

**IN THE MATTER OF
THE PROFESSIONAL GOVERNANCE ACT, S.B.C. 2018, c. 47**

and

IN THE MATTER OF Alireza (Danyal) Bahrami, P. Eng

DETERMINATION OF THE DISCIPLINE COMMITTEE

Date and Place of Hearing:	September 13 to 15, 2021 by video conference
Closing submissions:	October 20 to November 26, 2021
Panel of the Discipline Committee (the “Panel”)	Paul Adams, P. Eng., Chair Peter Bobrowsky, P.Geo. Keith Sashaw
Counsel for Engineers and Geoscientists BC:	Lindsay Waddell Sara Hanson
Counsel for the Registrant:	Dan Griffith
Decision Date:	May 2, 2022

Background

1. This panel of the Discipline Committee (the “Panel”) of the Association of Professional Engineers and Geoscientists of the Province of British Columbia doing business as Engineers and Geoscientists BC was convened to conduct a hearing concerning Alireza (Danyal) Bahrami, P.Eng. (the “Respondent”) pursuant to section 75 of the *Professional Governance Act*, S.B.C. 2018 c. 47 (the “PGA”).
2. A citation dated May 27, 2021 (“Citation”) sets out the allegations against the Respondent. The particulars are:
 1. You have demonstrated incompetence, negligence or unprofessional conduct by:
 - a. Failing to design a fire suppression system (the “Fire Suppression System”) for a dental office located at [REDACTED], Surrey BC (the “Project”) to the reasonable standard expected of a professional engineer by, among other things:
 - i. Incorrectly identifying the hazard classification for the Project;
 - ii. Utilizing a design method for the Fire Suppression System only permitted for single family or duplex residential occupancy;
 - iii. Failing to provide for a sprinkler in the hot water tank closet for the Project;
 - iv. Failing to provide for a minimum distance of 8 feet between residential sprinklers in the patient areas of the Project;
 - v. Using hydraulic calculations for the Fire Suppression System in a format similar to NFPA 13D, instead of to NFPA 13;
 - vi. Providing notes and details on the drawings for the Project that are irrelevant;
 - vii. Utilizing two-sprinkler design methods for the Project; and
 - viii. Otherwise failing to comply with the standards set out in the NFPA 13 (2013).
 - b. Failing to issue the drawings he prepared for the Project (the “Drawings”) as “Draft for Review” when he provided them to Mr. Reza Ghodousi, P.Eng., for his review and comments;
 - c. Failing to personally sign and seal the Drawings he prepared; and
 - d. Allowing Mr. Reza Ghodousi, P.Eng., to sign and seal the Drawings, which were stamped with Mr. Bahrami’s company’s title block (Seam Engineering), even though Mr. Ghodousi did not prepare the drawings, did not have the necessary experience to design a fire suppression system, and was not insured to do so.

2. You failed to provide the Subcommittee of the Investigation Committee with a copy of your complete file for the Project as requested of you by letter dated June 2, 2020. Specifically, in advising Engineers and Geoscientists BC on June 4, 2020 that you did not have any additional records beyond those attached to the June 2, 2020 letter, you failed to provide Engineers and Geoscientists BC with a number of documents, including additional correspondence between Mr. Ghodousi and yourself regarding the Project and correspondence between Mr. Ghodousi and Zoom Engineering Ltd. which had been forwarded to you.

3. The conduct set out above at paragraphs 1 (a) – (d) is contrary to Principle 1 of the Engineers and Geoscientists BC Code of Ethics, created pursuant to the EGA (the “Code of Ethics”), which required that members and licensees hold paramount the safety, health and welfare of the public, the protection of the environment and promote health and safety within the workplace.

4. The conduct set out above at paragraphs 1 (a) – (d) is contrary to Principle 2 of the Code of Ethics which required that members and licensees undertake and accept responsibility for professional assignments only when qualified by training or experience.

5. The conduct set out above at paragraphs 1 (a) – (d) is contrary to Principle 3 of the Code of Ethics which required that members and licensees provide an opinion on a professional subject only when it is founded upon adequate knowledge and honest conviction.

6. The conduct set out above at paragraphs 1 (a) – (d) is contrary to Principle 6 of the Code of Ethics which required that members and licensees keep themselves informed in order to maintain their competence.

7. The conduct set out above at paragraphs 1(c) and (d) is contrary to s. 20(9) of the EGA which required that a member receiving a seal or stamp under this section must use it, with signature and date, to seal or stamp estimates, specifications, reports, documents, plans, or things that have been prepared and delivered by the member or licensee in the member or licensee’s professional capacity or that have been prepared and delivered under the member or licensee’s direct supervision.

8. The conduct set out above at paragraphs 1 (a) - (d) is contrary to section 14(b)(2) of the Engineers and Geoscientists BC Bylaws, created pursuant to the EGA, which required that members and licensees shall establish and maintain documented quality management processes for their practices, including, at minimum:

(1) regular, documented checks of engineering and geoscience work using a written quality control process appropriate to the risk associated with the work.

9. The conduct set out at paragraph 2 is contrary to s. 30(4)(a) of the EGA, which required that that a member being investigated must provide the committee or subcommittee conducting the investigation with any information or records in the possession or control of the member that the committee or subcommittee may require.

3. For the reasons set out below, the Panel has found that Engineers and Geoscientists BC have proven allegations 1 (a), 1 (b), 2 and 9 of the Citation to the requisite standard. The allegations 1 (c), 1 (d), and 7 of the Citation were not proven to the requisite standard and are therefore dismissed. The Panel declined to make findings of any breaches of the Code of Ethics or the Bylaws in relation to allegations 3 to 6 and 8 given the extent to which those matters overlap with the Panel's conclusions on allegations 1(a) and (b), and the Panel's determination that the more appropriate finding for those matters is unprofessional conduct being the more serious finding.

Procedural history

4. Engineers and Geoscientists BC initially issued a Notice of Inquiry against the Respondent pursuant to the *Engineers and Geoscientists Act*, R.S.B.C. 1996, c.116 (the "EGA") on January 7, 2021. A discipline hearing was scheduled to be heard from April 20 to 22, 2021.
5. On April 19, 2021, Engineers and Geoscientists BC requested an adjournment relating to the Respondent's disclosure of additional documents. The Respondent consented and the Panel granted the adjournment.
6. Engineers and Geoscientists BC issued a revised citation pursuant to the PGA, that repealed the EGA on February 5, 2021, which included new allegations against the Respondent pertaining to the additional documents disclosed. As noted above, the Citation was issued on May 27, 2021.
7. Although the Citation was issued pursuant to the PGA, the allegations concern breaches of the EGA, the Engineers and Geoscientists BC's Code of Ethics (the "Code of Ethics"), and the Engineers and Geoscientists BC's bylaws (the "Bylaws"). No issues of jurisdiction were raised by the Respondent.
8. Pursuant to section 35(1)(d) of the *Interpretation Act*, R.S.B.C. 1996, c. 238, the repeal of the EGA on February 5, 2021 does not affect a contravention of the EGA that occurred prior to that date. It provides:

35 (1) If all or part of an enactment is repealed, the repeal does not (d) subject to section 36 (1) (d), affect an offence committed against or a contravention of the repealed enactment, or a penalty,

forfeiture or punishment incurred under it, or

9. The Panel is empowered to consider whether the Respondent breached sections 20(9) and 30(4) of the EGA, as well as the Code of Ethics and Bylaws enacted pursuant to the EGA, for conduct that occurred prior to the repeal of the EGA. This approach was confirmed in the Discipline Committee's recent decision of *Re Trott* (August 17, 2021).
10. The discipline hearing was rescheduled by consent of the parties to September 13 to 15, 2021 (the "Discipline Hearing"). The Respondent and his legal counsel attended the Discipline Hearing and did not raise any issues relating to service of the Citation.

Legal Principles

Burden and Standard of Proof

11. Engineers and Geoscientists BC bears the burden of proof. The standard of proof to be applied is on a "balance of probabilities" according to the Supreme Court of Canada's decision of *F.H. v. McDougall*, 2008 SCC 53. Evidence must be clear, convincing, and cogent to satisfy the balance of probabilities test.

The EGA

12. Section 1 of the EGA defined "direct supervision" as "the responsibility for the control and conduct of the engineering or geoscience work of a subordinate."
13. Section 1 and 1(2) of the EGA contained the following definitions that are applicable to "practice of professional engineering" and "professional engineer" as follows:

1 (1) In this Act:

"practice of professional engineering" means the carrying on of chemical, civil, electrical, forest, geological, mechanical, metallurgical, mining or structural engineering, and other disciplines of engineering that may be designated by the council and for which university engineering programs have been accredited by the Canadian Engineering Accreditation Board or by a body which, in the opinion of the council, is its equivalent, and includes reporting on, designing, or directing the construction of any works that require for their design, or the supervision of their construction, or the supervision of their maintenance, such experience and technical knowledge as are required by or under this Act for the admission by examination to membership in the association, and, without limitation, includes

reporting on, designing or directing the construction of public utilities, industrial works, railways, bridges, highways, canals, harbour works, river improvements, lighthouses, wet docks, dry docks, floating docks, launch ways, marine ways, steam engines, turbines, pumps, internal combustion engines, airships and airplanes, electrical machinery and apparatus, chemical operations, machinery, and works for the development, transmission or application of power, light and heat, grain elevators, municipal works, irrigation works, sewage disposal works, drainage works, incinerators, hydraulic works, and all other engineering works, and all buildings necessary to the proper housing, installation and operation of the engineering works embraced in this definition;

"**professional engineer**" means a person who is registered or licensed as a professional engineer under this Act;

(2) For the purposes of the definition of "**practice of professional engineering**" in subsection (1), the performance as a contractor of work designed by a professional engineer, the supervision of construction of work as foreperson or superintendent or as an inspector, or as a roadmaster, trackmaster, bridge or building master, or superintendent of maintenance, is deemed not to be the practice of professional engineering within the meaning of this Act.

14. Section 20(9) of the EGA provided:

20 (9) A member or licensee receiving a seal or stamp under this section must use it, with signature and date, to seal or stamp estimates, specifications, reports, documents, plans or things that have been prepared and delivered by the member or licensee in the member's or licensee's professional capacity or that have been prepared and delivered under the member's or licensee's direct supervision.

15. Section 30(4) of the EGA provided:

30 (4) A member, licensee or certificate holder being investigated under subsection (3) must

(a) provide the committee or subcommittee conducting the investigation with any information or records in the possession or control of the member, licensee or certificate holder that the committee or subcommittee may require,

(b) answer, within a reasonable time and in the manner specified by the committee or subcommittee, any inquiries of the committee or subcommittee, and

(c) appear, on request, before the committee or subcommittee.

16. Section 33(1) of the EGA provided:

33 (1) After an inquiry under section 32, the discipline committee may determine that the member, licensee or certificate holder

- (a) has been convicted in Canada or elsewhere of an offence that, if committed in British Columbia, would be an offence under an enactment of the Province or of Canada, and that the nature or circumstances of the offence render the person unsuitable for registration or licensing,
- (b) has contravened this Act or the bylaws or the code of ethics of the association, or
- (c) has demonstrated incompetence, negligence or unprofessional conduct.

The Bylaws

17. Section 14(b)(2) of the Bylaws provided:

14 (b) Members and licensees shall establish and maintain documented quality management processes for their practices, which shall include, as a minimum:

- (2) regular, documented checks of engineering and geoscience work using a written quality control process appropriate to the risk associated with the work.

The Code of Ethics

18. The Code of Ethics provided:

Members and licensees shall act at all times with fairness, courtesy and good faith to their associates, employers, employees and clients, and with fidelity to the public needs. They shall uphold the values of truth, honesty and trustworthiness and safeguard human life and welfare and the environment. In keeping with these basic tenets, members and licensees shall:

- 1) Hold paramount the safety, health and welfare of the public, the protection of the environment and promote health and safety within the workplace;
 - 2) Undertake and accept responsibility for professional assignments only when qualified by training or experience; and
 - 3) Provide an opinion on a professional subject only when it is founded upon adequate knowledge and honest conviction.
- ...
- 6) Keep themselves informed in order to maintain their competence, strive to advance the body of knowledge within which they practice and provide opportunities for the professional development of their associates;

Guidelines

19. The Association of Professional Engineers and Geoscientists of British Columbia's ("APEGBC") Quality Management Guidelines on Direct Supervision (the "APEGBC Direct Supervision Guidelines") define "subordinate" and "supervising APEGBC profession" as:

subordinate

Any person, directly supervised by an APEGBC professional who assists in the practice of professional engineering or professional geoscience; for example an engineer-in-training, a geoscientist-in-training, another person not registered or licensed to practice professional engineering or professional geoscience, or another APEGBC professional.

supervising APEGBC professional

An APEGBC professional who has professional responsibility for the technical basis, intent and accuracy of the activities carried out involving the practice of professional engineering or professional geoscience and whose professional skill and judgment are embodied in those activities and whose responsibility may include advising the client or employer; directly supervising the work of subordinates; and directly supervising the review of material and completed aspects of the work which could include the implementation.

20. Section 3.2 of the APEGBC Direct Supervision Guidelines deals with active involvement:

3.2.1 The supervising APEGBC professional should have knowledge of all stages of the project. He or she must demonstrate active involvement and ongoing interaction and input.

3.2.2 The exemption clause¹ in the Act is for unlicensed individuals who assist an APEGBC professional in the performance of professional engineering or professional geoscience. The exemption clause does not allow those individuals to take responsibility for professional engineering or geoscience work or services.

3.2.3 APEGBC professionals have an obligation to both direct and monitor the activities of their subordinates who are assisting the supervising APEGBC professional. While direction may be satisfied by active involvement in the initial stages or concept development, monitoring implies an awareness of activities and work throughout the process; therefore, supervising APEGBC professionals who conduct only a final review of documents and are unaware of the work prior to those documents reaching them for review, do not fulfill their direct supervision obligation.

3.2.4 Active involvement may be demonstrated through knowledge of the project, development or history of the project, input on earlier drafts, review of particular

elements at earlier stages, or evidence of regular consultation of the subordinates with the supervising APEGBC professional throughout the project.

3.2.5 Indicators of appropriately supervised subordinates may include:

- physical presence of both the supervising APEGBC professional and the subordinates at the same workplace at the same time;
- availability of the supervising APEGBC professional for regular and ongoing communication with the subordinates;
- periodic documented reviews of the work or services by the supervising APEGBC professional;
- consultation by the subordinates with the supervising APEGBC professional throughout the project; and
- adequate documentation of the supervisory activities of the supervising APEGBC professional.

21. The APEGBC Quality Management Guidelines on the Use of the APEGBC Seal (the “APEGBC Seal Guidelines”) provide:

3.2.3.1 Documents that are incomplete, are not in their final form, are not being issued to someone who will rely on their content, are being issued to indicate general works or degree of complexity, or are marked and being issued “for discussion”, “information only” or collaboration purposes are considered preliminary documents that do not need to be sealed. The intent that these documents are preliminary must be clear to those who are receiving them. For example, documents issued for “information only” to bidders to allow them to provide budget prices to a consultant do not require sealing. However, documents issued to bidders, who will rely on the adequacy of those documents to provide fixed prices, must be sealed. A work-in-progress, non-finalized document, or draft document should be clearly marked with ‘Preliminary’, ‘Draft’, ‘For Review Only’, ‘For Discussion Only’, ‘Not For Construction’, ‘Not for Implementation’ or similar notations which confirm the status of the document.

3.3.3.2 The use of a seal should not be automatic, but should be affixed only after the APEGBC professional has evaluated and is ready to accept professional responsibility for the document. The legal liability of an APEGBC professional is not dependent on whether or not the APEGBC professional affixes his or her seal to a document that he or she prepared or was prepared under his or her direct supervision and delivered to others who will rely on it. APEGBC professionals are professionally responsible and accountable for any aspect of a project, work or document that they have prepared and delivered, whether or not they apply their seal.

3.3.3.3 Before deciding to seal a document an APEGBC professional typically prepares the document or has it prepared, reviews it, and takes professional responsibility for its content. Only after doing so, does he or she seal it, and deliver it to those who will use or rely on it.

Unprofessional Conduct

22. Engineers and Geoscientists BC relies upon the following definition of “unprofessional conduct” set out in *Re Foreman* (August 25, 2015), a decision of the Association’s Discipline Committee, noting that this has been consistently adopted and applied by panels of the Discipline Committee, including in *Re Syed* (May 9, 2020):

[93] The Association’s Code of Ethics Guidelines addresses the standard of professional conduct as follows:

“The APEGBC Code of Ethics serves several purposes. It designates the standard of conduct expected of engineers and geoscientists in easily understandable terms. It distinguishes appropriate professional conduct from that which fails to meet a required standard. The Code also provides a basis on which allegations of unprofessional conduct are adjudicated by the Discipline Committee or other groups charged with responsibilities related to the conduct of members.”

[94] Hence, unprofessional conduct is that which does not meet the standard expected through application of the Code of Ethics. The Panel accepts the submission of the Association, based on *Law Society of British Columbia v. Martin*, 2005 LSBC 16, that professional misconduct is established when there is a marked departure from the standard to be expected of a competent professional, and that minor or inadvertent failure to comply with professional standards does not constitute unprofessional conduct.

23. The Respondent did not make any submissions on the definition of “unprofessional conduct” to be applied.
24. There is no definition of “unprofessional conduct” in the EGA. The Panel recognizes that the definition of “unprofessional conduct” set out in *Re Foreman* has been consistently applied in subsequent decisions. The test to be applied for “unprofessional conduct” is whether there is a marked departure from the standard to be expected of a competent professional. A minor or inadvertent failure to comply with professional standards does not constitute unprofessional conduct.

Incompetence

25. Engineers and Geoscientists BC also relies upon the definition of “incompetence” set out in *Re Foreman*:

[95] In considering whether a member's conduct is incompetent, the Panel was referred to *Reddy v. Association of Professional Engineers and Geoscientists of British Columbia*, 2000 BCSC 88, in which the following definition of incompetence was accepted:

"We believe it is fair to say a person who habitually fails to perform his work with the degree of skill or accuracy usually displayed by other persons regularly employed in such work is incompetent. And the same is true of one who usually performs substantially less than others regularly so employed. ... The true significance of the term "incompetency" should not be overlooked. It embraces habitual carelessness."

[96] The Panel accepts this definition of incompetence, and notes that it is consistent with previous decisions of the British Columbia courts and previous disciplinary panels of the Association.

26. The Respondent did not make any submissions on the definition of "incompetence" to be applied.
27. There is no definition of "incompetence" in the EGA. The Panel agrees with the definition of incompetence set out in *Re Foreman* and notes that it is consistent with the definition that has been adopted in previous Discipline Committee decisions. The test to be applied is a person who habitually fails to perform their work with the degree of skill or accuracy usually displayed by other persons regularly employed in such work.

Negligence

28. Engineers and Geoscientists BC also relies upon the definition of "negligence" in *Re Foreman*:

[97] For the purpose of considering whether a member's conduct is negligent within the meaning of s. 33(1)(c) of the Act, the Panel was referred to *Davidson v. British Columbia*, [1995] B.C.J. No. 1806, in which the following definition of negligence has been relied upon:

"... the standard of skill and care which a professional man is required to exercise may be defined as follows: that degree of skill and care which is ordinarily exercised by reasonably competent members of the profession, who have the same rank and profess the same specialization (if any) as the defendant. If the standard is formulated in this way, it is fair to both parties. The professional man will not be held liable in the absence of personal fault on his part. The client is adequately protected, because it is

normally actionable negligence if a professional man undertakes work beyond his competence.”

29. The Respondent did not make any submissions on the definition to be applied to the meaning of “negligence” in section 33 of the EGA. Having said that, the Respondent did argue that in order to establish negligence, Engineers Geoscientists BC must show the following elements:
4. In order to prove the allegation, set out at subparagraph 1(a), the Association must establish the following elements on a balance of probabilities:
 - (a) That Mr. Bahrami was acting in the capacity of a professional engineer in relation to the Project;
 - (b) That Mr. Bahrami owed a duty of care as a professional engineer in relation to the Project;
 - (c) That Mr. Bahrami was required to meet some standard of care as a professional engineer in relation to the Project;
 - (d) That Mr. Bahrami’s actions, or inactions, resulted in the duty of care being breached and the standard of care not being met.
30. The Respondent also argued that a duty of care owed by an engineer of record overseeing a project is different than the duty of care owed by a subordinate engineer who is providing design and drafting services. The Respondent argued that he only owed a duty of care to the engineer of record, not to the client and to the public at large as a professional engineer normally would. The Respondent also argued it would make little sense to impose the same standard of care on an engineer of record and those persons who assist the engineer with drafting and design services. The reality of the profession is that not every member is competent in every area from the time they become licensed. All licensees and registrants must labor to gain experience in an area of practice before becoming fully familiar with the field.
31. In reply, Engineers and Geoscientists BC submitted that the Panel should not be determining questions of duty or standard of care as this is not a tort law case. Rather, the meaning of negligence in the EGA has a specific definition which was outlined in *Re Foreman* and which is different from negligence in a civil law context. In addition, Engineers and Geoscientists BC submitted that irrespective of whether

an engineer is acting in a supervisory role or being supervised, there exists an obligation to practice to the standard expected of a reasonably competent engineer.

32. The Panel prefers Engineers and Geoscientists BC's position with respect to the meaning of "negligence". There is no definition of "negligence" in the EGA. The term has, however, been defined in *Re Foreman*. The Panel agrees that the Respondent's submissions regarding "duty of care" and "standard of care", including as they apply in a supervisory context, are rooted in civil law concepts of negligence which are not applicable here. The Respondent has not provided the Panel with any decisions to support adopting that type of approach in this professional regulation context. The Panel is of the view that "negligence" in the EGA must be interpreted in accordance with the Act's public protection purpose and in a manner that is consistent and harmonious with Engineers and Geoscientists BC's duty to protect the public. The Panel has determined that the meaning of negligence in the EGA is as it was defined in *Re Foreman* and sees no reason to depart from that approach in this case. The meaning of negligence is a breach of the standard of skill and care which a professional engineer is required to exercise, as compared to a reasonably competent and similarly situated member of the profession.
33. Engineers and Geoscientists BC is not seeking a determination of incompetence but has asked this Panel to make determinations of both unprofessional conduct and negligence. Paragraph 1 of the Citation, however, alleges that the Respondent has "demonstrated incompetence, negligence or unprofessional conduct by [...]." Accordingly, even if the alleged conduct could amount to multiple determinations under section 33 of the EGA, the Panel considers the appropriate course in this case to make a single determination. If conduct could be found to be an act of negligence (as that term is defined above), but also a marked departure from the standard to be expected of a competent engineer, a finding of unprofessional conduct instead of negligence may be warranted.

Evidence

34. Engineers and Geoscientists BC called two witnesses: Joanne Wilson, an investigator with Engineers and Geoscientists BC, and Celestine Chow, P.Eng., a retired mechanical engineer who was qualified by the Panel as an expert.
35. The Respondent testified on his own behalf and did not call any other witnesses.
36. Joanne Wilson testified as follows:
 - a. She described Engineers and Geoscientists BC's investigation process generally and the circumstances of the investigation underlying this matter specifically.
 - b. Her role as an investigator including communications she had with the Respondent and the Investigations Subcommittee.
 - c. The Respondent became a member of Engineers and Geoscientists BC on February 9, 2016. He is in good standing. He declared his areas of specialization to include "Industrial Manufacturing, Mechanical Plant Design and Machinery, and HVAC Systems." The Respondent owns and operates a firm called SEAM Engineering.
 - d. The matter involving the Respondent came to the attention of Engineers and Geoscientists BC via the investigation of another registrant, Reza Ghodousi, P. Eng., who was investigated for a deficient sprinkler design and improper use of his seal. The matter involving Mr. Ghodousi originated by way of a complaint from the City of Surrey in relation to the design of a sprinkler system of a dental office.
 - e. A memorandum prepared for the Investigation Committee in the Ghodousi matter included an interview statement by Mr. Ghodousi that the Respondent had prepared the sprinkler system drawings.
 - f. On December 12, 2019, the Investigation Committee moved to investigate the Respondent. Ms. Wilson was appointed as the investigator.

- g. By letter dated June 2, 2020, Ms. Wilson advised the Respondent that she was writing “regarding the design of a sprinkler system for a dental office located at [REDACTED], Surrey (the “Project”). Engineers and Geoscientists BC (“the Association”) became aware of the Project through a separate Professional Conduct Investigation of Mr. Reza Ghodousi, P.Eng. (“Ghodousi Investigation”).” Ms. Wilson indicated that during Mr. Ghodousi’s investigation, Engineers and Geoscientists BC became aware that the Respondent may have been involved in the design of the sprinkler system for the Project and had been advised that the Respondent was the primary designer for the drawings and plans for the Project despite the work being sealed by Mr. Ghodousi. Ms. Wilson informed the Respondent that the Investigation Committee had resolved, “The Investigation Committee investigate Mr. Bahrami”. In the same letter, Ms. Wilson requested, “We request your written response to the allegation that you produced the drawings and plans for the Project. In addition, we request your complete file related to your involvement for the Project, including all reports, drawings, photos, memos, correspondence, notes, invoices, etc., by June 16, 2020.”
- h. Ms. Wilson enclosed with her June 2, 2022 letter to the Respondent, a number of other documents that she had gathered during the investigation into Mr. Ghodousi’s conduct (specifically, emails dated June 26, 2017, June 27 2017, June 28, 2017 and July 6, 2017).
- i. Ms. Wilson had a phone conversation with the Respondent on June 2, 2020 in which he advised that he was not the engineer for the Project and only the drafter. The Respondent stated that he provided the drawings to Mr. Ghodousi to review and provide his comments but the Respondent did not receive any feedback from Mr. Ghodousi.
- j. Later, on June 2, 2020, the Respondent emailed Ms. Wilson stating:

First of all, my role was only design/drafter for subject project based on initial information which engineer Mr. Ghodousi provided to me. Once the drawing has been completed on my side, I asked Mr. Engineer to review

and check the documents for making me any comments or any necessary amendments. However, I have never received any feedback, comments or any marked ups from Engineer for revising the document before sealing and signing by him.

- k. Ms. Wilson spoke and emailed with the Respondent on June 4, 2020, at which times he indicated that he did not have any additional information other than what was attached to the June 2, 2020 letter.
- l. Ms. Wilson reminded the Respondent by email on June 4, 2020 of his obligations pursuant to section 30(4) of the EGA to provide any documents relating to the Project and that a failure to do so could result in disciplinary action.
- m. On June 16, 2020, the Respondent sent a formal response to the allegations in which he wrote:

I am writing in regard to the Letter I received on June 2nd 2020, about the design of the sprinkler system for tenant improvement a dental office located at [REDACTED] Surrey, in 2017.

When I received the letter, I followed up through phone calls and emails with Mrs. Joanne Wilson, the investigator regarding this matter. During our discussion, I explained for her that I had minor position in this project, I was not as an engineer, nor a checker and I asked her to let me write an explanation letter.

In June 2017, the Engineer, Mr. Ghodousi, approached me and ask me to help him with drafting of the subject sprinkler system. I agreed to have this role for this specific project. Under his supervision, he provided me some project details, including the size of riser and static pressure on the existing system, then he forwarded me the floor Plan on Cad file. Once the draft and drawing arrangement was finished on my side, I made it on layout with one document, and forwarded it to the engineer (Mr. Ghodousi) for his review and checking. As mentioned in the report T20-030, you can see clearly that **on June 26th, 2017, I asked him to review the drawings and send his comments back to me.** But He did not come back to me with any requests for modifications or any required changes. **I never received any redlines and mark ups either.** Also, I have not been notified if he revised any necessary amendments on document by **himself** or not, before his signing, seal and submission at City Hall. After a few weeks, he emailed me that the project has been rejected by the City. I wrote him an email regarding the initial and assumption that I considered. (As mentioned in Report T20-30).

In this case, I did not take the responsibility of the final reviewer, approved or even support engineer. Also, I have never provided any final professional engineering advice to the authority or end user. I only did the draft and design under his engineering knowledge and experience. Moreover, I have never advised Mr. Ghodousi that the drawing was perfect or there was no need for a review.

This is all I have to share and know regarding this project. I will be available to discuss further if needed.

- n. Ms. Wilson testified about the Respondent's interview, the Investigation Sub-Committee's report, and referral to external legal counsel.
- o. On November 26, 2020, Mr. Ghodousi emailed Ms. Wilson stating:

I think I have already sent 2 documents you were asking for and I will forward it for June 28th. Regarding your question on clarity to request for sign and seal, it was always like that to send me a drawing to review and sign and seal other conversations were on the phone or text. I will check if I can find anything else that will help you and will forward it accordingly.

- p. Later the same day, in response to a follow up question about the Respondent's request that Mr. Ghodousi sign and deal the documents, Mr. Ghodousi wrote:

I won't be able to find that conversation in emails as it was based on our phone conversation and as you see drawings provided to me (dates, times), it shows the urgency. actually, the goal was to impress the client for the first time and to maintain the relationship, it made that hurry. Sorry if I couldn't find that in writing.

- q. Ms. Wilson confirmed that she understood the drawings for the Project were being prepared for Avi Singh of Zoom Engineering Ltd. ("Zoom Engineering") She further confirmed that, during the course of her investigation of Mr. Ghodousi, she did not receive any communications between Mr. Ghodousi and Zoom Engineering, nor did she receive any such communications from the Respondent during her investigation into his involvement in the Project.
- r. Ms. Wilson confirmed that she did not receive the following documents from the Respondent during her investigation:
- i. The June 13, 2017 email exchange between Mr. Ghodousi and the Respondent regarding the Project;
 - ii. The June 13, 2017 email from Mr. Ghodousi to the Respondent attaching the floor plan;
 - iii. The June 14, 2017 email from Mr. Ghodousi to Mr. Haddad at Zoom Engineering, cc'ing the Respondent, regarding the initial quote of \$1500 for the Project design;
 - iv. The June 16, 2017 email from Mr. Ghodousi to the Respondent forwarding the site plan for the Project;

- v. The June 16, 2017 email from the Respondent to Mr. Ghodousi, advising Mr. Ghodousi what information he should go to the site and find out for the Project;
- vi. The June 16, 2017 email from Mr. Ghodousi to the Respondent forwarding the CAD and PDFS for the Project;
- vii. The June 20, 2017 email from Mr. Ghodousi to Mr. Haddad cc'ing the Respondent, regarding information required for the Project;
- viii. The June 26, 2017 email from Mr. Ghodousi to Mr. Haddad, cc'ing the Respondent, requesting the DWG border template and Mr. Haddad's response attaching the same;
- ix. The June 26, 2017 email from the Respondent to Mr. Ghodousi at 11:39 AM attaching the drawings for the Project with the Zoom Engineering title block;
- x. The June 26, 2017 email from Mr. Ghodousi to Mr. Haddad, cc'ing the Respondent, attaching the drawings for the Project with the Zoom Engineering title block.
- xi. The June 27, 2017 email from Mr. Ghodousi to Mr. Haddad, cc'ing the Respondent advising that they could "do that under our liability for \$2200", as well as Mr. Haddad's response;
- xii. The July 6, 2017 email from the Respondent to Mr. Ghodousi attaching the Globe Fire Sprinkler Corporation handout;
- xiii. The July 20, 2017 email from the Respondent to Ms. Ghodousi setting out his "process for designing";
- xiv. The July 27, 2017 text message exchange between Mr. Ghodousi and the Respondent; and
- xv. The October 4, 2017 email from Mr. Ghodousi to the Respondent and his business partner, attaching a spreadsheet of all of the projects that he worked on with SEAM Engineering.

37. Celestine Chow, P. Eng was qualified by the Panel as an expert to give opinion evidence in fire suppression systems generally, the NFPA 13, and the application of those standards in the commercial and residential contexts. He prepared an expert report dated February 18, 2021. Mr. Chow gave the following evidence in oral testimony and in his written report:
- a. He outlined his qualifications including that in 1980, he graduated with a Bachelor of Applied Science Degree with a focus in Mechanical Engineering from the University of British Columbia (“UBC”). In 1992, he received a Certified Professional (“CP”) designation from UBC. In 1999, Mr. Chow obtained his Masters of Engineering from UBC, with a specialization in fire protection engineering. In 2008, he became a fellow of Engineers Canada. Mr. Chow described his work experience in sprinkler system design. Mr. Chow was involved in developing Engineers and Geoscientists BC’s Practice Guidelines for Fire Protection Engineering for Building Projects.
 - b. The NFPA 13 is the only standard that applies to designing a sprinkler system in a commercial building. The NFPA 13 is geared towards life safety and property protection. The NFPA 13R, which is only for four-story residential buildings, and the NFPA 13D, which is only for single family homes or duplexes, are directed at providing life safety rather property protection.
 - c. When a Professional Engineer takes on the design and drafting services for a fire suppression system of a dental office in the City of Surrey, the design must meet the requirements of the BC Building Code and its referenced design and installation standard. At the time of the design, the applicable BC Building Code was the 2012 BC Building Code and its referenced standard is NFPA 13 - 2013, Standard for the Installation of Sprinkler Systems.
 - d. The system designer who is a professional engineer must take on the professional responsibility of the design, although he or she is not the registered professional of record for the design. The system design must

meet the requirements of the Building Code and the applicable design standards. The quality of the design and the documents must be in a good engineering practice.

- e. Mr. Chow was asked whether the drawings prepared for the Project by the Respondent meet the standard expected of a professional engineer when designing a fire suppression system for use in a dental office. Mr. Chow provided the opinion that in reviewing the design documents dated June 28, 2017, the design including the fundamental concept is not in conformance with the NFPA 13 – 2013.
- f. Mr. Chow identified the following requirements and failures in the Respondent's design drawings:

1. Using Incorrect Sprinklers - The sprinklers in a dental office must be quick response sprinklers, not residential sprinklers. The discharge coefficient of the quick response sprinklers in a dental office are generally 5.6. The discharge coefficient of the residential sprinklers is generally smaller (4.2 or 4.9) which require a higher pressure to maintain the same water discharge. Residential sprinklers are only permitted to

protect the floor areas (public corridors) containing the residential units or within the residential units.

2. Incorrect Hydraulic Design Area - The occupancy hazard classification for a dental office is Light Hazard and the design discharge density is 0.1 USgpm over a design area of 900 sq. ft. or up to 1,500 sq. ft. when the ceiling is 20 ft or higher. The number of sprinklers in the hydraulic design area of 900 sq.ft. and 1500 sq.ft. are likely 5 and 8 respectively. In Mr. Bahrami's design, only 2 sprinklers are included in the design area which is substantially less than the number of sprinklers required by the NFPA 13 approved hydraulic design method.
3. The sprinkler piping (mains and branch lines) in a commercial tenant space (office or retail) is generally black steel. It is unusual to use chlorinated polyvinyl chloride (CPVC) plastic pipe in an office building which is subject to system modification or sprinkler relocations during a tenant improvement. When sprinkler relocations in a sprinkler system with CPVC piping are used in an occupied building, the installation procedure requires the existing CPVC piping to be cut. Subsequently, new piping and fittings will be joined with adhesive glue. The volatile vapour from the glue through the ventilation systems may cause respiratory problems to system installers and the occupants in the offices adjacent to the unit undergoing renovations.

4. The design drawings are required to show the following:

The sprinkler system is designed and installed in accordance with NFPA 13 – 2013.

Hazard Classification – Light Hazard

Hydraulic Calculation Summary:

Design Density:

Design Area:

Available Water Supply at the City Connection: Flow and Residual Pressure

System Demand + Inside and Outside Hose Demand

None of the above is shown on the design drawings.

- g. The sprinkler system design drawings consist of three drawings: the SS1 Site Plan, SS2 Sprinkler Layout; and SS3 Hydraulic Calculation.
- h. The SS1 Site Plan drawing are marked “issue for BP – June 28, 2017” which means that the design was complete on June 28, 2017. During his direct examination, Mr. Chow further explained that “issue for BP” means issue for building permit. However, the drawing title block does not indicate the suite number of the dental office or the floor number where the dental office is located. The drawing does not indicate if the riser and the horizontal piping are existing or new piping.
- i. The SS2 Sprinkler Layout drawing is missing part of the dental office plan. Two residential sprinklers are specified in the sprinkler legend however residential sprinklers are not permitted to protect a dental office. The drawings do not indicate if the existing pipe is to be removed, retained or installed as new. The drawing indicates piping as 1” CPVC however black steep piping is more commonly used as the piping material in an office building. A sprinkler is missing in the hot water tank despite sprinkler protection being required in every closet including the hot water closet. The sprinklers in one of the patient areas are 7 feet 8 inches apart which is less than the minimum distance of 8 feet between residential sprinklers to avoid cold soldering effects. The drawings contain 19 notes of which 15 are not applicable to the Project, and one note is partially incorrect. Those comments are intended for residential and single-family sprinkler systems and they do not assist the City plan reviewer or installer to understand the

installation requirements and the designer's objectives. The presence of those comments creates confusion.

- j. The SS3 Hydraulic Calculation drawing contains hydraulic calculations in a format from the NFPA 13D rather than the applicable NFPA 13. The determined sprinkler flow is severely substandard. The sprinkler riser diagram is a typical single family sprinkler system riser. The supply piping arrangement is irrelevant to the Project.
- k. In email communications with the City of Surrey, the Respondent indicated that the design criterion of the dental office is "Ordinary Hazard Group 2." This statement is incorrect. The hazard classification is "Light Hazard".
- l. It is standard practice amongst engineers to mark any drawing that is not final with some notation indicating that it is a draft in order to ensure that the draft is not accidentally relied on by other members of the design team as a final product.
- m. Mr. Chow was of the opinion that: "The drawings prepared by Mr. Alireza Bahrami, P.Eng. do not follow the fundamental principles of NFPA 13. Residential sprinklers were selected to protect the dental office. Most of the notes and details provided on the drawings were extracted from a sprinkler system designed for a residential building which were irrelevant to the project. They created confusion rather than provided helpful information to the reader. The hydraulic calculation method did not follow the NFPA 13 design method. The design followed the two-sprinkler design method in NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes. Mr. Alireza Bahrami, P.Eng.'s response clarification email to the City of Surrey, further demonstrated that Mr. Alireza Bahrami did not have any knowledge in performing sprinkler system design for a commercial building. The design did not meet the fundamental requirements of NFPA 13 and Mr. Bahrami did not understand the purpose of the notes on the design documents."

- n. On cross-examination Mr. Chow was asked about the concept of “supervision” and agreed that it was not defined. Mr. Chow agreed that it is the engineer of record who is responsible for the accuracy and completeness of a building permit application that he or she has signed or sealed. Mr. Chow agreed that a draftsman is not required to be an engineer. Mr. Chow was asked about the relative responsibilities between an engineer of record and a draftsman or a designer, specifically to whom does a draftsman or designer owe a duty of care. Mr. Chow responded that that person must still meet certain standards. He also agreed that a draftsman owes a responsibility to the engineer of record.

38. The Respondent testified as follows:

- a. He became a professional engineer in 2016 and founded SEAM Engineering with his business partner in April 2016. SEAM Engineering is primarily involved in mechanical ventilation systems.
- b. Mr. Ghodousi approached the Respondent and his business partner to do some marketing and perform professional engineering work. Mr. Ghodousi was engineer of record in approximately 10 to 12 projects with SEAM Engineering.
- c. The Respondent testified that he is not specialized in sprinkler design and had only basic knowledge of sprinkler systems. The Respondent was aware that Mr. Ghodousi indicated to Engineers and Geoscientists BC that he had fire protection system experience.
- d. In relation to his role in this Project, the Respondent stated, “But for this particular case, I do only the draft, the design. This is the duty I’ve done, not more.”
- e. Mr. Ghodousi provided information and technical input to the Respondent as well as the CAD files. Those conversations took place by email or telephone. Mr. Ghodousi, and not the Respondent, interacted directly with the clients.

- f. The Respondent would then provide his “opinion” to Mr. Ghodousi in the form of the drawings. The Respondent first sent the drawings to Mr. Ghodousi under another logo. Mr. Ghodousi then asked the Respondent to do it under his company’s logo and name. The Respondent agreed to do so.
- g. The Respondent’s email of June 26, 2017 enclosing the drawings states “please review the drawings and let me know if you have any comments.” Mr. Ghodousi did not provide any comments to the Respondent. Once the Respondent sent the draft drawings to Mr. Ghodousi, he did not hear back, and then a few weeks later, he learned that the City of Surrey had rejected the drawings. The Respondent had no dealings with the City of Surrey. The Respondent was not aware at the time which drawings Mr. Ghodousi had submitted to the City of Surrey. The Respondent described his role to Ms. Wilson in an email dated June 2, 2020 as follows:

From: danyal bahrami <[REDACTED]>
Sent: June 2, 2020 2:40 PM
To: Joanne Wilson
Subject: Re: T20-030 Bahrami - response required

Hi Joanne,

Thank you so much for taking your time to speak with me today.

As I mentioned on our discussion:

First of all, my role was only **design/drafter** for subject project based on initial information which Engineer Mr. Ghodousi, provided to me. Once the drawing has been completed on my side, I asked Mr. engineer to **review and check the document for making me any comments or any necessary amendments.** however, I have never received any feedback comments or any marked ups from Engineer for revising the document before sealing and signing by him.
Please let me know if you have any questions.

Thanks
Danyal

- h. On July 6, 2017, Mr. Ghodousi emailed the Respondent to advise the drawings had been rejected. The Respondent replied as follows:

From: danyal bahrami <[REDACTED]>
Date: Thu, Jul 6, 2017 at 12:08 PM
Subject: Re: [FWD: # [REDACTED]]: Sprinkler review
To: reza ghodousi <[REDACTED]>

Here my answer:

1- Dental office is ordinary hazard ordinary group 2
2- design based on NFPA 13 chapter 11 edition 2007
3- Figure 11.2.3.1 density area curve : 0.3 (gpm/sqf) (based on restriction 11.2.3.4)
Method:
Room Design Method (11.2.3.3)
Methodology :

Two latest sprinkler must be activated based on sprinkler listed properly on existing residue pressure. (46 psi for 30GPM)
The calculation is done by Pipeflow. The pressure demand is 15psi, calculation satisfy the pressure demand.

For sprinkler the K value considered so We can change sprinkler to commercial type with at least k value 5, However current type will cover our k value and pressure requirements. but it would be strongly better to change it to commercial type GLOBE GL5601.

On 6 July 2017 at 10:41, reza ghodousi <[REDACTED]> wrote:
[FYI, project rejected](#)

- i. In relation to the investigation disclosure, the Respondent testified that because the matter originally arose via a complaint against Mr. Ghodousi, he thought all of the documents had already been disclosed to Engineers and Geoscientists BC by Mr. Ghodousi. When the Respondent learned that Mr. Ghodousi had not disclosed all of the documents in question, the Respondent provided the additional documents. The Respondent testified there are no other remaining documents that he has not disclosed.
- j. The Respondent described several telephone calls with Ms. Wilson in which he told her that he was aware of the existence of additional documents to those enclosed with her June 2, 2020 letter. He agreed there were no notes of such telephone calls.
- k. The Respondent allowed Mr. Ghodousi to sign and seal the drawings even though he was not insured to do so on the understanding that it would be Mr. Ghodousi's insurance, and not SEAM Engineering's insurance, which would apply. On cross-examination, the Respondent agreed SEAM Engineering's policy did not cover fire suppression work.

- I. On cross-examination, the Respondent was brought to his formal response to Engineers and Geoscientists BC in which he described his role as both “the draft and the design” of the sprinkler system. The Respondent did not agree that he was describing his role as both drafting and designing the sprinkler system. He emphasized that reference to “under [Mr. Ghodousi’s] engineering knowledge and experience” meant the design was Mr. Ghodousi’s.
- m. During cross-examination, Engineers and Geoscientists BC’s counsel took the Respondent to the following excerpts from the Sub-Committee’s interview transcript:
 - a. “I told him, yes, I can design it for you, but just only design and draft not anything else.”
 - b. “I’m just making a layout and just the design and drafting and providing the first review.”
 - c. “I told him, okay, I design and draft to you, but review. He said, okay, I will do that.”
- n. The Respondent acknowledged as of the time of the Discipline Hearing that he was aware that a dental office is not an ordinary hazard group 2, that the design method used for the Project was for single family or duplex residential dwellings, that some of the sprinklers in the drawings were not adequately spaced as the calculations were done based upon the NFPA 13D, that most of the notes on the drawings were irrelevant to the Project, and that using the two sprinkler design was incorrect.
- o. The Respondent admitted on cross-examination that he did not disclose the documents listed in paragraph 36(r) above to Ms. Wilson during the investigation.
- p. The Respondent agreed on cross-examination that after he placed the Zoom Engineering logo on the drawings and sent those to Mr. Ghodousi, he did not ask Mr. Ghodousi for his review of those documents. He also

agreed the same occurred once the SEAM Engineering logo was placed on the drawings. The Respondent explained that did not mean they were completed.

- q. The Respondent originally denied in cross-examination that he had put his initials, "A.B.", next to "design by" and "drawn by" on the first set of drawings he produced and emailed to Mr. Ghodousi. The Respondent then later conceded he had done so but that it was for internal purposes.
- r. The Respondent was asked about the drawings being labelled "issue for permit". He responded this does not mean that there is no need for comments or review by the engineer. The Respondent agreed that he changed the date when he put SEAM Engineering's logo on the drawings, and also changed the reference to "issue for BP". The Respondent denied changing the initials of the designer to "A.R." on the drawings. He explained those initials came from a prior template. The Respondent did not add his own initials to the drawing because it had not been finalized and he was not the design owner. The Respondent also agreed on cross-examination that he prepared the Schedule B for the City of Surrey on June 28, 2017 with the same date as the drawings. The Respondent denied he knew that Mr. Ghodousi was going to file the drawings that day.
- s. The Respondent was asked about his July 6, 2017 email to Mr. Ghodousi following the City of Surrey's rejection. The Respondent denied the proposition that he provided that information to Mr. Ghodousi because Mr. Ghodousi did not know anything about sprinkler systems and that the Respondent was assisting Mr. Ghodousi to respond to the City of Surrey's rejection. The Respondent described his email as merely opinion rather than engineering advice. The Respondent further stated that he obtained all of the information contained in that email from Mr. Ghodousi. The Respondent provided similar responses to further emails dated July 6, 2017 and July 20, 2017. In the July 20, 2017 email, the Respondent emailed Mr. Ghodouzi stating, "I had a chance to review the drawings you gave me and

study again on associate references, Here the process for designing: [...]”. The email is titled “sprinkler system design”. The email references to “medical services building including office”. The Respondent testified this information did not relate to the Project.

Analysis

Allegation 1 (a)

1. You have demonstrated incompetence, negligence or unprofessional conduct by:

a. Failing to design a fire suppression system (the “Fire Suppression System”) for a dental office located at [REDACTED] Surrey BC (the “Project”) to the reasonable standard expected of a professional engineer by, among other things:

- i. Incorrectly identifying the hazard classification for the Project;
- ii. Utilizing a design method for the Fire Suppression System only permitted for single family or duplex residential occupancy;
- iii. Failing to provide for a sprinkler in the hot water tank closet for the Project;
- iv. Failing to provide for a minimum distance of 8 feet between residential sprinklers in the patient areas of the Project;
- v. Using hydraulic calculations for the Fire Suppression System in a format similar to NFPA 13D, instead of to NFPA 13;
- vi. Providing notes and details on the drawings for the Project that are irrelevant;
- vii. Utilizing two-sprinkler design methods for the Project; and
- viii. Otherwise failing to comply with the standards set out in the NFPA 13 (2013).

39. The Engineers and Geoscientists BC submits that the evidence of Mr. Chow establishes each and every one of the design failures particularized above. In addition, Mr. Chow’s evidence establishes that the design for the Project was not to the standard expected of a professional engineer designing a fire suppression system. Engineers and Geoscientists BC submits that the Respondent’s conduct amounts to negligence because the Respondent failed to exercise the degree of skill and care ordinarily exercised by reasonably competent members of the profession, and because the Respondent undertook work beyond his competence. Moreover, it

is also unprofessional conduct because it is a marked departure from the standard expected of a competent professional.

40. The Respondent's submissions do not take issue with any of the alleged design errors particularized above. Rather, the Respondent's submissions focussed on the position that the Respondent only owed a duty of care to Mr. Ghodousi as the engineer of record. A subordinate engineer's only duty is that he must "raise any concerns he has" or is "not sure" about to the engineer of record. The Respondent submits that the evidence is clear he was acting as a subordinate because: (1) Mr. Ghodousi was the engineer of record, (2) Mr. Ghodousi signed and sealed the drawings, (3) the Respondent did not have any dealings with the City of Surrey, and (4) the Respondent provided a draft of his drawings to Mr. Ghodousi seeking his feedback. Moreover, the Respondent argues that Mr. Ghodousi occupied a supervisory role and his failures to follow through and provide feedback should not be attributed to the Respondent.
41. As noted above in the legal framework section, the Respondent takes the position that the Respondent only owed a duty to Mr. Ghodousi and no evidence was led that the Respondent violated that duty. The Respondent submits that to find the Respondent "professional liable" for the design errors would be to find an engineer who acted at all times properly as a subordinate responsibility for the full project where his supervisor failed in his supervisory role.
42. The first question for the Panel to decide is whether the Respondent did in fact design the fire suppression system at the dental office in question. The second question is; if so, whether the Respondent failed to design that system according to the reasonable standard expected of a professional engineer in the manner particularized in allegation 1(a).

The Respondent designed the fire suppression system

43. The Panel finds that the Respondent designed the fire suppression system at the dental office in question. While the Respondent testified that his role was minimal and he only provided drafting and design assistance to Mr. Ghodousi who designed

the fire suppression system, this is inconsistent with the Respondent's own earlier statements, and is not harmonious with other independent evidence. In particular:

- a. The Respondent has made numerous statements in which he described his own role on the Project as being both drafter and designer. During the Investigation Sub-Committee interview, he stated, "I told him, yes, I can design it for you, but just only design and draft not anything else.", "I'm just making a layout and just the design and drafting and providing the first review.", "I told him, okay, I design and draft to you, but review. He said, okay, I will do that." The Panel finds it more likely that the Respondent used the words design and draft, at the above times, to reflect that he was in fact both designing and drafting the sprinkler system.
- b. In his formal response to Engineers and Geoscientists BC, the Respondent stated, "I only did the draft and design under his engineering knowledge and experience". The Panel does not accept the Respondent's testimony that what he meant by those words was that Mr. Ghodousi was in fact responsible for the design concept. Those words do not appear in above sentence. The Panel is of the view that the Respondent was more likely trying to minimize his responsibility for the design with his reference to Mr. Ghodousi being the engineer of record.
- c. The Respondent inserted his initials "A.B." next to "design by" and "drawn by" on the first set of drawings that he produced and emailed to Mr. Ghodousi.
- d. The Respondent's June 27, 2017 email to Mr. Ghodousi attaching the drawings with the SEAM Engineering title block were marked "Issue for BP" and did not request that Mr. Ghodousi provide any feedback.
- e. The Schedule B was prepared on the same date as the drawings.
- f. The Respondent's July 6, 2017 email to Mr. Ghodousi following the City of Surrey's rejection contains design calculations and analysis. The

Respondent's statement "here is my answer", and the analysis that follows, is in response to the City of Surrey's rejection.

- g. The Respondent's July 20, 2017 email to Mr. Ghodousi sets out the Respondent's process for sprinkler system design. The Panel does not accept that this email did not refer to the Project. Rather, the references to the "medical services building" indicate it is more likely that this was indeed about the Project.
 - h. While the Respondent asserted that Mr. Ghodousi provided him with all of design information for the sprinkler system by phone and email, there was no evidence before this Panel of those purported phone calls or emails. The Respondent's evidence on this point was vague and provided little to no details about those communications. Likewise, the Respondent did not call Mr. Ghodousi as a witness. The Panel finds this assertion to be inconsistent with other evidence given by the Respondent, in particular, the Respondent's July 6, 2017 and July 20, 2017 emails to Mr. Ghodousi in which the Respondent is clearly providing design information to Mr. Ghodousi (and not the reverse). The records that were placed before the Panel show that it was the Respondent setting out design calculations and analysis, which supports that he and not Mr. Ghodousi designed the sprinkler system. The Panel finds it implausible that the Respondent would send Mr. Ghodousi an email advising him of design information if the source of that very design information had been Mr. Ghodousi himself. There is nothing in the communication to suggest this is what took place. It is clear that the Respondent was involved in design calculations, selection of design components and analysis of the sprinkler design - all features of sprinkler system design. The Respondent did this in addition to creating a graphical representation of the Project with technical specifications - features of his drafting work on the Project.
44. The Panel does not accept the Respondent's argument that he did not design the sprinkler system because Mr. Ghodousi was the engineer of record and Mr.

Ghodousi signed and sealed the drawings. Mr. Ghodousi's actions in relation to this Project are the subject of separate disciplinary proceedings. The fact that Mr. Ghodousi was the engineer of record and affixed his seal to drawings that he did not prepare, or were not prepared under his supervision, raises questions of Mr. Ghodousi's professional conduct, as opposed to being of any assistance to determining the Respondent's role.

45. The Respondent's remaining arguments relying upon his covering email enclosing the first set of drawings to Mr. Ghodousi and the absence of any communications to the City of Surrey are not sufficient to establish that the Respondent did not design the drawings.
46. Based upon the evidence before it, the Panel finds the Respondent designed the fire suppressions system.

Failure to design fire suppression system according to standard

47. The Panel finds the Respondent failed to design that system according to the reasonable standard expected of a professional engineer in the manner particularized in allegation 1(a).
48. The Panel accepts the evidence of Dr. Chow. The Panel did not find Dr. Chow to be "evasive" on cross-examination as submitted by the Respondent. The Panel did find however there was some confusion during certain lines of questioning. Nevertheless, the Panel found Dr. Chow's evidence remained consistent on all material points. Specifically, Dr. Chow's evidence was unshaken on cross-examination with respect to the design errors enumerated in allegation 1(a) (i) to (viii) in the Citation. The Panel also notes that the Respondent conceded that all of those design errors were present in the design drawings. The Panel finds the Respondent's fire suppression system contained all of the design errors enumerated in allegation 1 (a)(i) to (viii).
49. The Panel finds those design errors are contrary to the reasonable standard expected of a professional engineer. Again, the Panel accepts the evidence of Dr.

Chow that the NFPA 13 is the applicable standard for the sprinkler system design of the dentist office in question:

The NFPA 13 is the only standard that applies to designing a sprinkler system in a commercial building. The NFPA 13 is geared towards life safety and property protection. The NFPA 13R, which is only for four-story residential buildings, and the NFPA 13D, which is only for single family homes or duplexes, are directed at providing life safety rather property protection.

When a Professional Engineer takes on the design and drafting services for a fire suppression system of a dental office in the City of Surrey, the design must meet the requirements of the BC Building Code and its referenced design and installation standard. At the time of the design, the applicable BC Building Code was 2012 BC Building Code and its referenced standard is NFPA 13 - 2013, Standard for the Installation of Sprinkler Systems.

50. The Panel accepts Mr. Chow's evidence, set out in detail earlier in these reasons, specifically, that the Respondent's design did not conform with the applicable standard because the design did not meet the fundamental requirements of the NFPA 13. Residential sprinklers were selected to protect the dental office, the majority of the notes and details provided on the drawings were extracted from a sprinkler system designed for a residential building which were irrelevant to the project, the hydraulic calculation method did not follow the NFPA 13 design method, and the design followed the two-sprinkler design method in NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two-Family Dwellings and Manufactured Homes.
51. The Panel does not accept the Respondent's submission that he is not held to the above standard because he was subordinate or supervised. The Panel agrees with Engineers and Geoscientists BC's submission that there was no evidence before the Panel that Mr. Ghodousi occupied a supervisory role in relation to the Respondent. The Direct Supervision Guidelines require a supervising professional to demonstrate active involvement and ongoing interaction and input. The Respondent has not demonstrated how those were met in this case. Moreover, the Panel finds that there was no evidence of the Direct Supervision Guidelines "indicators of appropriately supervised subordinates" in this case. Specifically, there was no evidence of physical presence of both Mr. Ghodousi and the Respondent at

the same workplace (let alone at the same time), there was no evidence of the availability of Mr. Ghodousi for regular and ongoing communication with the subordinates, there was no evidence of periodic documented reviews of the work by Mr. Ghodousi, there was no evidence of consultation by Mr. Ghodousi throughout the project, and there was no evidence of adequate documentation of the supervisory activities of the supervising professional. Indeed, there was no documentation suggesting that the Respondent and Mr. Ghodousi were in a subordinate / supervisor relationship.

52. In any event, the Panel prefers Dr. Chow's opinion that the standard applies to a professional engineer who designs the system irrespective of whether they are the engineer of record:

The system designer who is a Professional Engineer must take on the professional responsibility of the design, although he or she is not the registered professional of record for the design. The system design must meet the requirements of the Building Code and the applicable design standards. The quality of the design and the documents must be in a good engineering practice.

53. The Panel agrees with Engineers and Geoscientists BC's submission that the Respondent cannot avoid responsibility under the EGA, the Code of Ethics, or the Bylaws on the basis that he was not the engineer of record. The Panel finds that the Respondent was acting in his capacity as a professional engineer during the material times. Section 1(1) of the EGA defines "practice of professional engineering" to include "designing":

"practice of professional engineering" means the carrying on of chemical, civil, electrical, forest, geological, mechanical, metallurgical, mining or structural engineering, and other disciplines of engineering that may be designated by the council and for which university engineering programs have been accredited by the Canadian Engineering Accreditation Board or by a body which, in the opinion of the council, is its equivalent, and **includes** reporting on, **designing**, or directing the construction of **any works that require for their design**, or the supervision of their construction, or the supervision of their maintenance, **such experience and technical knowledge as are required by or under this Act for the admission by examination to membership in the association**, and, without limitation, includes reporting on, designing or directing the construction of public utilities, industrial works, railways, bridges, highways, canals, harbour works, river improvements, lighthouses, wet docks, dry docks, floating docks, launch ways, marine ways, steam engines, turbines, pumps, internal combustion engines, airships and airplanes, electrical machinery and apparatus, chemical

operations, machinery, and works for the development, transmission or application of power, light and heat, grain elevators, municipal works, irrigation works, sewage disposal works, drainage works, incinerators, hydraulic works, and all other engineering works, and all buildings necessary to the proper housing, installation and operation of the engineering works embraced in this definition;

[emphasis added]

54. The Respondent did not argue that section 1(2) of the EGA applies in this case and the Panel considers that it is not applicable.
55. For these reasons, the Panel finds that Engineers and Geoscientists BC has proven allegation 1(a) to the requisite standard.

Allegation 1(b)

1 b. Failing to issue the drawings he prepared for the Project (the “Drawings”) as “Draft for Review” when he provided them to Mr. Reza Ghodousi, P.Eng., for his review and comments;

56. Mr. Chow testified that it is standard practice amongst engineers to mark any drawing that is not final with some notation indicating that it is a draft in order to ensure that the draft is not accidentally relied on by other members of the design team as a final product.
57. APEGBC’s Seal Guidelines set out how incomplete documents ought to be marked as drafts for review prior to their finalization:

3.2.3.1 Documents that are incomplete, are not in their final form, are not being issued to someone who will rely on their content, are being issued to indicate general works or degree of complexity, or are marked and being issued “for discussion”, “information only” or collaboration purposes are considered preliminary documents that do not need to be sealed. The intent that these documents are preliminary must be clear to those who are receiving them. For example, documents issued for “information only” to bidders to allow them to provide budget prices to a consultant do not require sealing. However, documents issued to bidders, who will rely on the adequacy of those documents to provide fixed prices, must be sealed. A work-in-progress, non-finalized document, or draft document should be clearly marked with ‘Preliminary’, ‘Draft’, ‘For Review Only’, ‘For Discussion Only’, ‘Not For Construction’, ‘Not for Implementation’ or similar notations which confirm the status of the document.

58. The Respondent says that he made it clear to Mr. Ghodousi that the draft was not final when he asked for Mr. Ghodousi's comments in his June 26, 2017 email attaching the first version of the drawings.
59. The Panel is of the view that the standard, as expressed by Mr. Chow and the APEGBC Seal Guidelines, requires something more than what the Respondent emailed to Mr. Ghodousi when it says "a work-in-progress, non-finalized document, or draft document should be clearly marked with "Preliminary", "Draft", "For Review Only", "For Discussion Only", "Not for Construction", "Not for Implementation" or similar notations which confirm the status of the document". The Guidelines specify that it is the document itself which must be clearly marked as a draft for review with one of the listed notations above (or similar). In this case, the Respondent did not mark the drawings enclosed with his June 26, 2017 email with any of the terms set out in the Guidelines or a similar notation which confirmed the status of the document was a "draft for review".
60. Moreover, the Respondent testified that the drawings he sent to Mr. Ghodousi on June 27, 2017 with the SEAM Engineering logo were also not final. However, he did mark those drawings as "issue for BP", which Mr. Chow testified means "issued for building permit", when he added the SEAM title block and post-dated the drawing for June 28, 2017, without having received any feedback from Mr. Ghodousi. The addition of the label "issue for BP" suggests that this version was intended to be final, and the previous version sent on June 26, 2017 was being provided as a draft to Mr. Ghodousi for his review and comments without being clearly marked as a draft for review.
61. For these reasons, the Panel finds that Engineers and Geoscientists BC has proven allegation 1 (b) to the requisite standard.

Allegation 1 (c)

1 c. Failing to personally sign and seal the Drawings he prepared; and

62. Engineers and Geoscientists BC submits that Mr. Chow testified under cross-examination that his understanding of the professional guidelines is that the professional engineer who actually did the work should be the professional engineer who stamps that work. Engineers and Geoscientists BC submits that this is reflected in the APEGBC Seal Guidelines as follows:

3.3.3.3 Before deciding to seal a document an APEGBC professional typically prepares the document or has it prepared, reviews it, and takes professional responsibility for its content. Only after doing so, does he or she seal it, and deliver it to those who will use or rely on it.

63. Engineers and Geoscientists BC submits that the Respondent presented no evidence that he was preparing the drawings for the Project under Mr. Ghodousi's direct supervision. Rather, the totality of the evidence demonstrates that, in fact, it was the other way around. In these circumstances, following s. 3.3.3.3 of the Seal Guidelines, the Respondent should have signed and sealed the documents that he prepared.

64. The Respondent submits that Engineers and Geoscientists BC has failed to establish that the Respondent was required to personally sign and seal the drawings. He argues, as acknowledged by Mr. Chow, that it is a fairly common practice for engineers to assist each other with drafting. It is the role of the engineer of record, to sign and seal the final draft of the drawings.

65. The Panel agrees with the Respondent's position that Engineers and Geoscientists BC has failed to demonstrate that the Respondent was required to personally seal the drawings. The Panel has carefully considered this argument and does not consider that section 3.3.3.3 of the APEGBC Seal Guidelines has the meaning Engineers and Geoscientists BC ascribes to it. That section does not mandate that an engineer who prepares a design must be the engineer to seal the document. Rather it prescribes that if an engineer is deciding whether to seal a document (including if that engineer has had that document prepared by someone else) they

must take professional responsibility for its content. In this case, Mr. Ghodousi sealed the documents in question.

66. Accordingly, the Panel finds that Engineers and Geoscientists BC has not proven this allegation to the requisite standard.

Allegation 1 (d)

1 d. Allowing Mr. Reza Ghodousi, P.Eng., to sign and seal the Drawings, which were stamped with Mr. Bahrami's company's title block (Seam Engineering), even though Mr. Ghodousi did not prepare the drawings, did not have the necessary experience to design a fire suppression system, and was not insured to do so.

67. The parties' submissions on this particular allegation were brief. Engineers and Geoscientists BC submits that it has met its onus of proving the allegation set out in paragraph 1(d) of the Citation that the Respondent demonstrated incompetence, negligence or unprofessional conduct engaged when he allowed Mr. Ghodousi to sign and seal the drawings, which were stamped with the Respondent's title block (Seam Engineering), even though Mr. Ghodousi did not prepare the drawings, did not have the necessary experience to design a fire suppression system, and was not insured to do so. Engineers and Geoscientist BC submits that the Respondent was either supervising Mr. Ghodousi or he knew that Mr. Ghodousi was not supervising him.
68. The Respondent argued this is the most perplexing of the allegations made against the Respondent as it assumes that he exercised a supervisory role over Mr. Ghodousi. Indeed, the preponderance of evidence before the Panel supports a finding that the opposite was true: namely, that the Respondent acted under Mr. Ghodousi's direction. The Respondent submits that no evidence was adduced that would support allegation.
69. The Panel finds that Engineers and Geoscientists BC has not proven this allegation to the requisite standard. The Panel accepts that the drawings were stamped with Seam Engineering's title block, Mr. Ghodousi did not prepare the drawings, and was not insured to do so. However, there was limited and contradictory evidence about Mr. Ghodousi's experience. More importantly, there was insufficient evidence that

the Respondent “allowed” Mr. Ghodousi to sign and seal the drawings, or that to do so would amount to incompetence, unprofessional conduct or negligence. It seems to the Panel that this allegation concerns whether Mr. Ghodousi ought to have affixed his own seal to the drawings, something which is not the subject of these proceedings.

Conclusion on Allegation 1

70. The Panel finds that Engineers and Geoscientists BC has proven allegations 1 (a) and (b) of the Citation to the requisite standard and has not proven allegations 1 (c) and 1(d) of the Citation to the requisite standard.
71. The Panel has determined that the Respondent has demonstrated unprofessional conduct through his conduct in allegations 1 (a) and (b). The standards applicable to these allegations are critically important for the safety, health and welfare of the public. The Respondent’s conduct was contrary to principles 1, 2, 3, 6 of the Code of Ethics which requires members to: hold paramount the safety, health and welfare of the public, the protection of the environment and promote health and safety within the workplace; undertake and accept responsibility for professional assignments only when qualified by training or experience; to provide an opinion on a professional subject only when it is founded upon adequate knowledge and honest conviction; and to keep themselves informed in order to maintain their competence.
72. The Respondent’s failure to design the fire suppression system and the resultant design errors, and his failure to appropriately mark draft drawings for the fire suppression system as drafts for review, are also marked departures from the standard to be expected from a competent professional; they are not minor or inadvertent failures to comply with professional standards. In this case, the Panel has determined that unprofessional conduct is the appropriate finding in relation to allegations 1(a) and 1(b) given that it is the more serious finding.

Allegation 2

2. You failed to provide the Subcommittee of the Investigation Committee with a copy of your complete file for the Project as requested of you by letter dated June 2, 2020. Specifically, in advising Engineers and Geoscientists BC on June 4, 2020 that you did not have any additional records beyond those attached to the June 2,

2020 letter, you failed to provide Engineers and Geoscientists BC with a number of documents, including additional correspondence between Mr. Ghodousi and yourself regarding the Project and correspondence between Mr. Ghodousi and Zoom Engineering Ltd. which had been forwarded to you.

73. Engineers and Geoscientists BC submits that the Respondent admitted under cross-examination that he did not provide his complete file to Ms. Wilson after she requested that he do so in her June 2, 2020 letter. Specifically, he admitted that he did not disclose a total of 15 relevant documents set out above. Engineers and Geoscientists BC submits that it has clearly met its onus of proving that in failing to provide his complete file to the sub-committee per Ms. Wilson's June 2, 2020 request, Mr. Bahrami violated of section 30(4)(a) of the EGA as set out at paragraph 9 of the Citation.
74. The Respondent submits that he acknowledges that he did not provide all documents in his possession and control to Engineers and Geoscientists BC. As such, he recognizes that there could be a basis for a finding of a breach of the EGA in relation to the provision of records to the Subcommittee of the Investigation Committee. Nevertheless, if such a breach occurred, he submits that it was a technical breach that should attract a lower level of culpability. He submits that it was not an intentional breach.
75. The Panel finds that Engineers and Geoscientists BC has proven the facts set out in allegation 2 to the requisite standard, through the evidence outlined above of Ms. Wilson and through cross-examination of the Respondent. In addition, the Panel recognizes the Respondent's admission of these facts. The Panel finds that the Respondent failed to provide the Subcommittee of the Investigation Committee with a copy of his complete file for the Project as requested of him by letter dated June 2, 2020. In advising Engineers and Geoscientists BC on June 4, 2020 that he did not have any additional records beyond those attached to the June 2, 2020 letter, he failed to provide Engineers and Geoscientists BC with a number of documents, including additional correspondence between Mr. Ghodousi and the Respondent regarding the Project and correspondence between Mr. Ghodousi and Zoom Engineering Ltd. which had been forwarded to him.

76. The Panel does not accept the Respondent's testimony that he made several phone calls to Ms. Wilson in which he advised that there were additional documents. The Panel prefers the evidence whose testimony was clear and convincing as to the full scope of communications she had with the Respondent. The Panel finds there were no notes of those phone calls because it is more likely than not that they did not occur.
77. The Panel will address section 30(4) of the EGA in allegation 9.

Allegations 3, 4, 5, 6 and 8

78. The Respondent did not make any submissions with respect to allegations 3 through 8 of the Citation.
79. After setting out the allegations in the Citation that have already been addressed above, Engineers and Geoscientists BC also included seven paragraphs at the end of the Citation that reference allegations 1 and 2, but characterized the same set of facts as being either a breach of the Code of Ethics, a breach of the Bylaws or a breach of the Act.
80. The Panel found that allegations 1 (a) and 1 (b) were proven to the requisite standard however, the Panel dismissed allegations 1 (c) and 1 (d). The Panel has determined for the same reasons set out above that allegations 3, 4, 5, 6 and 8 are not made out with respect to the conduct alleged in allegations 1 (c) and (d).
81. While the Panel does find that the conduct in allegations 1 (a) and 1 (b) is also contrary to principles 1, 2, 3 and 6 of the Code of Ethics, as well as section 14(b)(2) of the Bylaws, the Panel declines to make those additional findings in allegations 3 through 6 and 8 given the extent to which those matters overlap with the Panel's conclusions on allegations 1(a) and (b), and the Panel's conclusion that the more appropriate finding for those matters is unprofessional conduct being the more serious finding.

Allegation 7

7. The conduct set out above at paragraphs 1(c) and (d) is contrary to s. 20(9) of the EGA which required that a member receiving a seal or stamp under this section must use it, with signature and date, to seal or stamp estimates, specifications, reports, documents, plans, or things that have been prepared and delivered by the member or licensee in the member or licensee's professional capacity or that have been prepared and delivered under the member or licensee's direct supervision.

82. For the same reasons outlined with respect to allegations 1 (c) and 1 (d), the Panel finds that Engineers and Geoscientists BC did not prove allegation 7 to the requisite standard. This allegation is therefore dismissed.

Allegation 9

9. The conduct set out at paragraph 2 is contrary to s. 30(4)(a) of the EGA, which required that a member being investigated must provide the committee or subcommittee conducting the investigation with any information or records in the possession or control of the member that the committee or subcommittee may require.

83. Section 30(4)(a) of the EGA provides:

30 (4)A member, licensee or certificate holder being investigated under subsection (3) must

(1) provide the committee or subcommittee conducting the investigation with any information or records in the possession or control of the member, licensee or certificate holder that the committee or subcommittee may require,

84. There is no dispute between the parties that the conduct which was admitted and proven in allegation 2 is contrary to section 30 (4) (a) of the EGA. The Panel agrees and finds allegation 9 is clearly established by Engineers and Geoscientists BC.
85. The Panel has considered the Respondent's position that even if a breach is made out, this represents a lower level of culpability because of the Respondent's conduct was not intentional. There is no mental element in section 30(4) of the EGA and therefore the Panel does not consider it necessary or appropriate to make any findings about the Respondent's intentions or lack thereof. It is open, however, to the Respondent and Engineers and Geoscientists BC to argue whether there are any aggravating or mitigating circumstances that should be considered at the penalty and costs stage.

Summary

86. In summary, the Panel's conclusions in this matter are as follows:

- a. Engineers and Geoscientists BC has proven the allegations in paragraphs 1(a), 1(b), 2 and 9 of the Citation on a balance of probabilities. The Panel has determined with respect to the allegations in paragraphs 1 (a) and 1(b) that the appropriate finding is that the Respondent committed unprofessional conduct.
- b. Engineers and Geoscientists BC has proven the allegations in paragraphs 3, 4, 5, 6 and 8 of the Citation on a balance of probabilities, however, the Panel declines to find breaches of the Code of Ethics or of the Bylaws given the extent to which those matters overlap with the Panel's conclusions on allegations 1(a) and (b), and the Panel's conclusion that the more appropriate finding for those matters is unprofessional conduct being the more serious finding.
- c. Engineers and Geoscientists did not prove the allegations in paragraphs 1(c), 1(d) and 7 on a balance of probabilities. Those allegations are dismissed.

Penalty and Costs

87. Having made a determination under section 33(1) of the EGA, the Panel will next determine the sanctions which should be imposed upon the Respondent and whether, and in what amount, costs are payable.

88. The Panel requests that Engineers and Geoscientists BC provide written submissions on the appropriate sanctions and costs, including whether those should be ordered pursuant to the EGA or the PGA, in accordance with the following schedule:

- a. Counsel for Engineers and Geoscientists BC must provide their submissions to the Respondent and the Panel by no later than May 13, 2022;

- b. Counsel for the Respondent must provide his submissions to Engineers and Geoscientists BC and the Panel by no later than May 27, 2022; and
 - c. Counsel for Engineers and Geoscientists BC must provide any reply submissions to the Respondent and the Panel by no later than June 3, 2022.
89. All submissions may be delivered by email to the other party and to Susan Precious, independent legal counsel to the Panel.

<original signed by>

Paul Adams, P. Eng., Chair

<original signed by>

Peter Bobrowsky, P. Geo.

<original signed by>

Keith Sashaw