatant disrespect for his professional regulating body and demonstrated a lack of integrity and objectivity. The Hearing Panel found that this conduct harmed the honour, dignity, and reputation of APEGA by rejecting and insulting the authority of APEGA and by attempting to limit or restrict APEGA's public duty to carry out its investigation of the complaints against Mr. Drover.

In respect to emails sent to agencies including APEGA, the RCMP, Alberta Treasury Branches, the Alberta Securities Commission, the Office of the Premier, and the Prime Minister of Canada, the Hearing Panel found that Mr. Drover expanded his allegations concerning [Complainant A] to almost everyone who had any form of relationship with [Complainant A] or [Company B]. The Hearing Panel found that Mr. Drover showed a clear pattern of seeking out individuals who he believed had some connection with [Complainant A] or [Company B] and then sending emails to their employers or associates that suggested that they were involved in a \$100-million fraud.

The Hearing Panel also found that when various agencies refused to accept Mr. Drover's allegations, he made serious allegations against these agencies, alleging cover-ups and complicity in fraudulent activity without any objective facts to support his suspicions and allegations. The Hearing Panel noted that where anyone did not agree with Mr. Drover's allegations, they became, in his view, part of a large conspiracy to cover up fraudulent and illegal activities.

The Hearing Panel also found that Mr. Drover was guilty of unprofessional conduct for making very serious allegations of misconduct against a fellow professional, questioning that professional's competence and integrity based on suspicions and assumptions without adequate investigation or information, with a clear intent to injure the reputation and interests of that professional. It also found that Mr. Drover engaged in abusive, harassing, and vulgar conduct before and after a business meeting.

The Hearing Panel also found that the blog postings made by Mr. Drover on a blog that he commenced in February 2016 included the same allegations made by Mr. Drover in his emails and communications with various parties that were dealt with in the previous charges. However, the blog also included new materials and further articles and comments, expanding on Mr. Drover's allegations and attempting to set out a narrative that purported to expose an elaborate fraud, and the many individuals and companies and agencies that were alleged to be complicit in the alleged fraud. The blog made clear that Mr. Drover was attempting to publicize as broadly as possible the names, LinkedIn profiles, pictures, and correspondence of all the individuals, corporations, judge, lawyers, government agencies, and politicians that he alleged were involved in a broad-based conspiracy centring on the alleged illegal activities of [Company B] and [Complainant A] in an attempt to cause as much damage to the reputations of everyone named.

After receiving submissions from the Investigative Committee and Mr. Drover, the Hearing Panel found that Mr. Drover was ungovernable. It noted that Mr. Drover's actions and his ongoing statements made clear that he refused to be governed by APEGA. It found that a Member who was ungovernable could not be permitted to remain as a Member of the profession and noted that if APEGA could not govern Mr. Drover, then Mr. Drover could not be permitted to be a member of APEGA.

The Hearing Panel then made the following orders:

- a. an order that Mr. Drover's registration is cancelled;
- b. an order that Mr. Drover is ineligible permanently for registration with APEGA, unless an order is made by the Council reinstating Mr. Drover pursuant to section 75(3) of the *Engineering and Geoscience Professions Act* and section 47 of the *General Regulation*;
- c. an order that Mr. Drover pay a fine of \$10,000;
- d. an order that Mr. Drover pay costs of the proceedings totaling \$129,502.25 plus GST;
- e. an order that this decision and the orders on sanctions be published in full, including Mr. Drover's name, in *The PEG* magazine, on the APEGA website, and distributed to all other

Case No. 16-010-FH continued

professional organizations governing the conduct of Professional Geoscientists in Canada.

Signed,

KEVIN SARETSKY, P.ENG.

Panel Chair, APEGA Discipline Committee

GRANT HALLAM, P.ENG.

Panel Member, APEGA Discipline Committee

MARC SABOURIN, P.ENG.

Panel Member, APEGA Discipline Committee

NASER RABBANI, P.ENG.

Panel Member, APEGA Discipline Committee

MURIEL DUNNIGAN

Public Member, APEGA Discipline Committee

Decision Date: March 20, 2017

Sanction Decision Date: June 16, 2017

Date: April 24, 2017

Case No.: 12-010-FH and 13-008-FH

REGARDING THE CONDUCT OF A PROFESSIONAL MEMBER, P.ENG., AND HIS EMPLOYER, A PERMIT HOLDING COMPANY

Pursuant to the *Engineering and Geoscience Professions Act*, an APEGA Disciplinary Hearing was held on January 30, 2017. The hearing addressed a complaint against the conduct of a Professional Member, P.Eng., and his employer, a Permit Holding Company.

The Permit Holder was engaged to design and provide field inspection services at a home under construction in a residential subdivision (the "Project"). The Professional Member (the "Member") was employed by the Permit Holder as a Senior Structural Engineer. His responsibilities included preparing design drawings for the Project's structural insulated concrete wall panel system, consisting of an expanded polystyrene foam core and new form of fibre-reinforced shotcrete and conducting the related field reviews.

After an investigation into the conduct of the Member and the Permit Holder during the Project, the following charges were laid. The Member was charged with:

1. Having knowledge of and accepting a change in the formulation of the shotcrete used for the foundation of the Project, and for failure to document approval of the change and enclose that documentation with the Schedule C-2 for the Project.

2. Inappropriately issuing a Schedule C-2 for the Project, the particulars of which included:
 - a. Failure to conduct or ensure an adequate field review was conducted to ensure that the foundation was constructed in accordance with the design; and
 - b. Failure to ensure the shotcrete was applied to the foundation of the Project to the proper thickness.

The Permit Holder was charged with failure to follow its own policies for the Project, including:

1. Failure to prepare and maintain a Project Construction Checklist; and
2. Failure to generally follow the company's Professional Practice Management Plan.

The case proceeded by an Agreed Statement of Facts and an Acknowledgement of Unprofessional Conduct by both the Member and the Permit Holder. The Hearing Panel found the alleged charges against both the Member and the Permit Holder were supported and proven on the agreed facts. The conduct of both the Member and the Permit Holder constituted unskilled and unprofessional conduct within the meaning of Section 44 of the *Engineering and Geoscience Professions Act*.

The Hearing Panel highlighted the importance of ensuring that when professional documents are signed and stamped, the statements within the documents are absolutely accurate. It is vital for public safety and in the best interests of the public for the assurances in a Schedule C-2 to be complete and fully accurate. In this case, the Panel found that the Member failed to document the change in the formulation of the shotcrete and failed to conduct an adequate field

Case No. 12-010-FH and 13-008-FH continued

review to ensure that the foundation was constructed in accordance with the design and that the shotcrete was applied to the foundation of the Project to the proper thickness. The Panel found that these failures, combined with the false assurances given in the Schedule C-2 that there were no changes and that the field review obligations had been fulfilled, constituted conduct that displayed a lack of knowledge or a lack of skill or judgment in the carrying out of the duty or obligation undertaken by the Member.

In reviewing the charges against the Permit Holder, the Hearing Panel found the Permit Holder's failure to prepare and maintain a Project Construction Checklist as required by the policy in its Professional Practice Management Plan (PPMP), and its consequent failure to assess the complexity of the Project and to provide adequate oversight for the work, constituted conduct that displayed a lack of knowledge of, or a lack of skill or judgment in, the carrying out of a duty or obligation undertaken by the Permit Holder.

The Panel considered that it is essential for a Permit Holder to not only have an adequate PPMP but to actually implement and follow it for all projects. PPMPs are intended to provide procedures and policies to assist in ensuring competent practice. They are an important part of the profession's duty to the public to practice in a safe and competent manner.

Based on a Joint Submission on Penalty presented to and accepted by the Hearing Panel the Panel made orders for Member to:

1. Pay a fine in the amount of \$1,000 within 1 month of the decision;
2. Complete the National Professional Practice Exam within 1 year of the decision;
3. Complete a Safety Codes Council course, *Introduction to Safety Codes System in Alberta*, within 1 year of the decision;
4. Receive formal reprimand for his conduct, which the Discipline Committee's written decision is to serve as; and
5. Pay hearing costs in the amount of \$4,000 within 2 months of the decision.

The Panel ordered the Permit Holder to:

1. Pay a fine in the amount of \$1,000 within 1 month of the decision;
2. Receive formal reprimand for its conduct, which the Discipline Committee's written decision is to serve as; and
3. Pay hearing costs in the amount of \$4,000 within 2 months of the decision.

The Hearing Panel also acknowledged the Permit Holder's undertaking to communicate to its staff what had happened in this case and how important it is to follow the company's PPMP in all circumstances.

In the opinion of the Panel, the above imposed orders and the undertaking of the Permit Holder will protect the public and the integrity of the profession. The Panel appreciated the cooperation and professional manner of the parties. The findings were of a serious nature that needed to be dealt with appropriately. Without the Member and Permit Holders' cooperation and acknowledgement of error, the Hearing Panel would have imposed more severe sanctions for the unprofessional conduct and unskilled practice that occurred in this case. The Panel also stated it would have considered larger fines and cost awards without a Joint Submission on Penalty.

Normally, the Panel would order publication of the decision on a named basis. In this case, it considered the parties' joint proposal to maintain the anonymity of the Member and Permit Holder to be reasonable. As the conduct had occurred in 2010, the Panel determined enough time had passed for justice to be served and the profession to be properly regulated without the publication of names.

Signed,

TIM CARTMELL, P.ENG.

Panel Chair, APEGA Discipline Committee

DIANA PURDY, P.GEOL.

Panel Member, APEGA Discipline Committee

KEN LIU, P.ENG.

Panel Member, APEGA Discipline Committee

MURIEL DUNNIGAN

Public Member, APEGA Discipline Committee

Date: April 24, 2017

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