

**IN THE MATTER OF THE ENGINEERS AND GEOSCIENTISTS ACT**

**R.S.B.C. 1996, CHAPTER 116 AS AMENDED**

**- and -**

**IN THE MATTER OF Ray C. B. Chan, P.Eng.**

DISCIPLINE COMMITTEE PANEL: Alexander Black, P.Eng., Chair

Paul Blanchard, P.Eng.

Oliver Bonham, P.Geo.

COUNSEL FOR THE ASSOCIATION: Robert Hunter

COUNSEL FOR THE MEMBER: Ray C. B. Chan P.Eng., on his own behalf

INDEPENDENT COUNSEL TO THE PANEL: David Martin

DATE OF HEARING: January 23, 2013

PLACE OF HEARING: 3000 – 1055 West Georgia Street Vancouver, BC

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**DETERMINATION**

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**INTRODUCTION AND HEARING PROCESS**

1. A Discipline Committee Panel (the Panel) of the Association Of Professional Engineers and Geoscientists of British Columbia (the Association) under authority of the *Engineers and Geoscientists Act, R.S.B.C. 1996, C116 (the Act)*

held an inquiry to examine the alleged contraventions of the *Act* by Raymond C. B. Chan P.Eng.

2. Mr. Chan was a member of the Association under the Professional Engineer (P.Eng.) designation at all times relevant to the matters herein in question.
3. The allegation of unprofessional conduct against Mr. Chan is found in the second paragraph of the Notice of Inquiry dated November 16, 2012:

*“contrary to the Act, you have demonstrated unprofessional conduct in your concept review of structural drawings dated January 30, 2007 prepared by Edmond Wong Engineering Ltd. (Structural Drawings), and in your signing and sealing a Checklist for Professional Structural Concept Review, on or about February 5, 2007, for the Structural Drawings, that you understood would be submitted to the City of Vancouver, in support of a building permit, because you failed to identify any of the major gravity and lateral load deficiencies in the Structural Drawings.”*

4. The Panel convened on Wednesday January 23, 2013 at 9.45am. Mr. Chan appeared without counsel and the Chair advised Mr. Chan of his right to be represented by a lawyer or another member and asked if he desired to be represented. Mr. Chan declined to be so represented and elected to be represented by himself. Mr. Chan was also asked if he had read and understood the charge in the Notice of Inquiry and he replied he did.
5. Mr. Chan agreed to the jurisdiction of the Panel and had no objections to the composition of the Panel.
6. The charge was read to Mr. Chan and he denied the allegations.
7. As Mr. Chan was not represented by counsel, the Chair summarized the procedures to be followed in conducting the Inquiry. Mr. Chan had no questions or objections.

#### **BURDEN AND STANDARD OF PROOF**

8. Mr. Hunter opened the Inquiry by informing the Panel of the burden of proof upon the Association and the standard of proof that the Panel must apply in reaching

its decision. Mr. Hunter made it clear that the burden of proof always rests with the Association, and the onus falls upon the Association to demonstrate that the charges had been proven to the appropriate standard of proof. The appropriate standard is proof on a balance of probability.

## **OPENING SUBMISSIONS**

9. There had been no prior agreement on Statement of Facts and Documents. Mr. Hunter made an opening statement which was a summary of the evidence he proposed to lead in support of the charge. Mr. Hunter reminded the Panel that his opening statement was not evidence.
  - (a) On or about February 5 2013, Mr. Chan conducted a Structural Concept Review for a townhouse development at [REDACTED] (the "Project"). The structural design and drawings were prepared by Edmond Wong P.Eng. of Edmond Wong Engineering Ltd. who is the "Engineer of Record" for the Project. A Structural Concept Review is required to be carried out as per Clause 14(b)3 of the Bylaws of the Association and "Guidelines for Professional Structural Concept Review" dated August 1994. Clause 8 of the Structural Concept Review Process of these Guidelines requires the engineer who performs the concept review to provide a formal Record of Professional Structural Concept Review to the Engineer of Record, including a checklist and noting any unresolved issues.
  - (b) Mr. Chan met with Mr. Wong on January 28, 2007 to discuss his concept review of the Project and as a result Mr. Chan suggested changes which were incorporated by Mr. Wong in a set of structural drawings signed and sealed by Mr. Wong dated January 30, 2007. Mr. Chan prepared and signed and sealed a certificate entitled "Checklist for Professional Structural Concept Review" to Mr. Wong dated February 5, 2007. The drawings and certificate were received by the City of Vancouver (the "City") on February 14, 2007.
  - (c) The City of Vancouver wrote to Mr. Richard Herfst P.Eng. Struct. Eng. of Wicke Herfst Maver Consulting Inc. commissioning him to carry out a

“Structural Audit Review” on Mr. Wong’s structural drawings dated January 30, 2007, as per the City’s “Guidelines for Structural Audit Reviews” dated November 23, 2004, and “Structural Audit Reviews” Bulletin dated February 28, 2000. Mr. Herfst found a number of lateral and gravity load deficiencies and submitted his report to the City in a letter dated March 26, 2007.

- (d) Mr. Wong subsequently prepared three further revisions before his structural engineering design drawings were acceptable to Mr. Herfst. Mr. Chan had no part in these three submissions. Mr. Hunter said Mr. Wong’s subsequent design and drawings are irrelevant to these proceedings.
- (e) Mr. Chan in a letter to the Association dated February 13, 2012 stated that Mr. Herfst reviewed a design based on a steel rigid frame system not the plywood shear wall system shown on the January 30, 2007 drawings. Mr. Hunter said this is incorrect as the steel rigid frame system showed up months later in subsequent drawings prepared by Mr. Wong and reviewed by Mr. Herfst. It is the drawings incorporating the plywood shear wall system that are the subject of this Inquiry.
- (f) Mr. Herfst filed a complaint to the Association in 2010 against Mr. Wong and Mr. Chan. Mr. Chan provided the Association with a copy of his concept review record dated May 10, 2010.
- (g) The Association wrote to Mr. Chan on January 31, 2012 advising that a sub committee of the Investigation Committee of the Association had requested he provide a response to a number of questions detailed in this letter. These questions had been prepared by Mr. Clint Low P.Eng. Struct. Eng. chair of the subcommittee. Mr. Chan sent his response in a letter dated February 13, 2007.
- (h) Mr. Hunter said Mr. Herfst will give evidence on deficiencies on the January 30, 2007 set of drawings prepared by Mr. Wong and Mr. Low will give evidence on the Checklist for Professional Structural Concept Review of Mr. Wong’s drawings prepared by Mr. Chan.

- (i) Mr. Hunter said the issue is: Did Mr. Chan act unprofessionally in conducting the Structural Concept Review?
10. Mr. Chan opened his submissions by saying he did not dispute these background facts submitted by Mr. Hunter.
11. Mr. Chan then stated there are three structural engineers involved prior to completion of Structural Concept Review: a) the Engineer of Record; b) the In-House Design Checker; and c) The Structural Concept Reviewer.
12. Mr. Chan said he reviewed drawings in a preliminary stage and changes were made and incorporated into the drawings prior to January 30, 2007. He said the Structural Concept Review was to supplement but not replace the In-House Design Checker. Mr. Chan said that the Structural Concept Review Guidelines required only ten percent of each structural type to be checked and he said his submission to the Association on May 10, 2010 indicates this was done. He said he followed every step of the Review process and met with Mr. Wong to discuss his review. He said he has forty years experience as a structural engineer and is familiar with the Structural Concept Review process for the City.
13. Mr. Chan said he was not advised of Mr. Herfst concerns and said this should have been done. He said he only became aware some three years later when the complaint against him was filed. Mr. Chan said he and Mr. Wong were requested by the Association to attend a meeting at the Association office on May 16, 2012 but no one from the Association appeared. He said the length of time to resolve this matter was not of his making and had taken a toll on his health.
14. Mr. Chan said he considered he did act professionally in carrying out the Structural Concept Review.

**EVIDENCE**

15. Mr. Hunter presented a curricula vita for the Association's first witness, Mr. Richard Herfst P.Eng. Struct. Eng. which was accepted by the Panel, and Mr. Chan had no objections.
16. Mr. Herfst testified he was retained by the City in a letter dated February 26, 2007 to perform a Structural Audit Review on the drawings dated January 30, 2007 for a townhouse development at [REDACTED] prepared by Mr. Wong. He said his review was performed on Mr. Wong's January 30, 2007 drawings. He confirmed his Structural Audit Review was submitted to the City on March 26, 2007. He identified a number deficiencies and discrepancies on the drawings and these were summarized in his March 26, 2007 report.
17. He said the January 30, 2007 drawings he reviewed were based on a plywood shear wall system for resisting gravity and lateral loads not on a steel rigid frame system which appeared in later revisions to the permit application submitted to the City by Mr. Wong.
18. Mr. Herfst said his report was prepared in the format outlined in the City's Guidelines dated November 23, 2004 and sent to the City and Mr. Wong. He said, as specifically stated in the Structural Audit Review Bulletin, he did not disclose or discuss the findings with any party other than the City, the Structural Engineer of Record or, where appropriate with the Association's Structural Review Board.
19. Mr. Herfst said that the scope of the Audit Review is stated in the City's Guidelines and as described in the Association's "Guidelines for Professional Structural Concept Review" (August 1994). The Guidelines also request the Audit Reviewer to confirm an In-House Design Check and Concept Review of the design have been satisfactorily completed as required under By-Law 14(b) of the Association. In his report, Mr. Herfst noted that the In-House Design Check had been performed by the Structural Engineer of Record, Mr. Wong.
20. Mr. Herfst said he followed the Associations Guidelines in performing his Audit Review. He said his Audit Review identified numerous major gravity and lateral

load deficiencies and gave examples of loads not being transmitted to the foundations, adjacent live loads not being considered and the designer not considering the negative impact of openings such as windows and doors in his shear wall design. He said the effect of torsion between the two structures in the townhouse complex had not been fully analyzed.

21. Mr. Herfst said it was not difficult to identify the problems and that a Structural Concept Review should have identified that the chosen design did not look right. He did not see any details that would allow the design to work but did not carry out detailed calculations. He said that the diaphragms were not detailed properly.
22. During his cross examination of Mr. Herfst, Mr. Chan said that Mr. Herfst had produced a good checking set of drawings. Mr. Chan asked Mr. Herfst a number of questions concerning Mr. Herfst's statement regarding the adequacy of shear walls. Mr. Herfst said, given the fact there were significant openings, there were insufficient shear walls and the design was not adequate.
23. In response to a question from the Panel concerning procedures to be followed in carrying out a Structural Audit Review, Mr. Herfst said the City normally randomly select projects for such audits. He said the Audit and Concept Review are very similar. He said the Audit Reviewer is not required to contact the Concept Reviewer, that is up to the Engineer of Record. Mr. Herfst said he had carried out numerous Audit and Concept Reviews for the City and other municipalities and was very familiar with the requirements and procedures to be followed.
24. Mr. Hunter presented a curricula vita for the Association's second witness, Mr. Clint Low P.Eng. Struct. Eng. which was accepted by the Panel and Mr. Chan had no objections.
25. Mr. Low said he was appointed by the Association's Investigation Committee to be the subcommittee of one to carry out an examination of Mr. Chan's concept review following from a complaint filed by Mr. Herfst dated January 12, 2010. He reviewed the Checklist for Professional Structural Concept Review prepared and signed by Mr. Chan and the set of structural concept review records submitted by Mr. Chan to the Association dated May 10, 2010. As a consequence of this examination, Mr. Low prepared a request for documents and information in

relation to the concept review Mr. Chan performed and this was included in a letter sent to Mr. Chan by the Association dated January 31, 2012. Mr. Chan responded to this request for information in a letter to the Association dated February 13, 2012.

26. Mr. Low said he examined Mr. Chan's response dated February 13, 2012 and said that the response was unsatisfactory and did not satisfy his concerns.
27. Mr. Hunter submitted as evidence a report prepared by Mr. Low dated December 18, 2012 to Mr. Hunter where Mr. Low was asked to provide a professional opinion regarding the Structural Concept Review carried out by Mr. Chan. This report states that in Mr. Low's professional opinion that:
  - (a) Mr. Chan did not exercise the standard of care a reasonable and prudent structural engineer should exercise in carrying out a Structural Concept Review;
  - (b) Mr. Chan's Structural Concept Review failed to identify any of the numerous significant structural deficiencies with the building structural design and completeness of the drawings that were subsequently identified in a Structural Audit Review by an independent structural engineer, Mr. Herfst;
  - (c) Mr. Chan provided a signed and sealed Checklist for Professional Structural Concept Review indicating no concerns with the design shown on the structural drawings that he reviewed and did not bring any of the significant deficiencies to the attention of the Engineer of Record, Mr. Wong.; and
  - (d) As a result, Mr. Wong may have relied on Mr. Chan's concept review as confirmation that the structural design of the building was appropriate whereas it was not.
28. In response to a question from the Panel, Mr. Low stated the City require a Checklist Certificate to be completed and submitted to the City that contains no outstanding items. The City requires the Engineer of Record, the In-House Design Checker and the Concept Reviewer to have resolved all issues prior to



completion and submission of this Certificate. In his professional experience, this requires an iterative process between these three parties and there is no evidence of this having taken place in this instance.

29. Mr. Hunter then examined Mr. Chan as a witness. Mr. Chan said he was a graduate of the University of Alberta in 1971 and had always practiced as a structural engineer. He became an E.I.T. in 1971 prior to becoming a registered professional engineer of the Association. He said he practiced under the company name PR Engineering Ltd.
30. Mr. Chan said that this was not the first Structural Concept Review he had carried out for Mr. Wong and they had worked together in the past. He said he had conducted a number of Structural Concept Reviews and was familiar with the process. He said that, although not recorded he did have several meetings with Mr. Wong on this project and specifically on January 28, 2007 and January 29, 2007. He considered he did the Structural Concept Review in accordance with the Association's guidelines. He said he identified a number of deficiencies in Mr. Wong's design in his review but did state that he should have picked up some of the deficiencies which Mr. Herfst picked up in his Audit Review.
31. Under examination by Mr. Hunter, Mr. Chan did produce a copy of unsigned and undated notes which Mr. Chan said Mr. Wong had prepared and given to him. Mr. Chan was not aware when these notes were prepared but thought they were prepared sometime after the events. Mr. Chan said these notes show that he did have meetings and discussions on the design with Mr. Wong on January 28, 2007 and January 29, 2007. Mr. Hunter, on examining this document, noted that the last statement on these notes states "February 5, 2007, Mr. Chan issued the review report and said the concept is generally acceptable." Mr. Chan said that was a general statement and it was up to Mr. Wong as Engineer of Record to ensure his design was appropriate in the circumstances.
32. Mr. Chan said he had no further evidence to present in his defense. The Chair advised Mr. Chan again that this was his opportunity to present any evidence in his defense and to provide any expert witness evidence to support his case. The Chair explained that if Mr. Chan had no further evidence, the Inquiry would now

proceed to hear final submissions from both parties. Mr. Chan was asked if he required an adjournment at this time. Mr. Chan said he understood and wished to continue the Inquiry at this time and to proceed to hear the final submissions.

### **FINAL SUBMISSIONS**

33. Mr. Hunter, for the Association, said the only charge before this Inquiry is with respect to Mr. Chan's Professional Structural Concept Review and his alleged failure to identify major deficiencies in Mr. Wong's design drawings of January 30, 2007. Mr. Hunter reiterated the burden of proof is with the Association to demonstrate the charges have been proven and that the standard of proof is on a balance of probabilities.
34. Mr. Hunter said the Inquiry heard from three witnesses.
35. Mr. Hunter said Mr. Herfst gave evidence that he performed an Audit Review on behalf of the City of Mr. Wong's drawings dated January 30, 2007 as per the City's "Guidelines for Structural Audit Reviews" and the Association's "Guideline for Professional Structural Concept Review". His report is summarized in his report to the City dated March 26, 2007. Mr. Hunter referred to Mr. Herfst statement that he did not have to perform detailed calculations to identify deficiencies in drawings and they should have been very apparent to an experienced structural engineer. Mr. Hunter said that Mr. Herfst had given evidence that there were major gravity and lateral load deficiencies on the January 30, 2007 drawings, detailed in his March 26, 2007 letter, and that they were readily apparent.
36. Mr. Hunter noted that Mr. Chan's allegation in his letter of February 13, 2012 that Mr. Herfst's review of the January 30, 2007 drawings was based on a rigid steel frame system has been withdrawn. The Structural Concept Review for the plywood shear wall system shown on the January 30, 2007 drawings is the subject to this Inquiry.
37. Mr. Hunter said Mr. Low gave evidence as the member of the subcommittee of the Association's Investigation Committee. In that role, Mr. Low prepared questions posed in the Association's letter to Mr. Chan dated January 31, 2012

and Mr. Chan replied on February 13, 2012. Mr. Hunter acknowledged that the notes presented by Mr. Chan during his examination which he said were prepared by Mr. Wong do indicate that Mr. Chan and Mr. Wong met on January 28, 2007 and January 29, 2007 and that some actions were taken. Mr. Hunter also acknowledged that Mr. Chan's notes on page 14 of his structural concept review records, submitted to the Association under covering letter dated May 10, 2010, indicated he did refer Mr. Wong to the need to address torsion.

38. Mr. Hunter argued that Mr. Low in giving evidence said that a reasonable and prudent structural engineer would have found at least some of the gravity, lateral load and torsion deficiencies identified in Mr. Herfst's March 26, 2007 Audit Review and that Mr. Chan did not act as a reasonable and prudent engineer in carrying out the concept review, by not identifying these deficiencies.
39. Mr. Hunter in his opening to his comments on his examination of Mr. Chan reminded the Inquiry that Mr. Chan had signed a Checklist for Professional Structural Concept Review that was clean apart from one comment on Item 9, "Concerns discussed with Engineer of Record" where he stated his discussion of his review with Mr. Wong were acceptable. Mr. Hunter said there were no written records of Mr. Chan identifying gravity and lateral load deficiencies identified by Mr. Herfst.
40. Mr. Hunter stated there is evidence Mr. Chan and Mr. Wong met to discuss lateral and gravity load on January 28, 2007 and January 29, 2007 and Mr. Chan raised a number of concerns and these were addressed to Mr. Chan's satisfaction between January 28, 2007 and January 30, 2007 and before the Checklist for Professional Structural Concept Review was signed by Mr. Chan on February 5, 2007.
41. Mr. Hunter argued there is ample evidence in the testimony of Mr. Herfst and Mr. Low that there existed major gravity and lateral load system deficiencies in Mr. Wong's January 30, 2007 drawings which Mr. Chan did not recognize. On this evidence, Mr. Hunter argued, it may be properly concluded that Mr. Chan displayed unprofessional conduct in not identifying these deficiencies. Mr.

Hunter concluded by saying this was a design with many problems and Mr. Chan did not find them.

42. In response, Mr. Chan gave his closing arguments.
43. Mr. Chan opened by stating that he followed the Association's Guidelines for Professional Structural Concept Review. He said he did identify the gravity and lateral loads and perform check calculations on the structure and referred to his submission to the Association Dated May 10, 2010. He said that this submission indicates he was following the Guidelines and that he addressed each item in Concept Review Check List. He gave examples of the checks he performed.
44. Mr. Chan argued that it was his understanding that the review was to supplement not replace the In-House Design Checks and that the Engineer of Record and the In-House Design Checker were responsible for completeness of drawings. Mr. Chan said, given his understanding of the scope of the Structural Concept Review and the Audit Review, the Audit Review was more than a Structural Concept Review.
45. Mr. Chan argued given the limited scope of the Structural Concept Review, the Engineer of Record was responsible for the completeness of drawings, not the Structural Concept Reviewer. Mr. Chan argued that he has shown he did discuss gravity and lateral load and torsion deficiencies with Mr. Wong on January 28, 2007 and January 29, 2007 and it was Mr. Wong's responsibility to ensure completeness of drawings following their discussions.
46. Mr. Chan concluded by stating that to the best of his knowledge, he followed the Association's Guidelines for Professional Structural Concept Review and in doing so, his conduct was not unprofessional.

## **ANALYSIS**

47. The allegation against Ray C.B. Chan P.Eng. is that Mr. Chan demonstrated unprofessional conduct in his concept review of structural drawings dated January 30, 2007 prepared by Edmond Wong Engineering Ltd. in his signing a Checklist for Professional Structural Concept Review, on or about February 5, 2007, for the Structural Drawings, that he understood would be submitted to the

City of Vancouver, in support of a building permit, because he failed to identify any of the major gravity and lateral load deficiencies in the Structural Drawings.

48. The relevant sections of the Act with respect to unprofessional conduct are 30(9), 32(2), and 33(1)(b) and states:

*30(9) "Subject to subsection (10), if the investigation committee has reasonable and probable grounds to believe that a member, licensee or certificate holder has demonstrated incompetence, negligence or unprofessional conduct, the investigation committee must cause its recommendation for an inquiry to be delivered to the discipline committee."*

*32(2) "On receipt of the investigation committee's recommendation under section 30(9) or (10) for an inquiry, the discipline committee must cause an inquiry to be held before it by causing written notice of an inquiry to be personally served on the person who is the subject of the inquiry or, failing personal service, by leaving the notice at, or by mailing it by registered mail to, the person's last address on file with the Association"*

*33(1) After an inquiry under section 32, the discipline committee may determine that the member, licensee or certificate holder  
(b) has contravened this act or the Bylaws or the Code of Ethics of the Association.*

49. The issue facing this Panel is whether they consider Mr. Chan acted unprofessionally in conducting the Structural Concept Review and completing, signing and sealing a "clean" Checklist for Professional Structural Concept Review. The question the Panel faced is what a reasonable structural engineer would conclude when presented with the evidence placed in front of the Panel.
50. The Panel carefully considered the evidence of the three witnesses.
51. Mr. Herfst's curricula vita indicated that he is an experienced structural engineer and his evidence indicated he has completed numerous Concept and Audit Reviews on projects submitted to the City. In his evidence, he said the two types of reviews are similar and he is very familiar with the requirements and procedures to be followed.

52. Mr. Herfst testified he was retained to conduct a Structural Audit Review on the January 30, 2007 drawings, submitted by Edmond Wong Engineering Ltd to the City. He said his Audit Review identified numerous major gravity and lateral load deficiencies on the drawings and these were summarized in his report dated March 28, 2007 to the City.
53. Mr. Herfst testified that it was not difficult to identify the problems and that a Structural Concept Review should also have identified them. It was noted that Mr. Chan testified that Mr. Herfst had produced a good set of checking drawings.
54. Mr. Low's curricula vita indicated he is an experienced structural engineer and his evidence indicated he has completed numerous Concept and Audit reviews for the City.
55. Mr. Low in his testimony and his report dated December 18, 2012 stated that Mr. Chan had carried out a Structural Concept Review of the January 30, 2007 drawings that were submitted to the City and submitted a signed and sealed Concept Review Checklist dated February 5, 2007 to Mr. Wong which did not identify major gravity and lateral load deficiencies identified in Mr. Herfst's Audit Review. Mr. Low stated that although Mr. Chan provided concept review spot check calculations, they did not identify any of the major deficiencies identified in Mr. Herfst's Audit Review.
56. Mr. Low stated that in his professional opinion, Mr. Chan did not exercise the standard of care of a reasonable and prudent structural engineer in carrying out the Structural Concept Review in that he did not identify these major deficiencies. Mr. Low also stated that Mr. Chan provided a signed and sealed Checklist for Professional Structural Concept Review indicating no concerns with the design shown on the January 30, 2007 structural drawings that he reviewed and did not bring any of the major deficiencies to the attention of the Engineer of Record, Mr. Wong. As a result, Mr. Wong may have incorrectly relied upon Mr. Chan's Concept Review of his structural design.
57. Although Mr. Chan did not provide a curricula vita, the Panel accepted Mr. Chan's evidence that he had practiced as a structural engineer for approximately forty years and was a graduate in structural engineering from the

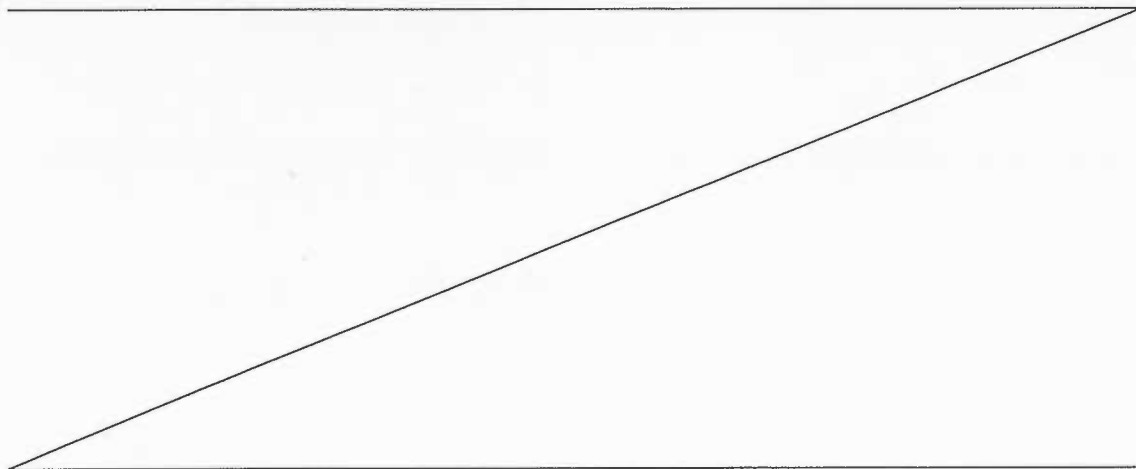
University of Alberta on or about 1971. Mr. Chan testified that he had worked with Mr. Wong on a number of occasions. He also testified that he had carried out a number of Concept Structural Reviews and was familiar with the City's Audit Review process.

58. In his testimony, Mr. Chan said that he had a number of meetings with Mr. Wong on or about January 28, 2007 and January 29, 2007 to discuss Mr. Wong's structural design and changes were made as a result.
59. Mr. Chan also testified that Mr. Herfst's marked up set of drawings accompanying Mr. Herfst's Audit Report to the City on March 26, 2007 was a good checking set. Mr. Chan testified that the Audit Review was more detailed than the Concept Review, but Mr. Herfst testified they are very similar.
60. Mr. Chan provided evidence he did perform design checks on or before January 30, 2007 and as a result Mr. Wong made changes to the design. However, Mr. Herfst and Mr. Low both testified that major gravity and lateral deficiencies still existed when Mr. Chan signed and sealed his Checklist for Professional Structural Design Concept Review on February 5, 2007 and that these deficiencies were readily apparent to a reasonable and prudent structural engineer.
61. Mr. Chan testified that the concept review is only part of the design review process and that the In-House Design Checker also is responsible for ensuring the structural design is suitable. The Panel notes that Mr. Herfst's Audit Review of March 26, 2007 identifies the In-House Design Checker to be Mr. Wong, who is also the Engineer of Record. The Panel considers Mr. Chan should have brought to Mr. Wong's attention that no independent In-House Design Checks had been performed and his testimony that there were three parties involved in the review process for this design was incorrect.
62. The Panel considered the unsigned and undated notes produced by Mr. Chan in his testimony which he said were the notes of Mr. Wong. These state that Mr. Chan and Mr. Wong did review and have discussions on the design drawings on January 28, 2007 and January 29, 2007 and as a result changes were made to the design. The last sentence of these notes states that on February 5, 2007,



Mr. Chan issued the report and said the concept is generally acceptable. Mr. Chan did not deny that statement in his testimony.

63. The Panel after careful consideration accepts that Mr. Chan in carrying out a Professional Structural Concept Review did carry out a review and did meet with Mr. Wong to discuss structural design changes.
64. However, Mr. Chan did not recognize the major gravity load and lateral load deficiencies identified by Mr. Herfst in his Structural Audit Review in issuing his Checklist for Structural Concept Review to Mr. Wong. The Panel, after careful consideration, accept the evidence of Mr. Herfst that, in his professional opinion, there were major gravity and lateral load deficiencies in the January 30, 2007 drawings and they were readily apparent.
65. The Panel after careful consideration accepts the evidence of Mr. Low that, in his professional opinion, Mr. Chan did not exercise the standard of care of a reasonable and prudent structural engineer in carrying out the Checklist for Professional Structural Concept Review by not identifying any of the major gravity and lateral load deficiencies identified in Mr. Herfst' report dated March 26, 2007. This resulted in Mr. Chan providing a signed and sealed Checklist for Structural Concept Review Checklist to the Engineer of Record, Mr. Wong, indicating no concerns with the design shown on the January 30, 2007 structural drawings that Mr. Chan reviewed. As a result Mr. Wong and the City may have incorrectly relied on Mr. Chan's signed and sealed Checklist for Structural Concept Review dated February 5, 2007.





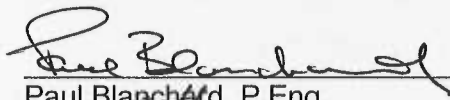
**FINDINGS**

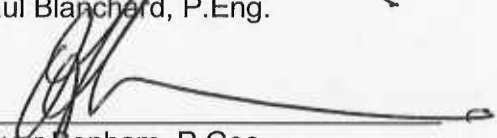
66. After careful consideration, and based on a fair and reasonable preponderance of the credible evidence, the Panel finds the charge proven to the requisite standard and that Mr. Chan has demonstrated unprofessional conduct.

Dated this 13<sup>th</sup> day of February, 2013

Discipline Committee Panel:

  
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Alexander Black, P.Eng., Chair

  
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Paul Blanchard, P.Eng.

  
\_\_\_\_\_  
Oliver Bonham, P.Geo.

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**R.S.B.C. 1996, CHAPTER 116 AS AMENDED**

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Discipline Committee Panel: Alexander Black P.Eng., Chair  
Paul Blanchard P.Eng.  
Oliver Bonham P.Geo.

Counsel for the Association: Robert Hunter

Counsel for the Member: Ray C. B. Chan P.Eng. on his own behalf  
initially; later represented by Vanessa Alescio

Date of Supplementary Hearing: February 25, 2013, reconvened April 9, 2013

Place of Hearing: 1000 – 840 Howe Street, Vancouver, BC

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**SUPPLEMENTARY DETERMINATION**

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**INTRODUCTION AND HEARING PROCESS**

1. This Discipline Committee Panel (the Panel) of the Association of Professional Engineers and Geoscientists of British Columbia (the Association), under the authority of the *Engineers and Geoscientists Act, R.S.B.C. 1996, C116 (the Act)* held an Inquiry to examine the alleged contraventions of the *Act* by Raymond C. B. Chan P.Eng. on January 23, 2013 and rendered a Determination on February 13, 2013.
2. The Panel reconvened on February 25, 2013 at 2:00 p.m. to hear submissions on the issues of Penalty and Costs. Mr. Chan appeared

without counsel and the Chair advised Mr. Chan of his right to be represented by a lawyer or another member and asked if he desired to be represented. Mr. Chan declined to be so represented and elected to be represented by himself.

3. As Mr. Chan was not represented by counsel, the Chair summarized the procedures to be followed in conducting this Supplementary Hearing on Penalty and Costs. The Chair stated that the Panel would hear submissions from the Association followed by Mr. Chan on Penalty and Costs. The Hearing would then adjourn and the Panel would carefully consider the submissions, deliberate and deliver a written Supplementary Determination on Penalty and Costs. Mr. Chan had no questions or objections to these procedures.

#### **EVIDENCE**

4. Mr. Hunter, counsel for the Association, did not call any witnesses.
5. Mr. Chan was self represented and did not call any witnesses.

#### **SUBMISSION ON PENALTY**

6. The Panel heard submissions on Penalty from Mr. Hunter. Mr. Hunter introduced a document entitled "Association's Submissions on Penalty and Costs" and this was marked as Exhibit 15. In his submission, Mr. Hunter referred the Panel to the relevant section of the Act, relevant case law for professional discipline cases and guiding principles by which discipline panels in self regulating professions impose sanctions.
7. Section 33(2) of the Act, provides that if the Discipline Committee finds that a member has demonstrated unprofessional conduct, then the Panel may, by order do one or more of the following:

- (a) *reprimand the member, licensee or certificate holder;*

- (b) *impose conditions on the membership, licence or certificate of authorization of the member, licensee or certificate holder;*
- (c) *suspend or cancel the membership, licence or certificate of authorization of the member, licensee or certificate holder;*
- (d) *impose a fine, payable to the association, of not more than \$25,000 on the member, licensee or certificate holder.*

8. Mr. Hunter argued that the Panel, in considering the appropriate penalty, should be guided by the following principles, in order of priority:

- (a) protection of the public;
- (b) specific deterrence, that is, deterrence to Mr. Chan from committing further similar unprofessional conduct;
- (c) general deterrence, that is, deterrence to members from engaging in similar conduct; and
- (d) rehabilitation of Mr. Chan.

9. Mr. Hunter, in his submission, stated that the requirement for a structural concept review was a recommendation of the Station Square Commission of Inquiry and is an important safeguard against inadequate structural designs. Given the Determination that Mr. Chan's structural concept review was inadequate, this form of protection for the public was lost and the Association considers this a serious matter.

10. Mr. Hunter recognized Mr. Chan's previous unblemished record and his seniority and made a submission that an appropriate penalty, considering the principles previously set out, to be:

- (a) a reprimand;

- (b) a condition on Mr. Chan's membership that he not be permitted to perform concept reviews until the requirements in sub paragraphs (c) to (e) have been successfully completed;
- (c) a condition on Mr. Chan's membership that he be the subject of a general practice review by the Practice Review Committee, at his own expense, and be found in compliance. The estimated cost of the practice review is \$2,250.00 plus taxes. Mr. Chan may also be the subject of a technical practice review if so required by the Practice Review Committee, and be found in compliance. The practice reviews must be completed by December 31, 2013 unless additional time is required by the Practice Review Committee, in which case the deadline for the completion of the practice reviews may be extended, at the discretion of the Practice Review Committee, to June 30, 2014;
- (d) Mr. Chan will pay a fine of \$5,000.00 to the Association within 60 days of the Panel's Penalty and Cost Order;
- (e) Mr. Chan will pay the Association's costs of investigation and inquiry as determined by the Panel. The Association is prepared to accept the payment of those costs in six equal monthly installments, due and payable on the first day of each month, commencing on April 1, 2013;
- (f) If Mr. Chan fails to comply with any of the conditions in sub-paragraphs (b), (c) and (d) above or fails to make any of the costs payments in sub-paragraph (e) on time, his membership in the Association shall be placed under the supervision of another member of the Association appointed by the Registrar until every default has been remedied.

## SUBMISSION ON COSTS

11. Mr. Hunter, in his submission, referred the Panel to the relevant section of the Act, relevant case law for professional discipline cases and guiding principles by which discipline panels for self regulating professions can impose sanctions regarding costs.

12. Section 35(1) of the Act states;

“If the discipline committee makes a determination under section 33(1), the discipline committee may direct that reasonable costs of and incidental to the investigation under section 30 and the inquiry under section 32, including reasonable fees payable to solicitors, counsel and witnesses, or any part of the costs, be paid by the person, and the costs may be determined by the committee.”

13. Section 35(3) of the Act states;

“If the discipline committee directs that costs be paid and determines the amount under subsection (1) or (2), the amount may be assessed by the registrar or district registrar of the Supreme Court, in the judicial district in which the inquiry under section 32 takes place, as special costs under the Supreme Court Rules, as nearly as they are applicable.”

14. Mr. Hunter, in his submission, referred to decisions from the British Columbia Supreme Court and the British Columbia Court of Appeal as to whether the Panel should consider awarding Costs under Section 35(1) and, if so, what is the appropriate level of Costs under Section 35(3) of the Act.

15. With respect as to whether Costs should be awarded, Mr. Hunter argued that the normal rule is that the unsuccessful party pays costs to the successful party and that these costs should be applied in a judicial manner and not arbitrarily or capriciously. Mr. Hunter submitted that the Association considers there are no special circumstances that would warrant the Panel departing from the normal rule and the Panel should exercise its discretion to award Costs to the Association.

16. Mr. Hunter said that if the Panel were to accept his argument that Costs should be awarded to the Association, the next issue is to determine what would be an appropriate level of Costs. Mr. Hunter referred to decisions from the British Columbia Supreme Court and the British Columbia Court of Appeal and argued these decisions set out what are considered to be special costs and that special costs are generally awarded by our courts between 70% to 90% of the actual legal fees and costs. Mr. Hunter referred to Rule 14-1 of Canada Law Book, British Columbia Annual Practice 2013, submitted and referenced as Exhibit 16, for Assessment of Special Costs. Mr. Hunter referred to a Memorandum dated February 22, 2013 attached to his submission and argued that Mr. Chan be required to pay special costs representing approximately 70% of the Association's special costs. Mr. Hunter submitted a copy of a letter, dated November 8, 2012, marked as Exhibit 17, to Mr. Chan where he was advised of the possible quantum of these special costs.
17. Mr. Chan was asked if he wished to make a submission on Penalty and Costs. Mr. Chan appeared to wish to dispute the Determination of the Panel dated February 13, 2013. The Chair reminded Mr. Chan that the purpose of this Hearing was to enable the Panel to hear submissions from both parties on Penalty and Costs. Mr. Chan said, in that case, he wished to consult with legal Counsel.
18. The Panel carefully considered Mr. Chan's request and determined the following:
  - (a) The Hearing to be adjourned at this time to allow Mr. Chan to consult with his legal counsel.
  - (b) The Panel asked that this be done at the earliest possible opportunity and Mr. Chan's legal counsel make contact with the Panel's counsel, Mr. Martin or the Association's counsel, Mr. Hunter.

- (c) The Panel will reconvene on April 9, 2013 commencing 2:00 p.m. at 1000 – 840 Howe Street, Vancouver, British Columbia.

- 19. The Hearing was adjourned at 3:10 p.m.
- 20. The Hearing reconvened on Tuesday April 9, 2013 at 1000 – 840 Howe Street, Vancouver, British Columbia, at 2:00 p.m. with Vanessa Alescio representing Mr. Chan.

The Chair asked Ms. Alescio if she wished to have Mr. Hunter present his submission on Costs and Penalty again but Ms. Alescio said it was not necessary as she had received a copy of Mr. Hunter's written submission.

#### **SUBMISSION ON PENALTY**

- 21. The Panel heard submission on Penalty and Costs by Ms. Alescio on behalf of Mr. Chan, as set out in a response submission document which was presented and marked Exhibit 18. Ms. Alescio also introduced three cases on the matters referred to in a Book of Authority Index that was presented and marked Exhibit 19. Ms. Alescio said that Mr. Chan will comply with the Penalty proposed by the Association in paragraph 10 of its submission (Exhibit 15) with the exception of subparagraph 10(f). Ms. Alescio argued that with respect to subparagraph 10(f), there should be no relationship between Mr. Chan's ability to a) pay a fine and (b) pay any costs assessed by the Panel with his competence to practice as an Engineer. Ms. Alescio argued that only if Mr. Chan fails to comply with subparagraph's 10(b) and 10(c) should subparagraph 10(f) apply.

#### **SUBMISSION ON COSTS**

- 22. Ms. Alescio argued that Special costs are not warranted in this case and that Party and Party costs should be applied. Ms. Alescio argued that the default rule with respect to costs is that the unsuccessful party pays the party and party costs of the successful party and that party and party costs



are assessed in accordance with Appendix B of the Supreme Court Civil Rules which were submitted to the Panel as Exhibit 20.

23. Ms. Alescio referred to Section 35(3) of the Act and interpreted it to say that Special costs “may” be applied not “will” or “must”. Ms. Alescio said the question facing the Panel is whether the imposition of Special costs is appropriate in Mr. Chan’s case.
24. Ms. Alescio gave examples of BC Supreme Court and BC Court of Appeal cases, marked as Exhibit 19, which gave examples of circumstances in which Special costs were ordered. She argued that these examples show that these circumstances do not apply to Mr. Chan.
25. Ms. Alescio argued that the Panel may exercise its discretion to award Special costs as nearly as they are appropriate and that the determination of whether Special costs is appropriate in the circumstances should be made on the basis of Mr. Chan’s conduct throughout this proceeding. Ms. Alescio stated that Mr. Chan acknowledged the complaint, responded to correspondence and inquiries from the Association, appeared before the Panel and was honest and sincere in his testimony.
26. Ms. Alescio requested that the Panel consider the draft Consent Order dated November 20, 2012 prepared by the Association to support Mr. Chan’s argument. Mr. Hunter, for the Association, said that no member of this Panel had been party to the drafting of the Consent Order and that it was the Association’s policy that the Panel not be given details of the Consent Order. However, Mr. Hunter stated that the Association would not object to the inclusion of the draft Consent Order presented by Ms. Alescio. After careful consideration, the Panel agreed to receive this draft Consent Order and it was marked as Exhibit 21.
27. Ms. Alescio referred to the draft Consent Order and argued that the Penalty proposed in that Order was more punitive than that now being proposed by the Association. Ms. Alescio argued that the draft Consent

Order called for Mr. Chan's resignation from the Association and now the Association was requiring a Practice Review of Mr. Chan. Ms. Alescio argued that Mr. Chan could not agree to the draft Consent Order as it was removing his ability to continue to practice engineering. Ms. Alescio argued that Mr. Chan had no choice but to proceed to a Discipline Panel Hearing.

28. Ms. Alescio argued that the examples given by Mr. Hunter that the Association is relying on for guidance with respect to assessment of Special costs do not apply to Mr. Chan. Ms. Alescio argued that the Panel need not assess Special costs and Mr. Chan considers an award of Special costs is not appropriate in these circumstances.
29. Ms. Alescio concluded by referring to Mr. Chan having practiced as a structural engineer for 40 years with an unblemished record and his sincere regrets that he is faced with this mark on his reputation and the burden of the financial consequences that flow from these circumstances at this stage in his life and career.
30. Ms. Alescio stated that Mr. Chan accepts the Association's penalty of a reprimand, a fine and a practice review. Ms. Alescio stated that Mr. Chan respectfully submits that he considers Special costs are not appropriate in the circumstances and requests that the Panel order costs to be assessed by the Registrar on Scale B of Appendix B of the Supreme Court Civil Rules entitled "Party and Party Costs".
31. Mr. Hunter, in response to Ms. Alescio's submission, argued that the examples Ms Alescio used in Exhibit 19 were for other Professional Associations where their Acts were silent on Special costs and that the rulings cited were not relevant in the case before this Panel.
32. Mr. Hunter said that Section 35(1) of the Act states that the Discipline Committee may make a determination on costs and that Section 35(3) of the Act states that the Association's default position is Special costs not

party and party costs. To support the Association's position, Mr. Hunter submitted Exhibit 22 which included a number of BC Supreme Court and BC Court of Appeal rulings on the Association's Act where the Courts ruled that costs at a Discipline Committee Hearing should be awarded as Special costs and that no finding of reprehensible conduct was required.

33. Mr. Hunter acknowledged that the Panel, in awarding Special costs, does have discretion in assessing all the circumstances laid out in Rule 14-1 of Canada Law Book, British Columbia Annual Practice 2013. Mr. Hunter argued, however, that Mr. Chan was put on notice of potential quantum of the Association's costs in his letter to Mr. Chan dated November 28, 2012 and marked as Exhibit 17.
34. With respect to Ms. Alescio's submission on Costs that non-payment should not be linked to Mr. Chan being placed under supervision of another member of the Association as proposed in paragraph 8(f) of the Association's submission on Penalty, Mr. Hunter stated that Section 35(5) of the Act allows the Discipline Committee to suspend or cancel the membership of Mr. Chan until the costs are paid. Mr. Hunter stated that what the Association is proposing is less punitive.
35. Ms. Alescio requested that she be allowed final comments and Mr. Hunter had no objection.
36. Ms. Alescio repeated her earlier assertion that the draft Consent Order dated November 20, 2012 would have effectively ended Mr. Chan's career and Mr. Chan had no choice but to proceed to a Disciplinary Hearing.
37. Ms. Alescio stated that even if the Panel has the authority to award Special costs, the circumstances are not appropriate in this case and the Panel should consider the particular circumstances.

38. Ms. Alescio acknowledged that Section 35(5) of the Act allows the Discipline Committee to suspend or cancel the membership of Mr. Chan until the costs are paid.
39. The Panel referred both parties to paragraph 13 of their Determination where there was reference to Mr. Chan being requested by the Association to attend a meeting at the Association office on May 16, 2012 to respond to the charge against him but no one from the Association appeared. Mr. Hunter acknowledged that due to an administrative error, no one from the Association attended. Ms. Alescio stated that Mr. Chan was prepared for the meeting and the delay not only inconvenienced him but put an additional toll on his health and that this should be taken under consideration by the Panel.
40. The Chair stated the Hearing was now concluded and the Panel would now deliberate and deliver their written Determination on Penalty and Costs.

## CONCLUSION

41. The Discipline Panel considered the submissions on Penalty. Section 33(2) of the Act provides that if the Panel finds that a member has demonstrated unprofessional conduct, then the Panel may do one or more of the following:
- (a) *reprimand the member, licensee or certificate holder;*
  - (b) *impose conditions on the membership, licence or certificate of authorization of the member, licensee or certificate holder;*
  - (c) *suspend or cancel the membership, licence or certificate of authorization of the member, licensee or certificate holder;*
  - (d) *impose a fine, payable to the Association, of not more than \$25,000 on the member, licensee or certificate holder.*

42. On reaching its decision on Penalty, the Panel was guided by the belief that any penalty imposed on the member should reflect the following principles:
- (1) the need for protection of the public;
  - (2) the need to deter other members of the Association from similar actions;
  - (3) the need to deter Mr. Chan from repeating the offence; and
  - (4) the need for rehabilitation of Mr. Chan.
43. The Panel carefully considered all the evidence and submissions. The Panel considered the penalties submitted by the Association in paragraph 8(a) to 8(f) of the Association's Submission on Penalty and Costs. These penalties were accepted by Mr. Chan in his Counsel's Submission and the Panel considers they meet the above principles and are appropriate.
44. The Panel carefully considered the Submission of Mr. Chan's Counsel that there is no relationship between Mr. Chan's ability to pay a fine or the Association's costs and his competence as an engineer. In response, Mr. Hunter stated that what the Association was proposing regarding non-payment of costs was less punitive than what the Discipline Committee may order under Clause 35(5) of the Act. The Panel agrees with Mr. Hunter and accepts his recommendations regarding non-payment of penalty and costs in Clause 8(f) of the Association's Submission on Penalty and Costs.
45. The Panel then addressed the submissions on costs. Firstly, to determine whether to award costs and secondly, if costs are warranted, to determine an appropriate level of costs.
46. The Panel accepts the Association's submission that case law states the unsuccessful party normally pays costs to the successful party but that the

Panel should apply discretion as to whether to award costs. The Panel, on careful consideration, considers that there are no special circumstances that would cause the Panel to depart from this normal rule and will carefully address the award of costs to the Association.

47. The Panel, having determined to award costs, now considered the determination of the amount of costs.
48. The Panel, after careful consideration, is guided by the decisions of the BC Supreme Court and the BC Court of Appeal cited by Mr. Hunter and determines that costs should be awarded to the Association as Special costs.
49. The Panel carefully considered the quantum of Special costs to be awarded and the Panel referred to Rule 14(3) of Canada Law Book, British Columbia Annual Practice 2013 in order to assess Special costs that directs that all circumstances of the case should be taken into account, including factors like the length of proceedings, the time involved, and the conduct of the parties. In particular, the Panel considered Rule 14(3)(v):  
  

*“the conduct of any party that tended to shorten, or to unnecessarily lengthen, the duration of the proceedings;”*
50. The Panel was guided by examples provided by Mr. Hunter in his submission indicating that Special costs are generally awarded by our courts between 70% to 90% of the actual legal costs and fees. The Panel, in reviewing Rule 14(3)(v) considered that Mr. Chan was subject to unnecessary costs as a result of the non attendance of the Association at the scheduled meeting on May 18, 2012. The Panel concludes that this should be taken into consideration when assessing Special costs as Mr. Chan experienced additional stress in preparing for and attending the Association’s offices. Accordingly, the Panel considers it appropriate to reduce the award of Special costs to 50% of the Association’s legal costs.

51. The legal costs of the Association were submitted to the Panel in a memorandum dated April 4, 2013 in the amount of \$32,003.71. After considering the submissions on Costs from Mr. Hunter and Ms. Alescio, the Panel accordingly awards Special costs to the Association of 50% of \$32,003.71 in the amount of \$16,001.85.
52. The Panel determined that Mr. Chan, P.Eng:
- (a) shall receive a reprimand;
  - (b) a condition be placed on Mr. Chan's membership such that he not be permitted to perform concept reviews until the requirements in sub paragraphs (c) to (e) have been successfully completed;
  - (c) as a condition on Mr. Chan's membership, he be the subject of a general practice review by the Practice Review Committee, at his own expense, and be found in compliance. The estimated cost of cost of the practice review is \$2,250.00 plus taxes. Mr. Chan may also be the subject of a technical practice review if so required by the Practice Review Committee, and found to be in compliance. The practice reviews must be completed by December 31, 2013 unless additional time is required by the Practice Review Committee, in which case the deadline for the completion of the practice reviews may be extended, at the discretion of the Practice Review Committee, to June 30, 2014;
  - (d) Mr. Chan will pay a fine of \$5,000 to the Association within 60 days of the Panel's Penalty and Costs Order;
  - (e) Mr. Chan will pay the Association's costs of investigation and inquiry as determined by the Panel in the amount of


\$16,001.85. The payment of these costs may be made in six equal monthly Payments in the amount of \$2,666.98, due and payable on the first Day of the month commencing July 1, 2013.

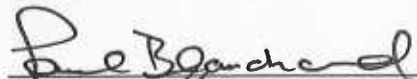
- (f) If Mr. Chan fails to comply with any of the conditions in sub paragraphs (b) and (c) above, his membership in the Association shall be placed under the supervision of another Member of the Association appointed by the Registrar until every Default has been remedied.

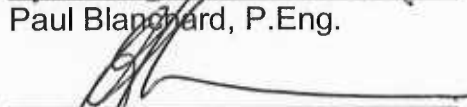
53. With respect to paragraph 52(f), the Panel accepts Ms. Alescio's submission that supervision of Mr. Chan's practice should not be triggered by Mr. Chan's failure to pay the fine and costs. The Panel notes that a failure to pay the costs can be the subject of a further order of the Panel by Section 35(5) of the Act.

Dated this 18<sup>th</sup> day of April, 2013

Discipline Committee Panel:

  
\_\_\_\_\_  
Alexander Black, P.Eng.  
Chair

  
\_\_\_\_\_  
Paul Blanchard, P.Eng.

  
\_\_\_\_\_  
Oliver Bonham, P.Geo.