The Association of Professional Engineers and Geoscientists of Alberta

APEGA
DISCIPLINE COMMITTEE

DECISION

Date(s) of Hearing: June 5 & 6, 2024
Date of Decision: August 21, 2024
APEGA Discipline Case Number: 23-011-FH

IN THE MATTER OF A HEARING OF THE DISCIPLINE COMMITTEE OF THE ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF ALBERTA
Pursuant to the *Engineering and Geoscience Professions Act*, being Chapter E-11 of the Revised Statutes of Alberta 2000

Regarding the Conduct of STANTEC CONSULTING LTD.

INTRODUCTION

The hearing of the Discipline Committee took place virtually via videoconferencing.

Appearances

The members of the Hearing Panel of the Discipline Committee (the "Hearing Panel") of the Association of Professional Engineers and Geoscientists of Alberta ("APEGA"):

D.F. Cox, P.Eng., Discipline Committee Panel Chair
T. Greenwood-Madsen, P.Eng., Discipline Committee Panel Member
F. Ritter, P.Eng., Discipline Committee Panel Member
P. Kavanagh, P.Geo., Discipline Committee Panel Member
M. Dunnigan, Discipline Committee Panel Member

D. Cranna, K.C., Legal Counsel for the Investigative Committee of APEGA (the "Investigative Committee")

P. Vogel, APEGA Investigator

P. Mack, K.C. and J. Bolton, Legal Counsel for Stantec Consulting Ltd. ("Stantec")

S. Mercado and A. Manevich, Corporate Representatives of Stantec

A. Reid, Independent Legal Counsel for the Hearing Panel

Several individuals attended to observe the hearing. APEGA staff were also present to provide administrative support for the hearing.

OPENING OF THE HEARING

1. The hearing opened on June 5, 2024. The participants introduced themselves for the record and confirmed that they were alone and in a private space.

Opening Statement of the Investigative Committee

2. Mr. Cranna began by referring the Hearing Panel to the Charge in the Notice of Hearing. He advised that the case arose out of a project in 2016 in which [redacted] (the "Diocese") set out to build a new church [redacted]. He explained the contracting relationships between the Diocese, an architectural firm, and Stantec for the project. Stantec agreed to provide drainage and stormwater management under the contract.

3. Mr. Cranna submitted that GH, a mechanical engineer and Responsible Member for Stantec, authenticated six stormwater design iterations that were submitted to [redacted] (the "Town") between January 2017 and August 2017. The Town raised concerns about the stormwater designs in October 2017, and Stantec assigned a different engineer to review the designs. Ultimately, the reviewing engineer found deficiencies.

4. Mr. Cranna advised that the issue in the hearing was whether Stantec submitted GH's stormwater designs for independent reviews within Stantec in accordance with Stantec's Professional Practice Management Plan ("PPMP") or APEGA guidelines in place at the time. The stormwater designs were submitted to a public body and were a public-facing expression of Stantec's work. However, the designs were erroneous and had not been submitted to quality assurance or quality control processes. In the Investigative Committee's view, Stantec's conduct constitutes unprofessional conduct under the *Engineering and Geoscience Professions Act* ("EGP Act").

5. Mr. Cranna advised that he intended to present an Agreed Statement of Facts and an index of documents in support of the Investigative Committee's case.

Opening Statement of Stantec

6. Mr. Mack began by noting that the principal parties involved in the project in 2016 and 2017, being RBK from the architectural firm and GH, were not before the Hearing Panel. He agreed with Mr. Cranna's characterization of the background of the matter.

7. Mr. Mack submitted that though there was no review of the stormwater designs, this case does not establish that Stantec engaged in unprofessional conduct. At the time of the events, Stantec had a PPMP in place. The PPMP incorporated an internally designed program that Stantec applied across Alberta and Canada. For reasons that were not entirely clear, GH did not subject the stormwater designs for review, and it was not known to those in charge.

8. Mr. Mack advised that once the mistakes or errors were brought to Stantec's attention, Stantec assigned senior engineers to solve the problem. Stantec prepared and tendered a new set of designs without charge to the client. The Town accepted the drawings.

9. Mr. Mack submitted that mistakes happen in all professions, and the test of a professional or organization is how they respond to mistakes. This case does not demonstrate unprofessional conduct. Stantec took steps immediately for the client's benefit. Mr. Mack advised that it was not clear why GH did not submit the stormwater designs for review. It would be unfair for Stantec to be held to a perfect standard of compliance for the error of one person.

10. Mr. Mack advised he would call three witnesses in support of Stantec [redacted]. He briefly described the evidence each witness was expected to give.

The Charges

11. The amended Notice of Hearing[1] listed the following Charge:

> 1. On or between January 2016 and August 2017, a professional mechanical engineer and principal of Stantec Consulting Ltd. ("Stantec") authenticated six iterations of storm water management designs (the "Designs") in connection with the construction of a church [redacted]. The Designs were not subjected to a peer or independent review, contrary to Stantec's own Professional Practice Management Plan and/or Stantec's own Project Management Framework; and further, or in the alternative, contrary to APEGA's Guideline for Professional Practice (2013) and/or contrary to APEGA's Guideline for Responsibilities for Engineering Services for Building Projects (2009).
>
> The Designs contained errors including one or more of the following:
>
> a. Stormwater catchment boundaries were not identified, or alternatively not adequately identified;
>
> b. The total capacity or storage volume for stormwater management was inaccurately assessed;
>
> c. The rate of stormwater flow leaving the system was inaccurately calculated;

[1] At the outset of the hearing, the parties applied to amend the Notice of Hearing, and specifically the reference to Permit No. 11525. They advised that the correct permit was Permit No. 0258. The Hearing Panel granted the application.

d. Incorrect, or alternatively insufficient, elevation grading points.

The Designs were submitted to the Town [redacted] for permitting purposes, at which time some or all of the foregoing errors were identified. The foregoing errors resulted in the installation of incorrect equipment and the replacement of that equipment.

IT IS FURTHER ALLEGED that the above-referenced conduct constitutes unprofessional conduct as set out in section 44(1) of the *Engineering and Geoscience Professions Act.*

Evidence Presented at the Hearing

12. The Hearing Panel heard evidence from the following witnesses at the hearing:

[redacted]

13. The parties presented the following documents over the course of the hearing:

Exhibit 1: Agreed Statement of Facts

Exhibit 2: Index of Hearing Documents, enclosing 205 tabs of documents

Standard of Proof

14. The onus is on the Investigative Committee to prove the facts alleged in the Charge in the Notice of Hearing to satisfy the "balance of probabilities" standard of proof. This standard requires that any fact be proven as more probable than not. If some or all the facts are proven, the Hearing Panel will consider whether the proven facts establish unprofessional conduct.

DECISION OF THE HEARING PANEL REGARDING CONDUCT ALLEGED

15. The Hearing Panel considered the facts alleged in the Charge, the Agreed Statement of Facts, the documents in Exhibit 2, and the witnesses' testimony. The evidence related to the Charge is summarized below.

Design Engineers, Project Managers, and Responsible Members

16. Stantec is an engineering company with corporate offices located in Edmonton, Alberta. Stantec has held a Permit to Practice with APEGA since January 8, 1968.

17. [redacted] and [redacted] testified about the different roles that engineers within Stantec could have in 2016 and 2017. During that time, [redacted] Stantec's appointed representative to APEGA and was responsible for Stantec's membership with APEGA,

submission of the PPMP, and related compliance. [redacted] worked as a Business Centre Discipline Lead and supervised other employees.

18. Engineers within Stantec can be project engineers, managers, principals, and Responsible Members. Project managers have supervisors, [redacted]. [redacted] explained that as a supervisor, [redacted] was responsible for his team's performance, but was not directly involved in all projects. Project managers are responsible and accountable for their own work and their own compliance. [redacted] became involved on a project when project managers needed assistance.

19. Stantec's PPMP defines a "Responsible Member" as:

> A licensed member who is responsible for direct personal supervision of the practice of engineering or geoscience by the permit holder. The permit holder's Responsible Members direct, supervise, and control all or part of a permit holder's professional practice in accordance with the permit holder's Professional Practice Management Plan (PPMP) and all relevant legislation, regulations, and codes.

20. [redacted] testified that Responsible Members have the unique authority to affix Stantec's Permit to Practice on professional work products. [redacted] explained that when Stantec's Permit to Practice is affixed to a document, it signifies that the person applying the permit has verified that quality processes were followed.

21. [redacted] testified that Stantec's leadership determines how many Responsible Members are needed before identifying and designating individuals to fill the role. Responsible Members may also be project managers. Generally, Responsible Members must have a level of experience and seniority. Stantec notifies APEGA of the individuals designated as Responsible Members. The Responsible Members complete APEGA training requirements. [redacted] testified that [redacted] was not aware of any additional training for Responsible Members.

Stantec's Professional Practice Management Plan

22. As a permit holder, Stantec is required to have in place and follow a PPMP. APEGA's Guideline for Professional Practice Management Plans, v1.4 defined a PPMP as "a written description of a permit holder's corporate policies, procedures and systems used to ensure that appropriate standards of professional practice are maintained." The Guideline's overview says a PPMP documents "a permit holder's procedures for planning, implementing, documenting, and assessing the effectiveness of activities that constitute the organization's scope of practice."

23. [redacted] testified about Stantec's PPMP in 2016 and 2017. The PPMP was in Exhibit 2, Tab 198. [redacted] advised that the PPMP was available internally on Stantec's intranet. The PPMP was also circulated to staff via email in regional bulletins or newsletters.

24. [redacted] explained that the PPMP integrated a ten-point project management framework that project managers were expected to follow (the "PM Framework"). The PM

Framework was a “key reference” created to maintain consistency amongst project managers across all regions and disciplines. Project managers received training on the PM Framework.

25. The Hearing Panel reviewed the PM Framework. There were mandatory tasks that served risk management and quality assurance purposes. Sections 2, 7 and 8 of the PM Framework required these steps:

> 2. Prepare a Project Plan to an appropriate level of detail. Conduct and document an independent review.
>
> 7. Conduct and document a quality review of final deliverables prior to issue.
>
> 8. Conduct and document an independent review of final deliverables prior to issue.

26. [redacted] explained the differences between a “quality review” and an “independent review” under the PM Framework. A “quality review” is performed by a person who is involved in the day-to-day tasks of the project and knows the details of the project. They check notes, inputs, and spreadsheets at a detailed level. The quality review is often completed by the project manager or a senior designer. An “independent review” is performed by a senior person who is not involved in the project but has the right experience or skillset to review the type of work involved. They look at the project with “fresh eyes.”

27. [redacted] testified that Stantec managed compliance with the PM Framework in a couple of ways. When a person wanted to open a new contract, they would submit a request [redacted]. There would be a contract executed and approved, followed by risk management forms. [redacted] advised that compliance was also enforced through random audits. Internal audits were more frequent. External firms also conducted audits at a frequency of once per year on a random selection of projects.

<u>The Project and the Stormwater Management Designs</u>

28. The Agreed Statement of Facts stated that in 2016, the Diocese began the process of building a new church, [redacted] (the “Church”) in [redacted] Alberta. The Diocese retained an architectural firm, Company A, as the prime consultant to design the Church.

29. As part of Company A’s contract, Company A agreed to engage the appropriate structural, mechanical, electrical, and civil engineering services commensurate with the architectural services under the contract. [redacted] testified that during [redacted] involvement with the matter, [redacted] learned that Company A did not hire a civil engineer for the project.

30. In January 2016, Stantec entered a contract with Company A (the “Contract”). Stantec became a sub-consultant to provide mechanical, electrical and structural engineering services for the Church project. Stantec agreed to provide “drainage and stormwater management” under the Schedule of Consulting Services Deliverables – MECHANICAL and ELECTRICAL ENGINEERING of the Contract.

31. GH, a professional mechanical engineer then employed by Stantec, signed the Contract on Stantec's behalf. The Contract was at Exhibit 2, Tab 199. Beneath the signature for Stantec was "[GH], P.Eng." GH was a Responsible Member and had been since 2008 a principal for Stantec. He had fiscal authority to enter contracts up to a certain value. He was also the design engineer of record and the project manager for Stantec on the Church project.

32. [redacted] testified that GH was a senior engineer with over 40 years of experience. GH had his own clients and "worked on projects independently." In June 2017, [redacted] was GH's supervisor and served as a performance leader. Twice a year they met for project reviews and discussions about what support GH needed. At that time, the discussions focused on GH's retirement plans and about plans to eventually wind down his practice. [redacted] was not concerned about GH's competence, as [redacted] reviewed several of GH's past projects without issue.

33. [redacted] testified that [redacted] role was not to supervise GH's work because GH's seniority "gave him the accountability and responsibility to do it." [redacted] role was to ensure that GH was "doing his work properly", mentoring others, and engaging in leadership roles.

34. Between February 2016 and August 2017, GH authenticated six stormwater management design iterations (the "Stormwater Designs"). He affixed Stantec's Permit to Practice on four of the Stormwater Designs, and one Stormwater Design bore a handwritten permit number. The Stormwater Designs were submitted to the Town for permits.

35. As admitted in the Agreed Statement of Facts, GH did not submit the Stormwater Designs for a complete independent review within Stantec prior to their submission to the Town. The Agreed Statement of Facts further noted that Stantec and GH's supervisors were not aware that no complete independent review of the Stormwater Designs was conducted. GH could have initiated a complete independent review of the Stormwater Designs at any point.

36. In March 2017, the Town requested additional documents, including a stormwater management plan. GH emailed RBK, a representative of Company A on April 3, 2017, noting that the Town's requirements "far exceed the normal storm design which we provide under our mechanical scope of work. I would like to have our Civil Department involved in providing the additional Engineering information. Our Civil Department would also be in a position to provide a Letter of Engagement for Field Services. Would it be ok with you if I requested a fee proposal from them [?]" GH copied RBN from Stantec on the email to RBK.

37. In April 2017, Stantec's Community Development group provided a fee proposal for civil engineering services, which was rejected. [redacted] testified that, despite the rejection, GH worked in cooperation with a representative of Company A to prepare the Stormwater Designs that went through several iterations before being submitted to the Town for a building permit.

38. On April 19, 2017, Mr. Burgos received an email from an engineer in Stantec's Community Development group about a "rumor that there may be mechanical engineers preparing these Civil designs drawings for various building projects" [*sic*]. At that time, [redacted]

[redacted] had no reason to believe that anyone in the mechanical department was doing any kind of civil work, so [redacted] did not investigate it further. [redacted] believed the email's intention was to make managers aware of who within Stantec should be providing those types of civil services.

39. On September 7, 2017, the Town, through one of its engineers, provided an approval to commence construction for the stripping and grading on-site.

40. On October 27, 2017, the Town, through one of its engineers, raised concerns with a different division in Stantec respecting, among other things, the suitability of the Stormwater Designs. [redacted] testified that at that time, [redacted] was in the incoming lead for the stormwater management team within Stantec's Community Development group. [redacted] was assigned to review the Stormwater Designs and to identify any issues with the drainage design.

41. On October 30, 2017, the Town, through one of its engineers, approved a building permit for the Church project based on the Stormwater Designs, among other things.

42. [redacted] completed a preliminary review in November 2017 and a subsequent detailed review of certain Stormwater Designs that GH prepared. [redacted] determined that the Stormwater Designs contained deficiencies, including:

- errors in assessing the maximum capacity of the stormwater design, which tied into an existing public stormwater system that was already over capacity;
- errors in accounting for different elevations between catch basins on the Church site, meaning that a less-than-100-year storm could result in runoff from the Church site onto an adjacent public roadway;
- errors in calculations, which required the grading and some pipe design to be reworked.

43. GH retired from practice in January 2018.

44. Stantec accepted responsibility for the Stormwater Designs and decided that the identified deficiencies required a redesign of the Stormwater Designs. Stantec submitted a revised design to the Town on March 5, 2018, which it developed at no cost to the Diocese or the Church. The Town approved the revised design on March 29, 2018.

45. The Hearing Panel finds that the evidence summarized above, provided through the Agreed Statement of Facts, the testimony of [redacted], and [redacted], and the documents in Exhibit 2, establishes the facts alleged in the Charge. GH authenticated the Stormwater Designs without independent review, contrary to Stantec's PPMP. The Stormwater Designs contained deficiencies and were submitted to the Town for permitting purposes.

DECISION OF THE HEARING PANEL REGARDING UNPROFESSIONAL CONDUCT

46. The Hearing Panel went on to consider whether the proven facts demonstrated that Stantec engaged in unprofessional conduct under section 44(1) of the EGP Act.

47. APEGA's Guideline for Professional Practice Management Plans defines a PPMP as a description of the permit holder's "corporate policies, procedures and systems used to ensure that appropriate standards of professional practice are maintained."

48. A PPMP is not merely aspirational; it is a permit holder's commitment to have certain systems and procedures in place that serve the purposes of the public interest and public protection. The Engineering and Geoscience Professions General Regulation requires a permit holder to certify that they will follow a PPMP before they are issued a permit:

> 48(1) The Council may issue to a partnership, corporation or other entity a Permit to Practice engineering or geoscience in its own name if
>
> > (d) the professional member or licensee certifies to the satisfaction of the Council that the partnership, corporation or other entity has in place and will follow a professional management plan that is appropriate to its professional practice.

49. At all relevant times, Stantec had a PPMP in place. The PPMP integrated the PM Framework, which prescribed quality control measures such as mandatory quality reviews and independent reviews before deliverables were issued. The reviews ensured that if there were errors in a Stantec engineer's work product, the errors would be caught.

50. The issue in this case is that the Stormwater Designs were not submitted for an independent review, contrary to the PPMP and the PM Framework, and the errors were not caught. Stantec had few systems or processes in place to become aware of or prevent situations where quality control processes were not followed, such as for the Stormwater Designs, except where a project was caught by a random audit.

51. Fortunately, the Town's concerns caused Stantec to have [redacted] review the Stormwater Designs and to redesign the drawings to remedy deficiencies. It is not clear why there was no independent review of the Stormwater Designs previously, as GH submitted other mechanical designs for independent review.

52. The Hearing Panel considered why it was that the Stormwater Designs failed to be submitted for an independent review. A factor was GH's unique, overlapping roles. He was the design engineer who prepared the Stormwater Designs. He was also the project manager; a person that on any other team would have reviewed the drawings of other engineers.

53. The Church project appeared to have other Stantec engineers involved, such as RBN, who was copied on some of GH's correspondence. Individuals in the Community Development group were also aware that the Church project involved some stormwater design work, as they

prepared a fee proposal. It was unclear whether any of these individuals followed up with GH after the proposal. [redacted] evidence was that GH "worked independently" and was given latitude due to his seniority. As GH's supervisor, [redacted] did not review GH's work product closely. The Hearing Panel's overall impression was that no one other than GH was sufficiently involved in the Church project to ensure quality assurance systems and procedures were being followed.

54. A second factor was that GH was a Responsible Member who was authorized to represent Stantec. Stantec's leadership had a role in designating GH as a Responsible Member. The Hearing Panel noted that when [redacted] was asked if there was an application process to become a Responsible Member, [redacted] stated "usually the opposite." Leadership designated the number of Responsible Members necessary for the organization and selected individuals like GH to fill the roles.

55. The Hearing Panel is not persuaded by the argument that GH's failure to conduct independent reviews of the Stormwater Designs was not a failure of Stantec, the permit holder. Stantec gave GH authority to act on Stantec's behalf. GH acted on Stantec's behalf when he entered and signed the Contract with Company A, in which Stantec agreed to provide "drainage and stormwater management" under the Contract. While GH was a design engineer, Stantec also designated him as a Responsible Member, which authorized GH to affix Stantec's Permit to Practice on the Stormwater Designs. In these circumstances, it is selective and inaccurate to say that GH's failure to submit the Stormwater Designs were not the actions of Stantec.

56. The Hearing Panel also considered Stantec's submission that those in charge were not aware that GH did not submit the Stormwater Designs for independent review. The Hearing Panel is not persuaded that Stantec's leadership's lack of awareness of GH's actions would excuse a failure to comply with the PPMP. A permit holder is responsible for ensuring its employees comply with the PPMP. A permit holder is also responsible for employees' failures to comply with the PPMP, when the employee takes those actions within the scope of their job and organizational authority. Further, Stantec cannot argue that leadership's lack of knowledge excuses any unprofessional conduct when the organizational structure was such that leadership would not learn of non-compliance. Stantec's designation of GH as a Responsible Member in combination with GH's independent practice and the lack of project oversight created a situation where those in charge would not learn about concerns with GH's PPMP compliance. Such an organizational structure undermined quality assurance processes outlined in Stantec's PPMP and the role of the Responsible Member, which elements were intended to ferret out mistakes and demonstrate that Stantec has taken responsibility for employees' designs.

57. Further, the Hearing Panel reviewed the definition of unprofessional conduct in section 44(1) of the EGP Act and is satisfied that if Stantec was unaware of PPMP non-compliance, the definition of unprofessional conduct is sufficiently broad to capture unintentional conduct.

58. Stantec also suggested that the failure to follow the PPMP was a mistake that did not amount to unprofessional conduct, as professionals should not be held to a standard of perfection. The Hearing Panel agrees that in some circumstances, one mistake may not amount to unprofessional conduct. However, in these circumstances, the failure to adhere to the

systems and procedures in the PPMP is sufficiently serious to be unprofessional conduct. This was not an isolated mistake, as the Stormwater Designs involved six authenticated drawings that were not subjected to independent review. The failure to follow PPMP procedures occurred over a period of time and revealed a weakness in Stantec's quality control system. Senior engineers, while trusted to follow the process, must be subject to the same process as every other engineer, and it appeared that GH was allowed to operate independently.

59. Stantec acted appropriately by taking responsibility for the Stormwater Designs and redesigning the work at no cost to the Diocese or the Church. The Hearing Panel agrees that Stantec acted professionally after it became aware of the deficiencies in the drawings. Stantec took responsibility for the errors made and took steps to minimize the impact on the client and the public more broadly. While Stantec's actions were respectable, the Hearing Panel finds that subsequent actions did not change the fact that Stantec failed to adhere to the PPMP.

60. APEGA requires permit holders to have PPMPs in place and to follow the systems and procedures described in the PPMP. If it was acceptable for a corporate permit holder to shift the responsibility of non-compliance with the PPMP onto individual engineers, the PPMP could be rendered meaningless, as would the Permit to Practice. A permit affixed to professional designs, such as the Stormwater Designs, tells a member of the public that quality control processes of the permit holder have been followed. When a member of the public sees Stantec's Permit to Practice on a professional drawing, they are assured that the proper process has been followed.

61. APEGA requires permit holders to have PPMPs in place and to follow the systems and procedures described in the PPMP. A reasonable member of the public would lose confidence in APEGA's ability to hold corporate permit holders accountable for non-compliance with a PPMP if the corporation was able to shift all non-compliance to individual engineers. The reality is that corporate permit holders act through individuals, such as Responsible Members like GH, and are responsible for the actions of these individuals.

62. The PPMP systems and procedures were not followed for the Stormwater Designs. Stantec's permit was affixed to the Stormwater Designs, which represented that the quality procedures were followed. Stantec's conduct is detrimental to the public interest and would cause the public to lose confidence in APEGA and the profession of engineering. Therefore, it is conduct that harms or tends to harm the standing of the profession generally and is unprofessional conduct under section 44(1)(c) of the EGP Act.

CONCLUSION

63. For the reasons set out in this decision, the Hearing Panel finds that the Charge in the Notice of Hearing is proven on a balance of probabilities and that the proven Charge constitutes unprofessional conduct.

64. The Hearing Panel is prepared to receive submissions from the Investigative Committee and Stantec regarding what orders, if any, should be made by the Hearing Panel in respect of

its finding of unprofessional conduct. The Hearing Panel directs the parties to provide written submissions on possible orders to Hearings@APEGA.ca:

a. The Investigative Committee will provide submissions on sanctions, costs, and publication of the Hearing Panel's decision within two weeks of receipt of this written decision;

b. Stantec will provide written submissions on sanctions, costs, and publication of the Hearing Panel's written decision within two weeks of the Investigative Committee's submissions;

c. The Investigative Committee may provide a reply to Stantec's submissions under paragraph b. within one week of Stantec's submissions; and

d. The parties may submit a request to vary these timelines or a request to make submissions via videoconference to Hearings@APEGA.ca.

Dated this 21 day of August, 2024

On behalf of the Hearing Panel of the APEGA Discipline Committee

Douglas Cox
Signed with ConsignO Cloud (2024/08/21)
Verify with verifio.com or Adobe Reader.
notarius

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Discipline Committee Panel Chair

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