

IN THE MATTER OF GEOFFREY A EVANS PEng (#15997)

A Discipline Committee Panel (the "Panel") of the Association of Professional Engineers and Geoscientists of BC (the "Association"), under authority of the *Engineers and Geoscientists Act*, RSBC 1996 (the "Act"), held an Inquiry to examine the alleged contravention of the Act by Geoffrey A Evans PEng.

Mr Evans was a member of the Association under the Civil designation at all times relevant to the matters in question.

The hearing took place in the Association Boardroom from June 18 to 22, 2001. The charge against Mr Evans was as follows:

1. That, contrary to the Act, he demonstrated unprofessional conduct with respect to the engineering services he provided in 1998 to the City with respect to a geotechnical seismic assessment at the site of the City's Civic Theatre; specifically, his reports dated July 24, 1998, August 4, 1998 and/or December 15, 1998, in which he drew conclusions concerning the potential for liquefaction of the subsurface soils at the site that were not based on appropriate geotechnical engineering principles.

Mr Robert Hunter and Mr Paul A Craven of Bull, Houser & Tupper acted for the Association. Mr Richard Lindsay and Ms Shelly Braun of Lindsay Kenney acted for Mr Evans.

Mr Evans agreed to the jurisdiction of the Panel and to its membership. He denied the charge, which was read to him.

Two exhibits were introduced into evidence by Mr Hunter: the Notice of Inquiry and other documents pertaining to the conduct of the hearing (Exhibit #1) and three binders, identified as the Book of Documents (together entered as Exhibit #2).

Burden and Standard of Proof

Mr Hunter opened the proceedings by describing the burden of proof upon the Association and the standard of proof the Panel must apply in reaching its decision. In so doing he quoted the opinion of Madame Justice McLachlan in *Dr William Jory vs The College of Physicians and Surgeons of British Columbia* (unreported, December 13, 1995). Mr Lindsay quoted other similar opinions which, he agreed, carried the same message. Therefore, the Panel accepted Madame Justice McLachlan's definition, which has been reproduced in previous judgments.

Evidence

A document titled "Agreed Statement of Facts" was presented and introduced into evidence as Exhibit #3. Mr Hunter called five witnesses; namely:

- The Director of Development Services for the City;
- A Member PEng, the Director of Operational Services for the City;
- B Engineer PEng of Independent Consultants;
- C Engineer PEng of Independent Consultants; and
- D Engineer PEng of Geotechnical Consultants.

Mr Lindsay called Mr Geoffrey A Evans of Evans Professional Engineering Services.

Events Relevant to the Matter

1. The City's Civic Theatre was constructed in 1935 and operated originally as a cinema. It was subsequently acquired by the City and, more recently, was used as a community theatre. It occupies a block of land together with other city-owned buildings.
2. On September 14, 1995, Independent Consultants ("Independ-

dent") prepared a report addressed to the Cultural Centre Society (Exhibit 2, Tab 12). That report concluded at page 18: *The study area, located within the eastern portion of downtown, is currently developed with a variety of municipal buildings. The recent geotechnical investigation has determined the easterly sloping area to be underlain by loose, cohesionless soils and a relatively shallow water table. These factors combine to make the site sensitive to disturbance by vibration, as might occur from an earthquake, machine operations or construction equipment.*

Future development of the study area must address the sensitivity of the site to such conditions. This will require careful project design to ensure that the risk of building damage is considered and appropriate foundation designs are selected. Specific projects may require further geotechnical investigation and review to determine the most practical and economical foundation design.

3. On April 9, 1998, a report entitled "The Civic Theatre — Proposed Renovation Feasibility Report" was presented by an Architectural Consultant and, among others, a Structural Engineering Consultant. The portion of that report prepared by the Structural Engineering Consultant, dated March 9, 1998 (Exhibit 2, Tab 17) concluded at page 3: *In the writer's opinion the building would likely suffer major damage under a minor seismic event and collapse under a moderate to major earthquake.*

As you are aware their (sic) is a potential for soil liquefaction under the building. Further investigation is required to determine the extent of damage that this would cause to the building.

4. A "Request for Proposals" was issued by the City and, as a consequence, Mr Evans was retained and prepared reports dated July 24, 1998, August 4, 1998 and December 14, 1998.
5. Mr Evans, in his July 24, 1998 report (Exhibit 2, Tab 2) concluded, among other things, at page 11:
 - .3 *NONE of the surficial soils sampled, above the till horizon, shows any degree of competency for foundation bearing capacity in a seismically active zone. These soils are highly susceptible to liquefaction from vibration, and will exhibit almost total loss in foundation bearing strength during an active seismic event.*
 - .4 *Artificial or induced drainage will create large volume changes in these types of soils, with consequent substantial differential foundation settlements.*
 - .5 *The existing metal bin retaining walls and the concrete retaining walls are all showing signs of distress by bulging (bowing) out from their presumed original alignments. Failure of these retaining walls, during a seismic event, will almost certainly give rise to a massive soil flux movement downslope from the building site towards the river. The potential hazard for loss of life is definitely a factor.*

6. The August 4, 1998 Evans Report (Exhibit 2, Tab 3) concluded at page 3:

2.0 CONCLUSIONS & RECOMMENDATIONS

- .1 *In EPES opinion, the general lack of any adherence to the BC Fire & Building Codes, together with minimal intact*

- structural integrity, currently makes this building a civic liability for any public assembly within the structure.
- .2 The brief visual inspection by EPES on Friday, July 31, 1998 did not find a shred of evidence that would support the maintenance of any structural integrity of the Civic Theatre when the geotechnical integrity failed, either by a seismic event or other loss/shift in foundation soil support.
 - .3 The cost of upgrading the Civic Theatre to ensure compliance with both seismic and Fire/Building Code requirements would be very high, and may be prohibitive. No attempts at temporary fixes or other partial upgrades should be made without due consultation with the project's architect, structural and geotechnical/seismic engineers.
 - .4 ****Under the terms of EPES engagement as BC registered professional engineers, it is our duty to inform you that in our opinion, due to the significant geotechnical and building envelope risks noted herein and in the EPES report entitled "Geotechnical Seismic Assessment — 24 July 1998", the City is exposing itself to an extreme liability by allowing the Civic Theatre to continue to be used for any public assemblies.****
7. Mr Evans delivered a further report on December 15, 1998 (Exhibit 2, Tab 10) that concluded, among other things, at pages 45 through 49:
 - .5 Few, if any, of the wet surficial soils sampled on the building site, above the till horizon, show any real degree of competency for foundation bearing capacity in a seismically active zone. Based on the findings to date, these fine sand and silt soils would appear to exhibit the potential for liquefaction from vibration, and an almost total loss in foundation bearing strength during an active seismic event. These soils are present between geodetic elevation 11.00 m and 5.00 m.
 - .6 The existing 1967 metal bin-type retaining walls are showing some possible minor signs of structural adjustments by bulging (bowing) and tilting out of their presumed original alignments and elevations. This was earlier observed and reported by a geotechnical engineer in a May 21, 1987 report. The lower bin-wall was not originally constructed with any toe bury or lateral restraint, but later had a concrete slab installed against the toe to prevent failure, by sliding movement, of the base of the wall. Generally, the bin-walls would appear to be in reasonable condition for their age, and show no obvious signs of any moisture leakage at any of the joints. However, failure of these retaining walls during a seismic event will almost certainly give rise to a massive soil flux movement downslope from the site towards the river. The potential hazard for loss of life is definitely a factor to be considered if these walls fail at any time, let alone during a seismic event. Armtec are, and have been, the principal manufacturers of cellular steel bin-type retaining walls. They list the anticipated galvanized bin-wall life expectancy at 40-50 years, which would indicate some kind of replacement or major repair works would be required for the subject property bin-walls between the years 2007-2017. A stability analysis should be conducted, as soon as possible, on both bin-type retaining walls to reassess both current soil conditions, any changes to the original superimposed loads and the Factors of Safety.
 - .7 With in excess of 30-40% moisture contents present in the upper 4-10 m zone of sandy silts (extending between the Civic Theatre and the adjacent building), attempts at moisture reduction could possibly result in serious and potentially large differential soil settlements, with resultant damage to surrounding buildings, roads and infrastructure utilities. It is recommended that a time-based soil moisture reduction program be considered, designed and implemented only after the site has been cleared of any building structures such as the Civic Theatre and the adjoining building. Implementation of drainage measures, prior to building removal, could cause serious structural deformation to occur.
 - .8 Underpinning of existing foundations and reinforcement to withstand earthquake design loadings for the Civic Theatre, and the adjoining building, would be very expensive (>\$750,000), and this cost estimate does not include any major superstructure rehabilitation for BC Building Code compliance. Costs will be very high due to poor accessibility for equipment to drill vertical and batter piles; the necessity for complete floor removal and replacement to allow access for equipment; and the requirement to tie together pile caps in two directions probably with reinforced concrete grade beams according to the Structural Engineering Consultant.
 - .9 Soil stabilization by injecting grouts and polymers into the ground at depth would also be very expensive (>\$500,000) as well as impractical, resulting in possible increases in pore pressures with interfering with natural hydraulic pathways within the subsoils. Any types of curtain walls or pillars could inhibit natural drainage and result in other offsite problems and liabilities. Successful ground stabilization is possible in only a few very specific cases, and usually requires open land space not cluttered with buildings and infrastructure.
 - .10 Removal of both the Civic Theatre and the adjoining building(s) could facilitate safe future use of these building sites for earthquake resistant designed structures. Staged, time-based, soil improvement/moisture reduction methods could possibly be employed after removal of the buildings and prior to any reconstruction activities. Either option will require a critical assessment of the adequacy (stability) and remaining life expectancy of the galvanized steel bin-type retaining walls. Large scale developments (ie, multi-storey structures such as a hotel) could also help resolve problems and defray some of the soil moisture mitigation costs.
 - .15 The current lack of any apparent small tremors or earthquakes in the local area is very noticeable from analysis of the Pacific Geoscience Centre, Victoria, data lists for at least the past year 1997/98 and even as far back as five (5) years, when reviewed by EPES for this study. Yet one of the largest earthquakes on record in North America occurred in close proximity to the City about 50 years ago at magnitude 7.3 on the Richter scale.
8. Mr Evans' geotechnical studies were based on measurements comparable to those previously used by Independent, as well as on his own engineering experience. The scope of Mr Evans' work required him to consult with other professional engineers in the course of preparing his reports, which consultations apparently occurred.

9. On the basis of Mr Evans' reports dated July 24, 1998 and August 4, 1998, the City closed the Theatre.

10. The City subsequently retained Geotechnical Consultants ("Geotechnical") to conduct a review of Mr Evans' report dated December 15, 1998. The results of this review were delivered to the City in a report dated January 4, 1999 from Geotechnical (Exhibit 2, Tab 14). That report stated at page 7:

4.3 Analyses

Mr Evans of EPES stated that a liquefaction triggering analysis was not done. We consider it essential that such an analysis be done. Unfortunately we have serious concerns with some of the existing data that would be input to such an analysis.

In Section 6.1, EPES discuss the volume change (settlement) that could result from desiccation or drainage of saturated soils found at the site. Volume changes of up to 48% as suggested by EPES are not possible. The pore space in a saturated soil is occupied by water. If the water is removed the pore space will not drop to zero (or close to zero) which would be required for the EPES prediction. Such a number is alarmist and misleading. A prediction of the settlement that would result from groundwater lowering at this site would require the input of new data but, in any case, the resulting calculated settlement would not be close to 48%.

The retaining walls may prove to be of unsatisfactory stability under earthquake loading with liquefaction. The stability of the walls should be checked for this condition.

The critical analysis at this time is the liquefaction triggering analysis. The results of this analysis must be in hand to determine if there is sufficient safety against liquefaction. Other analyses should be considered once the liquefaction analysis results are in hand.

The Geotechnical report concluded at page 8 as follows:

4.4 Summary and Recommendations

Soft silty soils have been identified at the site which may be prone to liquefaction or cyclic mobility. These soils had been identified previously; however EPES, in their latest investigation, did not conduct investigations and analyses to the current standard of practice that are required at this point in the site assessment. Further drilling and sampling to obtain quality data are recommended. A liquefaction triggering and foundation performance analysis is recommended. Depending on the findings, other analyses and evaluations may be required.

It appears that it may be feasible to undertake mitigative measures at the site should unacceptable risks with respect to earthquakes be identified. Until this recommended further work has been completed, we advise caution on the part of the City with respect to the use of the facilities.

11. Independent was subsequently retained and produced two reports: one on March 22, 1999 setting out comments and recommendations with respect to seismic analysis and design of building foundations for the proposed upgrading/renovation of the Theatre (Exhibit 2, Tab 15), and one on March 29, 1999, which provided an engineering assessment of the retaining walls located on the laneway crossing the site between the adjoining streets in the City (Exhibit 2, Tab 16).

12. The March 22, 1999 Independent report provided in a sum-

mary at page 12, in part, as follows:

4. *Research (Ishihara, 1985) indicates that there is sufficient thickness of soil that is not susceptible to liquefaction that overlies the potentially liquefiable stratum that ground induced damage will not occur.*
5. *Significant lateral soil movement is not expected during the design earthquake.*
6. *The results of the liquefaction analysis are consistent with the observations of limited structural distress at the site of the Theatre from the M7.3 earthquake that occurred about 50 years ago.*
7. *Based on the analysis, it is our opinion that ground improvement (soil remediation) to improve the seismic characteristics of the site of the Theatre is not necessary.*
8. *The geotechnical conditions at the site are considered adequate to permit the proposed development (upgrading and renovation) of the Theatre building to proceed.*

13. The March 29, 1999 Independent report at page 9 by way of summary stated, in part, the following:
Based on the results of the stability analysis, it is our opinion that the upper retaining wall, in its current condition, is acceptably stable. No remedial work is considered necessary to this wall.

It is our opinion that remedial work should be considered to address the stability of the lower bin retaining wall.

The report concluded with recommendations for remedial work with respect to the retaining wall. The Theatre was reopened after the City had completed upgrading of the foundation and nearby retaining walls in or about August 2000.

Determination

The question with which the Panel was charged was whether or not Mr Evans' conclusions concerning the potential for liquefaction of the subsurface soils at the site were based on appropriate geotechnical engineering principles.

Especially in the earlier documentation, there was much discussion of the word "seismic," which appears and disappears from the various RFPs, proposals and reports. Mr Evans denies having expertise in seismic assessments. Mr Evans obtained seismic acceleration estimates from the Pacific Geoscience Centre. The Panel could not find any use of these particular results in any of the reports, but the final Independent report was based on similar acceleration values specified for the region in the National Building Code.

The central question is whether Mr Evans' reports drew conclusions and issued warnings that were based on inadequate geotechnical assessment; a letter by B Engineer of Independent, supported by his testimony to the Panel, demonstrated that they did. Mr Evans had used standard penetrometer testing (SPT), whereas the final Independent report was based on cone penetrometer testing (CPT), a newer technology that is becoming the preferred technique. The SPT was used in all tests in this project except the final Independent tests and all witnesses agreed that it has been the standard for many years and, with proper data reduction, that it is capable of leading to correct interpretations.

On the other hand, the City had reason to expect a quantitative approach in Mr Evans' reports. Mr Evans stated to the Panel more than once that he had made no "mathematical" calculations at all and that none were required for his assessments. Witnesses agreed that the calculations contained in the final Independent report,

against which study Mr Evans' reports have been compared, could easily be made by hand or with a personal computer.

Judgment

After considering all the documentation entered in evidence, and all the testimony of the witnesses, the Panel unanimously upheld the charge against Mr Evans.

There can be no question that it is the duty of a Professional Engineer to call attention to a public danger that, in his professional opinion, exists. Mr Evans' first report did that, as did the earlier reports by others. The question is whether Mr Evans' severe warnings were based on sound engineering principles; whether the City had reason to believe his reports provided significant new evidence supporting the earlier views; and whether the reports provided such evidence.

In the opinion of the Panel, Mr Evans was at fault in not having processed his data in a way that would have led to quantitative assessments against which other studies could be compared. Opinion, even if based on long years of experience, is no substitute for quantitative evaluations. The Panel believes that engineering is essentially

a quantitative profession and that, although there may well be room for subjective opinion in preliminary considerations, reports at the advanced stages of a study can normally be expected to be supported by quantitative arguments, whenever such are possible.

Penalty

Having issued its judgment in this matter, the Panel invites written submissions on penalty from Mr Lindsay and Mr Hunter for the Panel's consideration.

Following receipt of the submissions on penalty, the Panel will reconvene to hear presentations from both parties before making its decision on penalty, at a date to be determined by mutual agreement between Mr Lindsay and Mr Hunter. If they are unable to agree on a date for the hearing on penalty, the Panel will set a date and reconvene to consider the matter of penalty at that time.

Discipline Committee Panel:

R D Russell PGeo, Chair; R Handel PEng, E Hauptmann PEng

Dated November 16, 2001

MEMBERSHIP

Continued from page 21

R A Ritter PEng Chemical (Saskatchewan '53, MSc Saskatchewan '54, PhD Alberta '61)

G A Ross PEng Electrical (Nova Scotia '70)

K Ryzdzkowski PEng Naval Architecture (Mgstr Inz Tech, Gdansk '77)

M B M Salkeld PEng Geological (Queen's '93)

J W Sandrowski PEng Mechanical (Alberta '85)

M F Schlender PEng Metallurgical (Alberta '92)

N P Schmidt PEng Civil (Alberta '90, MSc Alberta '92, PhD Canterbury '98)

A H Shaikh PEng Civil (Mohammed Haji Saboo Siddik Polytech '70)

E Shomali PEng Mechanical (Tennessee, Chattanooga '83)

N R Simpson PEng Civil (Bradford '67)

W J F Simpson PEng Civil (Toronto '82)

Z D Sloan PEng Civil (Saskatchewan '93)

D R Sousa PEng Chemical (McMaster '87)

D H Stocka PEng Civil (Mgstr Inz Tech U Szczecin '79)

V J Szabo PEng Structural (UBC '96)

M L Vincent PEng Mechanical (Alberta '92)

Y C Wan PEng Electrical (Essex '82, MSc Essex '83)

D H Wicke PEng Structural (McMaster '95)

D K K Woo PEng Structural (UBC '97, MEng UBC '99)

N C Wood PEng Civil (Alberta '71)

J C Wyder PEng Structural (UBC '96)

Y Yuen PEng Electrical (UBC '85)

S Zarbafian PEng Electrical (Arya-Mehr '75, MSc London '77)

PROFESSIONAL GEOSCIENTISTS

J A Beer PGeo Environmental Geoscience (UBC '93)

M W Bowles PGeo Geology (Western '82, MSc McGill '88, MSc Calgary '98)

G R Bronson PGeo Geology (Alberta '84)

J T Dance PGeo Geochemistry (Waterloo '78, MSc Waterloo '80)

J N Gray PGeo Geology (Waterloo '85)

T W Hannah PGeo Geology (New Brunswick '73)

C D Loewen PGeo Geotechnics (UBC '95)

S F Lomas PGeo Geology (Concordia '88)

R R Parent PGeo Geology (Alberta '90)

T J Reynolds PGeo Geotechnics (Waterloo '96)

A Slawinski PGeo Geology (MSc Warsaw '60, PhD Polish Academy of Science '77)

MEMBERS-IN-TRAINING

Engineering

G E Doyle EIT (UBC '01)

J A Ally EIT (Waterloo '01)

J C P Araki EIT (New Brunswick '01)

D A Baker EIT (UBC '01)

C Bolognese EIT (UBC '95)

R C Bryde EIT (UBC '01)

S Ciura EIT (Mgstr Inz Cracow '88, MEng UBC '00)

D F Cochrane EIT (McGill '01)

T I Cox EIT (UBC '01)

S A Dirksen EIT (Waterloo '99)

D R Dowler EIT (UBC '01)

M Froehling EIT (UBC '00)

O K Gepraegs EIT (Waterloo '99)

L M Gray EIT (Western '01)

E A Groom EIT (UBC '01)

M C K M Halligan EIT (Waterloo '01)

M J Harty EIT (New Brunswick '01)

O A Hoerni EIT (ENSEEIH '96)

J H Huang EIT (Industry U of Harbin '93, MEng UBC '01)

A R Jonsson EIT (UBC '91)

L Y Kan EIT (National Cheng Kung Taiwan '91, MSc Toronto '99)

D C Keenan EIT (UVic '01)

N Kharna EIT (City '92, PhD London '99)

J G Leason EIT (UVic '01)

J Leggatt EIT (UBC '01)

L C R Leung EIT (UBC '01)

Y L Liu EIT (Shandong Inst of Architectural Eng '84, MEng Automation Inst of Chinese Academy of Sc '89)

H B Lu EIT (Dalian U of Tech '86)

T C Martison EIT (UBC '01)

M T C Matias EIT (Baguio '85)

F K K Mok EIT (UBC '01)

S Molloy EIT (Concordia '98, MEng Memorial '01)

D M Moses EIT (Queen's '93, MSc Queen's '95, PhD UBC '00)

E V Nordstrom EIT (UVic '96)

L K Petryshen EIT (UVic '01)

N G Plante EIT (Shrebrooke '99)

I H Rose-Innes EIT (Witwatersrand '68, MSc Illinois Urbana-Champaign '79)

S L Soltys EIT (UVic '01)

A Takrimi EIT (East London '82)

E G Veloso EIT (Adamson '85)

M A Vuletin EIT (UVic '01)

N L A Wong EIT (UBC '98)

K X Zhan EIT (Tsing Hua '84, MEng Tsing Hua '87)

Geoscience

P Athanasopoulos GIT (Manitoba '97)

B G Kay GIT (SFU '01)

J Tataren GIT (SFU '99)

REINSTATEMENTS

C P J Berg PEng

D J N Blood PEng

J D Bowick PEng

I M Cameron PEng

D G Cox PEng

L F Dreger PEng

A Mahar PEng

W K Midan PEng

K B Orpen PEng

B Roberts PEng

J H Saunders PEng

P Schranz PEng

E Smith PEng

P J Townsley PEng

E W Tromposch PEng

A K F Tse PEng

M Bassiri EIT

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RESIGNATIONS

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J W Wright

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S F Braithwaite

C L Chao

V T M Chou

R C Koch

D J Passmore □

**IN THE MATTER OF GEOFFREY A EVANS PEng (#15997)
ORDER ON PENALTY AND COSTS**

The judgment in this matter, which found the member liable for the charge, was published on pages 30-33 in the January/February 2002 issue of Innovation.

The Discipline Committee Panel reconvened on January 25, 2002 to hear arguments and evidence regarding penalty and the assessment of costs.

Mr Evans gave testimony on his own behalf and there was submitted, as evidence, letters of recommendation supporting him. Afterwards, arguments were presented by Mr Robert Hunter of Bull Housser & Tupper for the Association and Mr Richard Lindsay PEng of Lindsay Kenney for Mr Evans, following which the others withdrew and the Panel considered its decision.

In determining the appropriate penalty and costs, the Panel was guided by the belief that any penalty imposed on the member should reflect the following principles, all in the context of the gravity of the proven charge:

- the need for protection of the public;
- the need to deter others members of the Association from similar actions;
- the need to deter Mr Evans from repeating the offence; and
- the need for rehabilitation of Mr Evans.

After carefully considering the submissions of the parties, and having regard to the above principles, the Panel has determined that:

- 1. Mr Evans shall be reprimanded for his actions.**
- 2. Mr Evans shall be prohibited from providing any geotechnical engineering services that include seismic risk analysis and earthquake-related geotechnical evaluations until he has**

successfully completed appropriate university courses in geotechnical engineering, approved in advance by the Registrar of the Association.

- 3. The Association shall conduct a Practice Review of Mr Evans' engineering practice within the next 18 months, with the full cost of this review to be borne by Mr Evans.**

The Panel has the authority, under Section 35 (1) of the *Act*, to direct that the member pay the Association's costs, or any part of the costs, for the investigation and inquiry. Mr Hunter informed the Panel of the Association's costs with respect to Mr Evans' inquiry hearing.

The Panel considered at length what proportion of the Association's costs might reasonably be charged to Mr Evans. Personal and financial hardships, which Mr Evans experienced in the course of this investigation and hearing, were well documented. Requiring him to pay a significant proportion of the Association's costs would be unrealistic under the circumstances.

Therefore the Panel imposed upon Mr Evans Association costs of \$1,000. Mr Evans is responsible for his own costs.

The Panel was unanimous in these decisions. In the event that there are any further matters requiring the assistance of the Panel as permitted by the *Act*, the Panel retains its jurisdiction to deal with those matters.

Mr Evans has filed an appeal of the liability decision of the Panel. The Association has consented to a stay of the reprimand, practice review and costs pending the disposition of the appeal by the BC Supreme Court. However, the restriction on Mr Evans' practice is effective as of February 21, 2002, the date of the Panel's decision.

Dismissal of Appeal — Geoffrey Evans PEng

The decision of the Discipline Panel that heard the Inquiry into Mr Evans' professional conduct was published in the March 2002 issue of *Innovation*.

The report of the Panel decision noted that Mr Evans had appealed the decision and that the penalties imposed on him were in abeyance pending the outcome of the appeal hearing. The appeal hearing was held in the Supreme Court of British Columbia on June 25 and 27, 2002 and the Reasons for Judgment were issued on July 9, 2002.

The Honourable Mr Justice Lowry dismissed Mr Evans' appeal. In his decision, he noted: "Finally, Mr Evans says that the panel exceeded its jurisdiction in defining the issue in a manner that fundamentally altered the scope of the charge against him. This is said to be so because in its decision the panel put the issue as follows: 'The question is, were Mr Evans' severe warnings based on sound engineering principles and did the City have reason to believe his reports provided significant, new evidence supporting the earlier views, and whether the reports provided such evidence.'"

Mr Justice Lowry continued: "In my view, the question the panel posed did no more than to put the issue in context. Mr Evans had undertaken an assessment that the panel considered was the kind of assessment that was to be done at an advanced stage. It said in effect that engineering is essentially a quantitative profession. There may be room for subjective opinion in preliminary considerations, but not where, as here, the City had reason to expect Mr Evans' report would be supported by quantitative analysis."

The full text of Mr Justice Lowry's Reasons for Judgment are available at <http://www.courts.gov.bc.ca/jdb%2Dtxt/sc/02/10/2002bcsc1029.htm>.