

- form in PEO's official publication, with reference to names;
- c. Pursuant to section 28(4)(d) of the *Professional Engineers Act* it shall be a term or condition on Leung's licence that he shall, within fourteen (14) months of the date of pronouncement of the decision of the Discipline Committee, successfully complete the association's Professional Practice Examination (PPE);
- d. Pursuant to section 28(4)(b) and (k) of the *Professional Engineers Act*, in the event that Leung does not successfully complete the above-mentioned examination within the time set out

- in (c) above, his licence shall be suspended for a period of ten (10) months thereafter, or until he successfully completes the examinations, whichever comes first; and
- e. There shall be no order as to costs.

A verbal reprimand was delivered over the telephone immediately following the hearing.

The panel issued written Decision and Reasons on Penalty on June 10, 2019.

This written summary of the Decision and Reasons is authorized by L. Brian Ross, P.Eng., as chair on behalf of the other members of the discipline panel: Ishwar Bhatia, P.Eng., Colin Cantlie, P.Eng., Rebecca Huang, LLB, LLM, and Charles M. Kidd, P.Eng.

DECISION AND REASONS

In the matter of a hearing under the *Professional Engineers Act*, R.S.O. 1990, c. P.28; and in the matter of a complaint regarding the conduct of DR. ANTHONY IKPONG, P.ENG., a member of the Association of Professional Engineers of Ontario.

This panel of the Discipline Committee convened in Toronto to hear this matter. The hearing lasted eight days over a six-month period and was mostly conducted electronically. The hearing involved a number of witnesses called by the prosecution. Dr. Anthony Ikpong, P.Eng., represented himself throughout and testified on his own behalf. The panel invited and received the parties' closing submissions in writing over the months of June, July and August 2017. In this decision, the panel refers only to the facts, evidence and submissions relevant to its decision on each of the four allegations set out in paragraph 23 of the Amended Statement of Allegations reproduced below.

THE ALLEGATIONS

The Amended Statement of Allegations dated October 17, 2016, sets out the following allegations against the member and corresponding particulars:

- At all material times, Ikpong was a professional engineer licensed pursuant to the *Professional Engineers Act*.
- Between approximately January 2013 and June 2015, Ikpong exchanged communications with Professional Engineers Ontario, the Ministry of Transportation, the Minister of Transportation and/or other professional engineers regarding his concern that the analyses relating to the design of shear-connected box girder bridges in Ontario were faulty.
- Between approximately 2011 and 2013, while working as an engineer for WSP Canada Inc. (WSP), Ikpong was involved in the design of a number of bridge projects for WSP, including the Bug River Bridge, for which Ikpong jointly authored a Structural Design Report (the report) dated May 1, 2012.
- In or about January 2013, Ikpong raised concerns with the joint author of the report regarding the analysis set out therein.
- In or about February 2014, Ikpong sent an email to the Ministry of Transportation of Ontario (MTO) questioning the analysis performed by the bridge design consultants retained by the MTO regarding their assumptions about the transfer of wheel load effects between girders.
- In its response, the MTO described the mechanisms in place to ensure bridge safety in Canada but invited Ikpong to be more

- specific about his concerns and to identify any specific structures where his concerns applied.
7. In his subsequent replies, Ikpong reiterated his view that bridge design consultants hired by MTO had made errors in the design of shear-connected box girder bridges in Ontario and had failed to follow the Canadian Standards Association's Canadian Highway Bridge Design Code, CAN/CSA-S6-06 (the code) such that the bridges were unsafe for travelling, including two specific bridges where the bending moment ratio attributed to the bridges was unacceptable, including the Bug River Bridge.
 8. When the MTO advised Ikpong they would look into the two bridges and requested that he share his analysis, Ikpong refused to do so, asserting that the solution was his intellectual property and that he would only provide assistance in the capacity of a consultant.
 9. Subsequently, without specifying why the bridge analysis was incorrect, Ikpong advised the MTO that his concern related to the consultants improperly using the simplified methods of analysis provided for by the code and the criteria that must be met in order for those simplified methods to work.
 10. In or about March 2014, the MTO advised Ikpong that a senior engineer had reviewed the calculations for one of the bridges and obtained similar results to the original calculations. Ikpong replied that the calculations could not be correct if they were based on the simplified method applicable to multi-spine bridges but refused to explain why he believed the MTO's calculations were erroneous.
 11. MTO provided a further response to Ikpong's comments about the use of the multi-spine simplified method, explaining in detail how certain bridge types must be analyzed for relevant structural responses under the code.
 12. After receiving this correspondence, Ikpong, for the first time, provided the MTO with a document purporting to set out his analysis. In response, MTO advised Ikpong that the *Ontario Public Transportation Improvements Act* (OPTIA) mandates the use of the code for the design of bridges in Ontario and that until any proposed method is approved and incorporated into the code, its use would be a violation of the OPTIA. MTO advised Ikpong that it was concluding its investigation into his concerns.
 13. In or about July 2014, Ikpong wrote directly to the Minister of Transportation about his concerns regarding the methods of analysis being used by the MTO's bridge consultants and the "dire consequences" this created for the safety of the travelling public. Ikpong requested that he receive credit and payment for his proposed solution to the problem.
 14. In his response, the minister's representative advised Ikpong that they had discussed his concerns with bridge engineers, noted that a number of consultants had designed bridges independently following the provisions of the code and obtained similar results, and that the MTO had recently conducted a load test on a similarly designed bridge and no defects or performance issues were identified.
 15. At approximately the same time he wrote to the minister, Ikpong also filed complaints with PEO against the MTO engineers and design consultants involved in the Bug River Bridge and/or Beaver Creek Bridge projects (the project respondents). In his complaints, Ikpong questioned the method of analysis they used in calculating the live load for bridges made of pre-stressed concrete box girders, classified by the code as "shear-connected beam bridges," including the Bug River Bridge and/or Beaver Creek Bridge.
 16. Ikpong alleged that the project respondents:
 - a. failed to discover that the "simplified methods of analysis" set out in section 5.7.1.1 of the code does not apply to "shear-connected beam bridges"; and
 - b. employed a method of analysis that results in bending moments roughly 25 per cent of moment produced by one truck, such that any pre-stressed concrete box girder bridges designed or approved by the project respondents will carry only 50 per cent of the live load effect, greatly compromising safety.
 17. In or about October 2014, the MTO filed its response to Ikpong's complaint, which included opinions from four practitioners and academics regarding Ikpong's allegations and the proper method of analysis for shear-connected beam bridges (MTO experts). The MTO's response and accompanying opinions clarified their precise points of disagreement with Ikpong's analysis and conclusions.
 18. In or about December 2014, some of the MTO engineers Ikpong had complained about filed their own complaint with PEO against Ikpong, alleging, inter alia,

- that he demonstrated a lack of knowledge, skill and judgment in respect of the interpretation and application of the code, bridge design and construction methods in general and in respect of shear-connected beam bridges in particular (the MTO complaint).
19. In or about January 2015, Ikpong contacted at least two of the MTO experts who had provided opinions that disagreed with his analysis and conclusions. Ikpong was critical of the MTO experts and maintained that his analysis and conclusions were correct.
 20. In or about February 2015, the Complaints Committee considered Ikpong's complaint together with all of the information obtained by PEO in its investigation of that matter, including the responses and opinions submitted by the MTO engineers. The Complaints Committee concluded that there was no evidence of unprofessional conduct or a breach of the Code of Ethics on the part of the project respondents and did not refer the matter to the Discipline Committee.
 21. In or about June 2015, Ikpong provided a very lengthy response to the MTO complaint, complete with drawings and calculations intended to prove that his analysis and approach was correct and that espoused by the project respondents and the MTO experts was wrong.
 22. Between approximately January 2013 and June 2015, as set out in the communications above with Professional Engineers Ontario, the Ministry of Transportation, the Minister of Transportation and/or other professional engineers, Ikpong:
 - a. used intemperate and/or unprofessional language;
 - b. provided information and/or made statements that he knew or ought to have known were not true and/or inaccurate;
 - c. repeatedly made disparaging, unfounded, inaccurate, untrue, inappropriate and/or unprofessional comments regarding other professional engineers and/or engineering firms, including comments questioning their competency and/or integrity;
 - d. repeatedly and/or persistently communicated that his opinion regarding the appropriate method of analyzing shear-connected beam bridges was correct, despite having been presented with significant evidence to the contrary;
 - e. initially refused to share details of the analysis and/or calculations he used:
 - i. to conclude that shear-connected beam bridges and/or pre-stressed concrete box girder bridges, such as the Bug River Bridge, were inappropriately designed and/or constructed; and/or
 - ii. to identify his proposed solution to these errors, unless and until he received recognition and/or compensation, despite his stated belief that these bridges represented a risk to public safety;
 - f. persisted in his opinion that his method of analyzing shear-connected beam bridges and/or pre-stressed concrete box girder bridges was correct, despite having been presented with significant evidence to the contrary;
 - g. favoured certain assumptions in his design and analysis that supported his opinion while disregarding other assumptions, which were based on sound scientific and engineering principles, that did not support his opinion;
 - h. misinterpreted the Canadian Standards Association's Canadian Highway Bridge Design Code, including when he treated shear-connected beam bridge design as a multi-spine bridge design;
 - i. demonstrated a lack of understanding of the application of the Canadian Standards Association's Canadian Highway Bridge Design Code to shear-connected beam bridges, including but not limited to the Bug River Bridge;
 - j. demonstrated a lack of understanding and/or refused to accept that the shear key transfers the load between girders;
 - k. demonstrated, based on his improper and/or inaccurate modelling, that he did not understand the proper methods and/or considerations that apply to the design of shear-connected beam bridges and/or other structures;
 - l. misinterpreted the proper methods for designing shear-connected beam bridges;
 - m. demonstrated a lack of understanding that the girders of shear-connected beam bridges can resist torsional moments and, in doing so, ignored the dynamic nature of this type of bridge.
 23. Based on these facts, it is alleged that Anthony Ikpong, P.Eng., is guilty of professional misconduct and/or is incompetent by:
 - a. engaging in conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional;

- amounting to professional misconduct as defined in s. 72(2)(j) of Ontario Regulation 941; and/or
- b. engaging in a course of vexatious comment or conduct that he knew or ought reasonably to have known was unwelcome and that might reasonably be regarded as interfering in a professional engineering relationship; amounting to professional misconduct as defined in s. 72(2)(n) of Ontario Regulation 941; and/or
 - c. displaying in his professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates he is unfit to carry out the responsibilities of a professional engineer; amounting to incompetence as defined by s. 28(3)(a) of the *Professional Engineers Act*, R.S.O. 1990 c. P 28, as amended; or
 - d. in the alternative to c. above, committing acts or omissions in the carrying out of his work as a practitioner that constituted a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances; amounting to professional misconduct as defined in s. 72(2)(a) of the Ontario Regulation 941.

PLEA OF THE MEMBER

Dr. Ikpong denied all of the allegations.

OVERVIEW AND FACTS

The uncontested facts in this matter are that Dr. Ikpong was at all relevant times a professional engineer licensed under the *Professional Engineers Act*, having held a licence since September 2010; that he was employed as a senior bridge engineer at Genivar between 2011 and 2013 involved in the design of bridge projects including the Bug River Bridge; that his employment at Genivar was terminated in January 2013 shortly after he raised concerns about the analysis used in the design of certain bridges as reflected in the report he jointly authored dated May 1, 2012; and that the events giving rise to this hearing began around the time of Dr. Ikpong's departure from Genivar and include the following actions he took regarding his concerns about the design of shear-connected box girder bridges commissioned by the MTO:

- Between February and March of 2014, Dr. Ikpong communicated by email with various MTO staff regarding the "Design of Prestressed/Precast Concrete Box Girder Bridges in the Province of Ontario," expressing his concerns about the analysis of these structures.
- On July 14, 2014, Dr. Ikpong sent a letter to the Minister of Transportation alleging "incompetent highway bridge designs in the Province of Ontario."
- On July 20, 2014, after having been advised by MTO that his concerns were considered unfounded, Dr. Ikpong filed a complaint with PEO against Nicolas C. Theodor, P.Eng., the head, bridge design, in the bridge office of MTO alleging negligence and a failure to safeguard life, health or property over "erroneously designed...prestressed concrete box girder bridges."
- Dr. Ikpong subsequently filed similar complaints against three other MTO engineers.

In response to Dr. Ikpong's actions, on December 10, 2014, Chris Raymond, PhD, P.Eng., secretary, Qualification Committee, head, construction contracts section of MTO, filed the MTO complaint with PEO against Dr. Ikpong on behalf of the project respondents against whom Dr. Ikpong had complained. Dr. Ikpong's complaints were not referred to the Discipline Committee for a hearing.

Dr. Ikpong, who holds a BSc in civil engineering and a MSc in structural engineering from the University of Jos in Nigeria, obtained his PhD in civil engineering from Concordia University in 2016 with his thesis "Managing Highway Bridges Against Climate-Triggered Extreme Events in Cold Regions."

The issues before the panel are whether Dr. Ikpong's communications, conduct and/or actions between January 2013 and June 2015 amounted to professional misconduct under sections 72(2)(j) (Allegation 1) and/or (n) (Allegation 2) of Ontario Regulation 941 as alleged by PEO; and whether the facts establish that Dr. Ikpong was or is incompetent (Allegation 3) and/or negligent (Allegation 4).

EVIDENCE, DECISION AND REASONS REGARDING EACH ALLEGATION

PEO bears the onus of proving the allegations in accordance with the standard of proof, which in this matter is a balance of probabilities.

Allegation 1

Sections 72(2)(j) of Ontario Regulation 941 under the act states:

- (2) For the purposes of the act and this regulation, "professional misconduct" means,
 - (j) conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional[.]

The evidence before the panel relating to this allegation consisted of email exchanges between Dr. Ikpong and various MTO engineers, Dr. Ikpong's letter to the Minister of Transportation (the minister) and the complaint Dr. Ikpong filed with PEO against the project respondents. Of particular concern to the panel were the passages authored by Dr. Ikpong set out below.

Dr. Ikpong's email to Tony Merlo, P.Eng., manager of the bridge office, MTO, dated February 13, 2014, which followed emails Dr. Ikpong had sent on February 10 and 11, 2014, expressing concerns about the "structural analysis of concrete box girder superstructures," the "assumption of transfer of wheel load effects between girders" and the "bending ratio" and "design moments" for these bridges and stated, in part:

The bridges affected include ALL the box girder bridges designed/built over the past 3 to 4 years in the Province of Ontario. A subset of those bridges would be all the concrete box girder bridges designed under the contracts awarded by the Northwestern Region of MTO to 3 consulting engineering firms in 2010/2011 or thereabout. There could be up to a total of 20 such concrete box girder bridges in Northwestern Ontario alone. There will be lots more from the other regions of the MTO.

I am the one who identified this problem and I reserve the right to continue to be involved to ensure that the engineering work is corrected to my satisfaction. I will not accept being shunted aside. I also have an obligation as a professional engineer to follow through to ensure that the work is rectified right. Unless you insist otherwise, we can take care of this without the involvement of a third party, I want to solve this problem, and take credit for identifying it and solving it. Without my intervention, how was the ministry going to be "looking into" anything?

I have developed a method and the rationale for designing these concrete box girder bridges and I am the one to re-design these bridges, wherever they may be in Ontario. You (MTO) and the consultants had your chance and it doesn't look like you did it right. I'm not ready to trust you guys to do it again. By the

way, you have not even managed to say thank you for identifying the problem.

Please be aware that I have possession of written communication dated 10 January 2013 (one year ago) in which I advised the three consultants against their approach to the design of these box girders for MTO Northwestern Region. Given their performance, these consultants have forfeited the "right" to work on these projects again. I will do the work, ensure that it is done right, and these consultants will pay for the re-design and the re-construction of these bridges no matter whether there are 50, 70 or 100 of such bridges in Ontario.

Please let me know. [sic]

At that point, Mr. Merlo asked Mr. Theodor to look into the issues raised by Dr. Ikpong. In an email dated February 28, 2014, Dr. Ikpong stated:

Regarding the right way to analyze these box girders, I can do that for you in the capacity of a consultant. It is intellectual property and a part of my practice of structural engineering. In other words, I'd be happy to solve the problem for you if you invite me.

Please let me know.

On March 3, 2014, Mr. Theodor wrote to Dr. Ikpong and said that one of his senior engineers reviewed the calculations, in accordance with the code, for one of the structures identified by Dr. Ikpong and obtained results similar to those obtained by the consultant, and that he personally went through the calculations using the 1983 version of the code and obtained comparable results. Mr. Theodor then asked Dr. Ikpong to share his calculations with MTO so that they could be compared to see where MTO might have possibly gone wrong in the event they were possibly "falling into the same trap" in which case "the code should be made clearer." Dr. Ikpong's response of that same date said, in part:

As I have noted in two separate emails to you and Mr. Merlo, I have developed a method and a rationale for the proper analysis of these concrete box girder superstructures, but it is intellectual property. It is not common knowledge.

Mr. Theodor then provided a lengthy reply to Dr. Ikpong on March 4, 2014, reminding him that he has “an ethical responsibility” to report his calculations if they “indicate that the current method of analysis gives results that are not conservative and have the potential to impact the safety of these structures.” Mr. Theodor also stated that MTO’s investigation of the issue was concluded. In response, Dr. Ikpong stated on March 6, 2014:

Attached you will find a technical paper that I have authored, which details the fundamentals of structural engineering for determining peak girder moments and shears in multi-girder bridges, including precast/prestressed concrete box girders. There is only one truth regarding the structural analysis of these types of bridge superstructures, and this is the truth—the attached paper. My approach is thoroughly proven within the paper.

...

Please read through the technical paper and the attached Sketch and scrutinize them. I will not charge you any fee for reading them. Further, I encourage you to adopt my method for the design of concrete box girders for Ontario bridges. However, if you decide to adopt my method, the following condition shall apply: for a fee, I will use my method, in the capacity of a subconsultant or other capacity, to perform the analysis, provide the rationale for the analysis, and provide the design bending moments and design shears for all the concrete box girders designed for Ontario bridges under contracts awarded to consultants during the past 5 years.

In his response to Dr. Ikpong, Mr. Theodor advised that the OPTIA mandates the use of the code for the design of bridges in Ontario and that until any proposed method is implemented by the code, its use would be considered a violation of the legislation. Mr. Theodor also stated that he was immediately deleting, without reading, the papers Dr. Ikpong had sent him, that he didn’t wish to receive any additional such correspondence and that he considered the issue closed.

Dr. Ikpong then sent a letter to the minister on July 14, 2014, stating, in part:

I write to bring to your attention a horrific situation involving incompetent highway bridge designs in the Province of Ontario. By provid-

ing engineering insight, I have on my own tried to correct/reverse this problem, but the problem persists. The engineering service providers contracted by the ministry have failed to discover the error in their work even when it has been repeatedly questioned. Similarly, your bridge engineers and structural engineers at the bridge office as well as the structural sections in the various regions have failed to positively deploy detailed information provided to them on why the designs are wrong.

As stated above, I did provide Mr. Merlo and Mr. Theodor with the structural engineering solution for this problem, complete with the rationale for the solution approach, but I also gave them the following condition. They can use my method and rationale for the further analysis and design of concrete box girder bridges for which design contracts had been awarded by 5th March 2014.

To that end, I have already completed two-thirds of the work as follows.

1. I have identified the problem and the danger to the public where no one else could.
2. I have conceived the solution for the problem where no one else could.
3. What remains now is the third and final phase, namely, for me to implement my solution on the 50 or more concrete box girder bridges that have already been designed, built or contracted out province wide.
4. What also remains is for me to get paid for all of the work that I have done in identifying the problem, conceiving a solution, and implementing the solution. The ministry will pay me and then back-charge the consultants.

2. March 3rd 2014 email to me from Nicolas Theodor...in which Mr. Theodor confirms that the Ontario Government engineers are just as incompetent as the consultants with respect to the proper analysis of concrete box girder bridges.

This is a serious matter with dire consequences for the safety of the travelling public, and one which is perfectly within your purview to resolve. I am the one who identified this problem, and I want to solve this problem and take credit for identifying it and solving it. I also want to be paid for the ingenuity in coming up with the solution and for implementing the solution on all the affected bridges. [sic]

In the response sent on behalf of the minister on August 11, 2014, to Dr. Ikpong, Dino Bagnario, P.Eng., director of the highway standards branch stated:

Finally, I would like to address your comment that the email from Mr. Nick Theodor, P.Eng., of March 3, 2014, “confirms

that Ontario Government engineers are just as incompetent as the consultants with respect to the proper analysis of concrete box girder bridges.” The ministry vehemently disagrees with your comments with respect to this e-mail and no such statements are made or implied in the e-mail by Mr. Theodor. In fact you may want to consider withdrawing this statement. A professional engineer in Ontario that makes inaccurate accusations against a fellow engineer, suggesting that they are incompetent or have allowed unsafe situations to persist, is violating the Professional Engineers Code of Ethics (section 77 of the O.Reg. 941) and could potentially be subject to discipline from Professional Engineers Ontario (PEO). In future I suggest you be mindful of this when communicating your concerns.

The ministry considers this matter now closed. If you have any further questions or concerns with the methods of analysis in the CHBDC for this type of bridge, I urge you to contact the chair of the CHBDC analysis section. Thank you for your concerns. [sic]

Based on Dr. Ikpong’s own words and actions set out in the passages above, the panel concludes that Dr. Ikpong engaged in conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as unprofessional. Dr. Ikpong’s conduct is relevant to the practice of professional engineering because it concerned existing bridges on which his former employer consulted and on which he was involved and bridge design as set out in the code. Dr. Ikpong has a duty as a professional engineer to conduct himself professionally in regard to the practice of professional engineering.

The panel considers Dr. Ikpong’s labelling of other engineers as incompetent to be intemperate language that demonstrated poor judgment. The panel is convinced that the average engineer would have concerns about Dr. Ikpong’s intemperate language and poor judgment and would consider it unprofessional to accuse another engineer of being incompetent in circumstances when one engineer believes that he or she has discovered a preferable engineering solution or design. Even if Dr. Ikpong had in fact discovered a superior engineering solu-

tion or design—and the panel is not suggesting that he has—choosing to communicate his discovery in the way that he did would be unprofessional.

The panel notes Dr. Ikpong’s testimony that he acted out of concern for public safety and his position that he is a whistleblower who is now being punished for pointing out safety concerns. While Dr. Ikpong’s intent in his letter to the minister appears to have been, in part, to protect public safety, Dr. Ikpong could have and should have voiced his concern in a professional manner.

For the reasons above, the panel finds Dr. Ikpong guilty of professional misconduct under section 72(2)(j) of Ontario Regulation 941 of the act.

Allegation 2

Section 72(2)(n) of Ontario Regulation 941 of the act states:

(2) For the purposes of the act and this regulation, “professional misconduct” means,
(n) harassment.

“Harassment” is defined in section 72(1) of O.Reg. 941, which reads:

(1) In this section,
“harassment” means engaging in a course of vexatious comment or conduct that is known or ought reasonably to be known as unwelcome and that might reasonably be regarded as interfering in a professional engineering relationship[.]

Based on Dr. Ikpong’s correspondence and conduct set out under the Allegation 1 discussion above, the panel is satisfied that he engaged in a course of vexatious comment or conduct that he knew or ought reasonably to have known was unwelcome and that might reasonably be regarded as interfering in a professional engineering relationship.

Dr. Ikpong’s letter to the minister and his correspondence with MTO engineers leading up to it were courses of vexatious comment or conduct that he ought reasonably to have known were unwelcome. By the time he sent his letter to the minister, Dr. Ikpong had already been told by MTO that his concerns were investigated by multiple other engineers and determined to be unfounded. In these circumstances, Dr. Ikpong’s decision to write to the minister and accuse the project respondents, who had considered and dismissed his specific concerns,

of incompetence because they disagreed with his views, was harassment.

The panel also accepts that Dr. Ikpong's repeated offers to provide his engineering services to MTO to rectify the bridge problems he alleged existed, as set out in the passages in Allegation 1 above, might reasonably be regarded as interfering in a professional engineering relationship. Dr. Ikpong explicitly and repeatedly offered his services to MTO in the place of other professional engineers who had a contractual relationship with MTO, even going so far as to suggest that MTO "back-charge" these engineers once it paid him for implementing his "solution."

Dr. Ikpong's strongly worded letter to MTO and his accusations of incompetence were serious actions taken after he had been told by MTO and other engineers he contacted that his concerns had been investigated, considered unfounded and dismissed, and that the matter was closed. The language and approach Dr. Ikpong used in the circumstances was harassment.

For the reasons above, the panel finds Dr. Ikpong guilty of professional misconduct under section 72(2)(n) of Ontario Regulation 941 of the act.

Allegation 3

Section 28(3)(a) of the act states:

- (1) The Discipline Committee may find a member of the association or a holder of a temporary licence, a provisional licence or a limited licence to be incompetent if in its opinion,
 - (a) the member or holder has displayed in his or her professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates the member or holder is unfit to carry out the responsibilities of a professional engineer[.]

The application of section 28(3)(a) requires that a member display "in his professional responsibilities" a lack of knowledge, skill or judgment or disregard for public welfare sufficient to demonstrate that he is unfit to be an engineer. The panel is not satisfied that the conduct of Dr. Ikpong as set out in the Amended Statement of Allegations constituted a display "in his professional responsibilities." The extensive testimony of the witnesses and Dr. Ikpong established that Dr. Ikpong expressed certain views on engineering analysis and design of pre-stressed concrete box girder bridges and that he did so in the capacity of an engineer volunteering his views, in part, out of concern for public safety. This context is crucial to the panel's finding. The panel does not accept that Dr. Ikpong's volunteered views on bridge design and his insistence that his volunteered views were correct qualified as a display in his "professional responsibilities" of a lack of knowledge, skill or judgment or disregard for the welfare of the public as required for the application of section 28(3)(a) of the act. The panel considers Dr. Ikpong to be expressing a concern, albeit one that none of the witnesses agreed with, about bridge design. Irrespective of whether Dr. Ikpong's views were in fact wrong, the panel cannot make a finding of incompetence when the conduct underlying the allegation is not a display in his professional responsibilities of a lack of knowledge, skill or judgment or disregard for the welfare of the public and the section 28(3)(a) test is not met.

The evidence adduced by PEO does not establish on a balance of probabilities that Dr. Ikpong is incompetent within the meaning of section 28(3)(a) of the act and, as a result, the panel finds that Allegation 3 has not been proven.

Allegation 4

Section 72(2)(a) of O.Reg. 941 states:

- (2) For the purposes of the act and this regulation, "professional misconduct" means,
 - (a) negligence[.]

“Negligence” is defined in section 72(1), which reads, in part:

“negligence” means an act or an omission in the carrying out of the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances.

The panel is not satisfied that PEO has proven Allegation 4. Similar to its reasoning regarding Allegation 3, the panel does not consider Dr. Ipkong’s conduct in volunteering his views on bridge design to qualify as “an act or an omission in the carrying out of the work of a practitioner.” Dr. Ipkong’s acts or omissions in the circumstances of this matter were not “in the carrying out of” his “work.” As the first part of the definition of negligence is not satisfied, the panel finds section 72(2)(a) of O.Reg. 941 cannot apply.

CONCLUSION

Having found Dr. Ipkong guilty of professional misconduct under sections 72(2)(j) and (n) of Ontario Regulation 941 of the act, the panel will invite submissions from the parties on penalty.

FINAL NOTE

The panel notes that professional engineers have a duty to raise, and should not be faulted for raising, safety concerns. The evidence in this matter established that Dr. Ipkong conscientiously objected to a specific bridge design and that he advocated for what he considered a safer design and for a clarification in the code for prestressed/precast concrete box girder bridges. The panel is neither charged with nor qualified to determine such design questions. However,

the panel notes it was presented with evidence of recurring failures of shear keys and of the judgment requirement for bringing shear-connected box girders into the sphere of the code’s simplified design, both of which raise issues. Accordingly, the panel recommends that these issues and the additional information and calculations that Dr. Ipkong provided in response to PEO’s reply submissions (which the panel did not accept or review) be reviewed by relevant authorities. In this regard, the panel echoes the recommendation of the Complaints Committee Decision of April 1, 2015, that concerns regarding the accuracy or applicability of the code should be forwarded to, and seriously considered by, the CSA Technical Committee responsible for the code which should publish its reasoning and conclusions.

Henry Tang signed this Decision and Reasons for the decision as chair of this discipline panel and on behalf of the members of the discipline panel: Stella Ball, LLB, Paul Ballantyne, P.Eng., Tim Kirkby, P.Eng., and Patrick Quinn, P.Eng.