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General Principles of Engineering Ethics & Statutes for New Brunswick Professional Engineers

Course No: NB3-001
Credit: 3 PDH

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Chapter 1

Code of Ethics

1. Foreword

Members, Licencees and Members In-Training shall conduct themselves with integrity and in an honourable and ethical manner. Members, Licencees and Members In-Training shall uphold the values of truth, honesty and trustworthiness and safeguard human life and welfare and the environment.

In keeping with these basic tenets, Members, Licencees and Members In-Training shall:

- 1) hold paramount the safety, health and welfare of the public and the protection of the environment and promote health and safety within the workplace;
- 2) offer services, advise on or undertake engineering/geoscience assignments only in areas of their competence and practise in a careful and diligent manner and in compliance with applicable legislation;
- 3) act as faithful agents of their clients or employers, maintain confidentiality and avoid conflicts of interest, but, where such conflicts arise, fully disclose the circumstances without delay to the employer or client;
- 4) keep themselves informed in order to maintain their competence and strive to advance the body of knowledge within which they practise;
- 5) conduct themselves with equity, fairness, courtesy and good faith towards clients, colleagues and others, give credit where it is due, and accept, as well as give, honest and fair professional criticism;
- 6) present clearly to employers and clients the possible consequences if engineering/geoscience decisions or judgements are overruled or disregarded;
- 7) report to their association or other appropriate agencies any illegal or unethical engineering/geoscience decisions or practices by engineers/geoscientists or others;
- 8) be aware of and ensure that clients and employers are made aware of societal and environmental consequences of actions or projects and endeavour to interpret

- engineering/geoscience issues to the public in an objective and truthful manner;
- 9) treat equitably and promote the equitable and dignified treatment of people in accordance with human rights legislation; and
 - 10) uphold and enhance the honour and dignity of the professions.

2. Code of Conduct

Engineers, geoscientists, and Members In-Training shall:

- 1) hold paramount the safety, health and welfare of the public and the protection of the environment and promote health and safety within the workplace;
- 2) cooperate in extending the effectiveness of the engineering and geoscience professions by interchanging information and experience with other members and students and by contributing to the work of engineering and geoscience societies, schools and the scientific press;
- 3) encourage employees to improve their knowledge and education;
- 4) keep themselves informed in order to maintain their competence, strive to advance the body of knowledge within which they practise and provide opportunities for the professional development of their subordinates;
- 5) report to their Association or other appropriate agencies any illegal or unethical decisions or practices by the membership or others;
- 6) observe the rules of professional conduct that apply in the country in which they practise and, if there are no such rules, observe those established by this Code of Ethics;
- 7) not advertise their work or merit in a self-laudatory manner and avoid all conduct or practice likely to discredit or do injury to the dignity and honour of the profession;
- 8) not advertise or represent themselves in an unprofessional manner by making misleading statements regarding their qualifications or experience; and
- 9) abide by all acts, regulations, by-laws, codes and standards concerning the practice of engineering or geoscience in any jurisdiction in which they may practise.

3. Relations with the Public

Engineers, geoscientists, and Members In-Training shall:

- 1) endeavour to extend public knowledge of engineering and geoscience and discourage the spreading of untrue, unfair and exaggerated statements regarding engineering and geoscience;
- 2) have due regard for the safety of life, health and welfare of the public and employees who may be affected by the work for which they are responsible;
- 3) when giving testimony before a court, commission or other tribunal, express opinions only when they are founded on adequate knowledge and honest conviction;
- 4) not issue *ex parte* statements, criticism or arguments on matters connected with public policy that are inspired or paid for by private interests, unless it is indicated on whose behalf the arguments are made;
- 5) refrain from expressing publicly opinions on subjects relating to engineering or geoscience unless they are informed of the facts relating thereto;
- 6) conduct themselves with equity, fairness, courtesy and good faith towards clients, colleagues and others, give credit where it is due, and accept, as well as give, honest and fair professional criticism; and
- 7) treat equitably and promote the equitable treatment of all clients, colleagues and coworkers, regardless of race, religion, gender, sexual orientation, age, physical or mental ability, marital or family status, and national origin.

4. Relations with Clients and Employees

Engineers, geoscientists, and Members In-Training shall:

- 1) act faithfully for their clients or employers, maintain confidentiality and avoid conflicts of interest;
- 2) act with fairness and justice between the client or employer and the contractor when dealing with contracts;
- 3) make their status clear to clients or employers before undertaking engagements if they are called upon to decide on the use of inventions, apparatus, etc. in which they may have a financial interest;
- 4) ensure that the extent of their responsibility is fully understood by each client

- before accepting a commission;
- 5) offer services, advise on or undertake assignments only in areas of their competence and practise in a careful and diligent manner;
 - 6) not sign or seal drawings, specifications, plans, reports or other documents pertaining to engineering works or systems or geoscience works unless actually prepared or verified by them or under their direct supervision;
 - 7) guard against conditions that are dangerous or threatening to life, limb or property, and on work for which they are not responsible, promptly call such conditions to the attention of those who are responsible;
 - 8) present clearly to employers and clients the possible consequences if engineering or geoscience decisions or judgments are overruled or disregarded;
 - 9) engage or advise clients or employers to engage and cooperate with other experts and specialists whenever the clients' or employers' interests are best served by such service;
 - 10) not disclose information concerning the business affairs or technical processes of clients or employers without their consent;
 - 11) not accept compensation, financial or otherwise, from more than one interested party for the same service, or for services pertaining to the same work, without the consent of all interested parties;
 - 12) not accept commissions or allowances, directly or indirectly, from contractors or other parties dealing with clients or employers in connection with work for which they are responsible;
 - 13) not be financially interested in bids as contractors on work for which they are engaged as engineers or geoscientists unless they have the consent of the client or employer;
 - 14) promptly disclose to clients or employers any interest in a business that may compete with or affect the business of the client or employer and not allow an interest in any business to affect their decisions regarding work for which they are employed, or that they may be called upon to perform;
 - 15) while serving as members of any public body, not *Act* as vendors of goods or services to that body without disclosure of their interest;
 - 16) respect the right of employees to voice their professional concerns in an appropriate manner about works that they believe to be dangerous or threatening to life, limb, or property; and
 - 17) be aware of and endeavour to ensure that clients and employers are made

aware of societal and environmental consequences of actions or projects and endeavour to interpret engineering and geoscience issues to the public in an objective and truthful manner.

5. Relations with Engineers and Geoscientists

Engineers, geoscientists, and Members In-Training shall:

- 1) endeavour to protect the engineering and geoscience professions collectively and individually from misrepresentation and misunderstanding;
- 2) take care that credit for work is given to those to whom credit is properly due;
- 3) not use or duplicate a design of others without the express permission of the designer or owner;
- 4) uphold the principles of appropriate and adequate compensation for those engaged in engineering or geoscience work, including those in a subordinate capacity, as being in the public interest and maintaining the standards of the professions;
- 5) not accept financial or other considerations, including free engineering or geoscience designs, from material or equipment suppliers in return for specifying their product;
- 6) not solicit or accept an engineering or geoscience engagement that requires the engineer or geoscientist to give a preconceived conclusion or opinion;
- 7) endeavour to provide opportunity for the professional development and advancement of engineers or geoscientists in their employ;
- 8) not directly or indirectly injure the professional reputation, prospects or practice of other engineers or geoscientists; however, if they consider that an engineer or geoscientist is guilty of unethical, illegal or unfair practice, they shall present the information to the proper authority for action;
- 9) exercise due restraint in criticizing another engineer's or geoscientist's work in public, recognizing that the technical societies and the technical press provide the proper forum for technical discussions and criticism;
- 10) not try to supplant another engineer or geoscientist in a particular employment after becoming aware that definite steps have been taken toward the other's employment;
- 11) not compete with another engineer or geoscientist by reducing normal fees after having been informed of the charges named by the other;

- 12) not use the advantages of a salaried position to compete unfairly with another engineer or geoscientist;
- 13) not provide a commission, a gift or other consideration in order to secure work;
and
- 14) not associate with any enterprise that does not conform to ethical practices.

Chapter 2

Engineering and Geoscience Professions Act

The following are excerpts from the Engineering and Geoscience Professions Act of the APEGNB. If you wish to review the entire Act, please visit the Board website at:

<https://www.apegnb.com/about-us/publications/#actanddocuments>

12. Complaints Committee

- 1) There shall be a Complaints Committee, appointed by Council, composed of not fewer than two members, and at least one person who is a public representative and none of the Committee members shall be members of Council.
- 2) The quorum, number of Complaints Committee members, their terms of office, qualifications, and the manner of their appointment shall be established and governed by the by-laws and the by-laws may regulate the procedures, functions, and operations of the Committee and may permit the establishment of panels of the Committee to act for and to carry out and exercise all the duties and powers of the Committee provided that each panel shall include at least one person who is a public representative.
- 3) The Council shall name one member of the Complaints Committee to be chairperson.
- 4) No person who is a member of the Discipline Committee shall be a member of the Complaints Committee.
- 5) Upon receipt by the Association of a complaint alleging:
 - a) a violation of any provision of this Act, by-laws, or rules;
 - b) professional misconduct, including negligence in the practice of the Professions;
 - c) incompetence in the practice of the Professions;
 - d) a conviction of a criminal or quasi-criminal offence in Canada, or any other jurisdiction;
 - e) the obtaining of registration as a member, licensee, or holder of a certificate of authorization in the Association by reason of misrepresentation or any improper means;
 - f) an investigation by another regulating body in New Brunswick or any other

jurisdiction with respect to professional misconduct or incompetence, or imposed professional discipline as a result of a concluded investigation with respect to professional misconduct or incompetence; or

g) other conduct of such a nature as the Council considers should be investigated;

it shall be referred by the Registrar to the Complaints Committee.

- 6) The Complaints Committee shall consider and investigate complaints referred to it, but no action shall be taken by the Committee under subsection (10) before it has
 - a) notified the respondent of the complaint and the respondent is given at least two weeks to submit in writing to the Committee any explanations or representations the respondent may wish to make concerning the matter; and
 - b) examined or has made every reasonable effort to examine all records and other documents relating to the complaint.
- 7) Notwithstanding subsection (8), the Complaints Committee is not required to hold a hearing or to give the complainant or the respondent an opportunity for a hearing, or an opportunity to make oral submissions, before making a decision or giving directions under this section.
- 8) A respondent may be requested to appear before the Complaints Committee to respond to the complaint and, if the respondent fails to appear, the Committee may proceed to deal with the complaint in accordance with subsection (10).
- 9) The Complaints Committee may engage such persons as it deems necessary including legal counsel to assist it in the consideration and investigation of complaints and shall determine its own rules of procedure.
- 10) The Complaints Committee, in accordance with the information it has received, may:
 - a) direct that the matter be referred, in whole or in part, to the Discipline Committee;
 - b) direct that the matter not be referred under paragraph (a); or
 - c) take such action as it considers appropriate in the circumstances to resolve the complaint as long as such is not inconsistent with this Act, by-laws, or rules.
- 11) The Complaints Committee shall give its decision, together with reasons, in writing to the Registrar who shall notify the complainant and respondent.
- 12) In circumstances where the Complaints Committee makes a referral under paragraph (10)(a), the Committee may suspend or place conditions on the member, licensee, or certificate of authorization holder pending completion of the

proceedings before the Discipline Committee if it is of the opinion that a danger to the public could result from not suspending or placing conditions on the member, licensee, or certificate of authorization holder.

- 13) A complainant who is not satisfied with the disposition of the complaint by the Complaints Committee may apply to the Council for a review of the treatment of the complaint, which the Council may refer to the Discipline Committee under subsection 13(3).

13. Discipline Committee

- 1) There shall be a Discipline Committee appointed by the Council, composed of not fewer than two members, and one person who is a public representative and none of the Committee members shall be members of Council.
- 2) The quorum, number of Discipline Committee members, their terms of office, qualifications, and the manner of their appointment shall be established and governed by the by-laws and the by-laws may regulate the procedures, functions, and operations of the Committee and may permit the establishment of panels of the Committee to act for and to carry out and exercise all the duties and powers of the Committee provided that each panel shall include at least one person who is a public representative.
- 3) In addition to a complaint under paragraph 12(10)(a), the Council, by resolution, may direct the Discipline Committee to hold a hearing and determine any allegation of professional misconduct or incompetence on the part of an individual.
- 4) The Discipline Committee and the Council when acting pursuant to subsection 13(3), shall conduct its proceedings in accordance with its own rules of procedure and may do all things and engage such persons including legal counsel it deems necessary to provide for the investigation, hearing and consideration of any complaint or appeal and in no case is the Discipline Committee or the Council bound to follow the technical rules of evidence or procedure applicable in judicial proceedings.
- 5) The Discipline Committee on being satisfied with proof of service that the individual was notified of a Discipline Committee hearing and the individual fails to appear at the hearing, may continue with the hearing, deem the individual to have admitted the substance of the complaint, and make whatever decision considered appropriate.
- 6) An individual may be found guilty of professional misconduct by the Discipline Committee if:
 - a) the individual has been found guilty of an offence which, in the opinion of the

Committee, is relevant to suitability to practise the Professions; or

b) the individual has been guilty, in the opinion of the Committee, of conduct relative to the practice of the Professions which constitutes professional misconduct including, but not limited to, that defined in the bylaws.

7) The Discipline Committee may find an individual incompetent if in its opinion:

a) the individual has displayed a lack of knowledge, skill, judgment, or disregard for the welfare of the public of a nature or to an extent that demonstrates the individual is unfit to carry out the responsibilities of the Professions; or

b) the individual is suffering from a physical or mental condition or disorder of a nature and extent making it desirable in the interests of the public that the individual no longer be permitted to engage in the practice of the Professions or the individual's practice of the Professions be restricted.

8) When the Discipline Committee finds an individual guilty of professional misconduct or incompetence it may, by order, do any one or more of the following:

a) revoke the right to practise the Professions;

b) suspend the right to practise the Professions for a stated period, not exceeding twenty-four months;

c) accept the undertaking of the individual to limit his or her practice in the Professions to the extent specified in the undertaking;

d) impose terms, conditions or limitations on the individual, including but not limited to the successful completion of one or more particular courses of study;

e) impose specific restrictions on the individual, including but not limited to:

i) requiring the individual to engage in the practice of the Professions only under the personal supervision and direction of a member;

ii) requiring the individual to not alone engage in the practice of the Professions;

iii) requiring the individual to submit to periodic inspections by the Discipline Committee, or its delegate, of documents, records and work in connection with the individual's practice of the Professions; or

iv) requiring the individual to report to the Registrar or to such committee of the Council as the Discipline Committee may name on such matters with respect to the individual's practice of the Professions for such period and in such form, as the Committee may specify;

f) reprimand, admonish or counsel the individual, and if considered warranted, direct that the fact of the reprimand, admonishment or counselling be recorded

- on the Register for a stated or unlimited period of time;
- g) revoke or suspend for a stated period of time the designation of the individual as a specialist, consulting engineer, consulting geoscientist or otherwise;
 - h) impose such fine as it considers appropriate, to a maximum of \$10,000.00, to be paid by the individual;
 - i) subject to subsection (9) in respect of orders of revocation or suspension, direct that the finding and the order of the Discipline Committee be published in detail or in summary and either with or without including the name of the individual in the official publication of the Association and in such other manner or medium as it considers appropriate;
 - j) fix and impose costs of any investigation or procedures by the Complaints Committee or the Discipline Committee to be paid by the individual to the Association;
 - k) direct that the imposition of a penalty or order be suspended or postponed for such period, and upon such terms, or for such purpose, including but not limited to,
 - i) the successful completion by the individual of one or more courses of study,
 - ii) the production to the Discipline Committee of evidence satisfactory to it that the individual no longer poses a danger to the public in the practice of the Professions.
- 9) The Discipline Committee shall cause an order of the Committee revoking or suspending an individual to be published, with or without the reasons, in the official publication of the Association together with the name of the individual.
- 10) Upon the request of an individual, the Discipline Committee shall cause the decision of the Committee that an allegation of professional misconduct or incompetence was unfounded be published in the official publication of the Association.
- 11) Where the Discipline Committee is of the opinion that it is appropriate, the Committee may order that the Association reimburse an individual's costs or such portion as fixed by the Committee.
- 12) In proceedings before the Discipline Committee, the Association and the individual are parties.
- 13) An individual whose conduct is being investigated in proceedings before the Discipline Committee shall be afforded the right to be heard and to examine, before the hearing, any written or documentary evidence that may be produced, or any report the contents of which may be given in evidence at the hearing.

- 14) Members of the Discipline Committee panel shall not have previously participated in any investigation of the subject-matter of the hearing, and shall not communicate directly or indirectly in relation to the subject matter of the hearing with any person or with any party or the representative of the party except upon notice to and opportunity for all parties to participate.

14. Public Hearings

- 1) Subject to subsection (2), Discipline Committee hearings shall be open to the public.
- 2) The Discipline Committee may order that the public, in whole or in part, be excluded from a hearing or any part of a hearing if it is satisfied that:
 - a) financial, personal, or other matters that would otherwise be disclosed are of such nature that it is within the public interest that they not be disclosed; or
 - b) the safety or security of a person may be jeopardized.
- 3) The Discipline Committee may make whatever order it considers necessary to prevent public disclosure, including orders prohibiting publication, broadcasting, or any other means of communication that the Committee considers may risk disclosure.
- 4) No order shall be made pursuant to subsection (3) that prevents the publication of anything that is otherwise available to the public.
- 5) The Discipline Committee may order that the public be excluded from that part of a hearing dealing with a motion for an order pursuant to subsection (2).
- 6) The Discipline Committee may make any order it considers necessary to prevent public disclosure of matters disclosed in a submission relating to any motion under this section, including any order it could make under subsection (3).
- 7) The Discipline Committee shall state at the hearing the reasons for any order made pursuant to this section.
- 8) Where the Discipline Committee makes an order pursuant to subsection (2), it
 - a) shall allow the parties and their legal or other representatives to attend the hearing, and
 - b) may allow such other persons as it considers necessary to attend all or part of the hearing.
- 9) Notwithstanding anything contained in this section, public attendance at a hearing does not constitute authorization to take photographs, record sound, videotape, or otherwise mechanically, electronically, or by any other means record the

proceedings, and no such recording is permitted unless specifically authorized by the Discipline Committee.

- 10) It is professional misconduct for any individual to disclose or in any way facilitate the disclosure of matters ordered by the Discipline Committee not to be disclosed.

15. Hearing Procedure

- 1) The Discipline Committee, or someone designated by it to act on its behalf, may by summons in a form prescribed by Council Rule, require the attendance before it of any person whose evidence may be material to the subject-matter of the hearing and may order any person to produce such records, reports or other documents as appear necessary for the purpose of the hearing.
- 2) A person served with a summons shall attend and answer all questions concerning matters being inquired into at the hearing and shall produce to the Discipline Committee all records, reports or other documents that are in that person's custody or control.
- 3) The testimony of any witness may be taken under oath or affirmation which may be administered by the chairperson of the Discipline Committee or any person designated to do so on the chairperson's behalf.
- 4) If a person on whom a summons has been served, either personally or by leaving a copy of the summons with some adult person at that person's last or most usual place of residence or business, fails to appear before the Discipline Committee, or upon appearing refuses to be sworn or refuses without sufficient cause to answer any question relevant to the hearing, the Committee may by application to the Court, cause the person to be cited for contempt under the provisions of the *Rules of Court* in the same manner and to the same extent as if the alleged contempt took place in proceedings before the Court.
- 5) The oral evidence taken before the Discipline Committee shall be recorded and, if requested, copies of the transcript shall be furnished to the parties at their own expense.
- 6) All findings of the Discipline Committee shall be based exclusively on evidence admitted before it.
- 7) No member of the Discipline Committee shall participate in a decision of the Committee unless that member was present throughout the hearing and heard the evidence and argument of the parties.
- 8) Documents and things put in evidence at a hearing of the Discipline Committee shall, upon the request of the party who produced them, be returned by the Committee within a reasonable time after the matter in issue has been finally

determined.

- 9) Where a proceeding is commenced before the Discipline Committee, and the term of office of a member thereof on the Council or on the Committee expires or is terminated, other than for cause, before the proceeding is disposed of, but after evidence has been heard, the member shall be deemed to remain a member of the Committee for the purpose of completing the disposition of the proceeding as if that member's term of office had not expired or been terminated.
- 10) A copy of the decision of the Discipline Committee shall be served upon the individual and the person who filed the complaint.

17. Public Offences

- 1) Any person, other than a member, licensee, or a certificate of authorization holder who
 - a) takes and uses orally or otherwise any title or designation allowed to be used under section 9, or uses any addition to or abbreviation of such titles, or any words, names or designations, including the use of a professional seal, with the intent that such use will lead to the belief that the person is a member, licensee, or certificate of authorization holder;
 - b) advertises, holds out, or represents in any way or by any means to be a member, licensee, or certificate of authorization holder;
 - c) wilfully procures or attempts to procure registration or licensing under this Act for that person or for another person by making, producing or causing to be made or produced any fraudulent representation or declaration, either verbal or written; or
 - d) engages in the practice of the Professions;commits an offence.
- 2) Any person who knowingly makes a false statement in any application or declaration signed or filed under this Act commits an offence.
- 3) No partnership, association of persons, or corporation shall
 - a) practise the Professions;
 - b) use any name, title, description or designation that will lead to the belief that it is entitled to practice the Professions;
 - c) advertise, hold itself out, or conduct itself in any manner as to lead to the belief it is entitled to practice the Professions,

unless the partnership, association of persons, or corporation is the holder of a valid certificate of authorization, and every member or manager of the partnership or association of persons, and every shareholder, director, officer or manager of a corporation who participates in a violation of this subsection commits an offence.

- 4) Where a partnership, an association of persons or a corporation that has a subsisting certificate of authorization practises the Professions in contravention of this Act, every member or manager of the partnership or association of persons, and every shareholder, director, officer or manager of a corporation who participates in such contravention, commits an offence.
- 5) Every person, member, or manager of a partnership or association of persons, and every shareholder, director, officer or manager of a corporation who commits an offence under this section is liable:
 - a) for the first offence, to a fine of not less than \$1,000.00 and not more than \$10,000.00;
 - b) for the second and each subsequent offence, to a fine of not less than \$5,000.00 and not more than \$50,000.00 or to imprisonment for a term of not more than six months, or to both; and
 - c) upon failure to pay a fine imposed under paragraph (a) or (b) to imprisonment for a term of not more than six months.
- 6) Upon conviction of any person for an offence under subsection (1) or (3), the judge convicting the person may in addition prohibit that person from engaging in the practice of the Professions or from doing anything for which the person was convicted.
- 7) Any person who fails to comply with an order under subsection (6) commits an offence and is liable to a fine of not less than \$1,000.00 and not more than \$10,000.00 or to imprisonment for a term of not more than six months, or both, and on failure to pay the fine to imprisonment for not more than six months.
- 8) Any person who refuses or neglects to perform any of the duties imposed by this Act, or who violates any of the provisions of this Act, shall be liable to a penalty, when not otherwise provided for, of a sum not less than \$500.00 and not more than \$10,000.00 and in default of payment to imprisonment for a term of not more than three months.
- 9) Proceedings for a contravention of this Act may be carried out by the Association without the consent of the Attorney General of New Brunswick.
- 10) No proceedings shall be commenced for an offence under this section after two years from the date of commission of the offence.
- 11) Subject to subsection (10), the *Provincial Offences Procedure Act* applies to the prosecution of all offences under this Act.

Chapter 3

Professional Practice & Ethics: Case Studies

As explained in Chapter 1, we, as Professional Engineers, are expected to take reasonable precautions or care in the practice of our engineering profession as we must hold paramount the safety, health and welfare of the public. So, what happens when we fall short of our professional responsibilities, for which we were entrusted by the public when we earned our honorable title of “Professional Engineer”?

The following ethical case studies were randomly selected to emphasize the different scenarios of professional misconduct and their potential consequences.

CASE STUDY 1:

Omega, P.Eng., as a process engineer for Universal Chemical Corporation (Universal) signed a secrecy agreement with Universal that prohibits Omega from divulging information that the firm considers proprietary. Universal developed an adaptation of a standard piece of equipment that makes it highly efficient for cooling viscous plastics slurry. The company decided not to patent the idea but to keep it a trade secret.

Omega subsequently left the employment of Universal to work for a candy processing facility that is not in any way competition to Universal. Omega soon realized that a modification similar to Universal's trade secret could be applied to a machine used for cooking fudge and at once arranged for the change to be made.

Has Omega acted unethically? Did he commit professional misconduct? What other steps, if any, should Omega have taken?

Omega has a duty to act with fairness and loyalty to his former employer and has a duty to regard as confidential information obtained as to the technical methods or processes of an employer.

As this is a specific process, it cannot be considered a skill of the engineer who is aware of it and therefore, by common law, Omega has a duty of confidence to his former employer. Any process has a number of sub-processes and components associated with it. If the modification of the process used at Universal is only one sub-process that uses only a relatively small number of components, and it is reasonable to understand that the original process could not in any way be

reconstructed from the modification, then it may be reasonable to use the modification.

If, however, the modification is only a small variation of the original process, it would be unreasonable to apply the modification without an agreement with Universal. The justification for this statement is that knowledge of the modified process may allow a third party to realize that it could have been used in a situation similar to the original purpose of the process and therefore potentially affect Universal.

If Omega had not arranged for the change yet, he should first approach his employer, indicate that there is a modification which exists which could improve upon the current processes and provide an estimate as to the savings. If his employer agrees, Omega could then act as an agent and approach Universal to determine if there are any conditions under which the trade secret could be licensed.

If Omega has already arranged for the change in such a way that others are aware of it, Omega may already be guilty of professional misconduct and his employer may be vicariously liable to Universal who may have the right to sue the company for damages. In this case, it is Omega's responsibility to inform his employer and to mitigate any potential damage caused by his actions.

CASE STUDY 2:

Alpha is a P.Eng. employed by EngInc, an engineering company. As Chief Project Engineering, Alpha is in charge of a project for BigGuy, an important client of EngInc. BigGuy and Alpha have several disagreements over the design that Alpha has developed. BigGuy wants a cheaper, more conventional solution. Alpha is convinced that the design is a "masterpiece" and believes that BigGuy "doesn't have an ounce of imagination". Alpha simply shrugs off BigGuy and refuses to discuss any other alternative.

BigGuy is furious and phones Beta, P.Eng., the president of EngInc, to yell and complain about Alpha. BigGuy threatens to hire another engineering firm to complete the design according to BigGuy's wishes.

You work for EngInc as an intermediate design engineer. Beta calls you into a private office and closes the door. Beta asks you to review Alpha's design and instructs you to keep the review a secret from Alpha. Beta explains that Alpha is a senior engineer who has been with EngInc for 28 years and could be "a bit sensitive at times".

What do you tell Beta?

Alpha is another professional engineer, and therefore it is necessary that you and Beta act at all times with fairness and loyalty and with courtesy and good faith. In addition, as Alpha is still employed by EngInc, it would be unethical to accept an engagement to review the work of another practitioner for the same employer except

with the knowledge of the other practitioner.

One may suggest to Beta to discuss the issues with Alpha, but not in the presence of the client, BigGuy. It should be emphasized that the purpose of providing engineering services is to create a design that safeguards the economic interests, as well as others, of the client. Consequently, an unconventional design, no matter how imaginative or correct, that unnecessarily causes increased economic costs on the client, should be cautioned against if there are cheaper alternatives that continue to satisfy other requirements of protecting the public welfare, the environment, etc.

Additionally, it may be considered to be a professional misconduct to provide a design that does not make reasonable provision for safeguarding the finances of the client. If the masterpiece is unnecessarily extravagant with the sole purpose of allowing Alpha to demonstrate his abilities, this could even potentially be seen as negligence if the design would not meet the standards that a reasonable and prudent practitioner would maintain in these circumstances.

What do you think of Alpha's conduct in dealing with BigGuy? How should Alpha have responded to BigGuy's request?

By "shrugging off" the client and refusing to discuss any other alternatives, Alpha is neither acting with fairness nor with loyalty to his client. In addition to displaying hubris, a good engineering design does not require imagination. The purpose of a design is to satisfy the requirements of the client while maintain the protection of the safety and welfare of the public and other interests as well as complying with applicable statutes, regulations, standards, codes, by-laws and rules. As the client is paying for the design, Alpha should address the concerns of BigGuy and indicate exactly why this design deviates so significantly from other conventional designs.

Additionally, as Alpha is an employee engineer of EngInc, by perhaps unnecessarily antagonizing a client, he may be threatening the relationship between EngInc and the client, and is therefore not acting with fairness to his employer.

CASE STUDY 3:

Omega, a P.Eng. with many years of experience and a valid Certificate of Authorization, was hired by ABC to design a fire protection system for a new building and supervise its installation. Omega produced the design and gave signed, sealed and dated copies of the final design to Theta (P.Eng.) of Faultless to install. Faultless is a contractor hired by ABC and Theta is their project manager.

Once the installation was complete, Omega provided the city with a sealed, signed and dated report affirming that the fire protection system had been installed as designed and that it met all codes and standards. Omega did not check the installation but had depended on the assurance of Theta who said that it had been

installed as designed. Omega had worked with Theta and Faultless for many years and was very confident about their work.

Three months later the city conducted a building review and found twenty deficiencies in the as-built work. They issued a letter to Omega requesting that the construction be fixed to comply with the design and standards. Omega forwarded the letter to Theta and asked her to make the necessary changes. Theta made some modifications and informed Omega a few weeks later that all the changes had been made. Omega then sent the city another sealed, signed and dated report affirming that the fire protection system had been installed as designed and that it met all codes and standards.

A second building inspection by the city found that a number of significant deficiencies still remained.

What do you think of Omega's conduct? What consequences may he face? (Keep in mind that the deficiencies appear to be the result of the installation and not the design.)

First, Omega is expected to regard his duty to the public welfare as paramount. He is also expected to have fidelity to public needs by ensuring that the installation is safe. In devotion to high ideals of personal honor and professional integrity, he should not seal a report verifying that work had been performed when that work had not checked by himself.

On two occasions, Omega acted unprofessionally by signing and sealing a report that was not actually checked by himself. As a fire protection system is in place primarily for safeguarding the life of those using the facilities in which it is installed, checking the installation would be considered a reasonable provision the engineer should take into account. In addition, checking the installation would also be a responsible provision for ensuring the installation complies with applicable statutes, regulations, standards, codes, by-laws and rules in connection with the work under the responsibility of the practitioner.

Finally, given that the original installation had twenty deficiencies, to verify that those deficiencies had all been corrected would be an action that a reasonable and prudent practitioner would maintain in this circumstance, and failure to do so would therefore, again, constitute negligence.

One may be able to argue that, while being unprofessional, the first lapse did not necessarily constitute negligence; however, the second lapse almost certainly did.

What do you think of Theta's conduct? What consequences may she face?

As Theta is overseeing the installation of a fire suppression system, she should regard

her duty to public welfare as paramount. In addition, she should be faithful to the public needs in providing an environment that is safe.

Next, Theta should act toward Omega with good faith, and this would include inspecting the installation and conveying correct information to Omega. This also applies when the deficiencies were being corrected. In addition, by not verifying—or even possibly deceiving—Omega, this does not present the loyalty one would expect to one's associate.

By not ensuring that the installation was compliant with the design on two occasions, this would constitute a failure to make reasonable provisions for safeguarding the life and health of those using the facilities; a failure to make responsible provisions for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by the practitioner; an act that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the position of supervision the installation, and therefore negligence, and possibly conduct that would be regarded as dishonorable or unprofessional.

CASE STUDY 4:

WorldEng designed and inspected the construction of a plant for MegaChem. MegaChem is now selling the plant to BuyerCo. BuyerCo is contracting EngInc to inspect the plant. I work at WorldEng and work part-time at EngInc. I have been assigned to perform the inspection of the plant.

What do you have to say about the appropriateness of your employment arrangements?

As long as I have provided EngInc with a written statement of the nature of the practitioner's status as an employee at WorldEng and the attendant limitations on the practitioner's services to the client, I feel that the work I do at EngInc does not conflict with my duty to WorldEng, and I have informed WorldEng about my part-time employment, I am not in violation of the Code of Ethics.

However, I would be guilty of professional misconduct if I ever fail to make prompt, voluntary and complete disclosure of an interest, direct or indirect, that might in any way be, or be construed as, prejudicial to my professional judgment in rendering service to the public, to WorldEng or to EngInc when contracting in my own right to perform professional engineering services for other than WorldEng.

Assuming that your employment arrangements have not changed since the plant was designed and constructed, how do you respond to EngInc's request for assistance?

To avoid professional misconduct, I would have to immediately point out my prior

connection with the plant at WorldEng and indicate that this would be a direct interest which, even if I was to be professional in my conduct, would be construed as prejudicial. Depending on the size of EngInc, it may be necessary to take a voluntary leave for the duration of the inspection.

Is a P.Eng. license sufficient to permit you to provide services to EngInc.?

A Certificate of Authorization is required if a P.Eng. is a full-time employee, but offer engineering services directly to the public on a part-time, moonlighting, or volunteer basis. Therefore, regardless of whether or not my colleague at EngInc is taking responsibility for my work, if my actions are in the practice of professional engineering, I would require a Certificate of Authorization as EngInc is not my direct employer.

CASE STUDY 5:

Tau, the owner of a house in the City of Alpha, Ontario, was notified by the city that the condition of the foundation walls of his house violated the standards set out in the city's property standards by-law. The city, being concerned that the foundation walls had deteriorated to the point of being structurally unsafe, ordered Tau to obtain a written report by a professional engineer as to the walls' condition. Omega prepared a report stating that he had inspected the foundation and that the foundation walls appeared to be "structurally sound and capable of safely sustaining the house for many more years".

Tau submitted Omega's report to the city. In response, the city sent a letter to Tau with a copy to Omega pointing out the city's observations regarding the deterioration of the walls, including evidence of significant water permeation, together with photographs taken by the city's inspector. In the letter, the city requested the condition of the foundation be reassessed and a response be made to the city within two weeks. Tau was unaware that Omega would be waiting for authorization for him to spend more time on the project and accordingly did not contact Omega and request him to respond. Omega did not follow up with either Tau or the city.

Following a second request to Tau, copied to Omega, Omega responded by letter to the city, advising that he had never examined the interior of the walls, only the exterior and admitted the photographs provided by the city indicated that the foundation was structurally unsound.

What is your opinion on the engineering services provided by Omega? What do you think of his conduct regarding his dealings with the City?

The question indicates that Omega was licensed, but it does not mention that he had a Certificate of Authorization to provide engineering services to the public. If he did

not have such a certificate, one could allege professional misconduct.

By not inspecting the interior of the walls, one could allege professional misconduct by negligence as one would suspect that a professional engineer asked to inspect walls would, at the very least, inspect both sides.

By attempting to assist Tau in not repairing the walls, one could allege professional misconduct as Omega would not be safeguarding the life of Tau and others.

The report does not state Omega's area of competence, but if he is not trained in civil engineering, one could allege professional misconduct by undertaking an inspection which would fall under the specialization of a civil engineer.

Finally, by submitting a report which could have the potential of the city by-laws not being enforced in a situation where they are being contravened, one could allege professional misconduct in attempting to allow Tau to not comply with local by-laws.

CASE STUDY 6:

Prodigy is a professional engineer who is employed on a full-time basis by MajorEng, a large engineering firm. However, for a number of reasons, Prodigy is unhappy and for some time has been thinking about looking for a new job. Although Prodigy's current employment at MajorEng provides good pay and interesting work, Prodigy is finding it difficult to work with Overseer, a professional engineer who is Prodigy's supervisor at MajorEng.

Since joining MajorEng a year ago, Overseer has frequently made derogatory jokes and remarks about Prodigy's race and religion—sometimes even in meetings with other engineers and clients. On many occasions, Prodigy has informed Overseer that such remarks are offensive, hurtful, and inappropriate and has asked Overseer to stop. Overseer refuses to do so and says that Prodigy should "toughen up and learn to take a joke", if Prodigy expects to have a successful career at MajorEng.

Recently, Prodigy met with a professional engineer colleague who is a vice president at EngCo, another engineering company. Upon hearing that Prodigy was interested in considering other opportunities, the colleague offered Prodigy a part-time job to work in the evenings and on weekends on a trial basis as an engineer for EngCo. Prodigy would work under the colleague's supervision with the intent that in a few months, if Prodigy preferred working at EngCo, Prodigy would resign from MajorEng and become a full-time employee of EngCo.

What is your opinion on Overseer's conduct?

Overseer's jokes and remarks are not aligned with his ethical duty to act with fairness to his subordinate and his actions would not appear to be treating another practitioner

with what one would consider courtesy. It would appear that Overseer is possibly guilty of professional misconduct with respect to both harassments, as a supervising engineer, failing to maintain the human rights code with respect to employment. As Prodigy has already approached Overseer on this issue, Overseer cannot claim ignorance on this matter.

What should Prodigy consider doing about Overseer's conduct?

Prodigy has the right to freedom from harassment in the workplace by another employee because of race and creed. Out of fairness to his supervisor, he should inform Overseer using an appropriate medium of the specific statutes which Prodigy believes are being violated and that he feels that they are applicable. If Overseer continues in his behavior, Prodigy should report the situation with supporting documentation to the Human Resources department of MajorEng. If neither of these produces an appropriate result, Prodigy would be correct to file a complaint with the authorities of his jurisdiction.

What requirements, if any, Prodigy must satisfy to properly undertake such part-time employment with EngCo?

Prodigy has an ethical responsibility to inform EngCo in a written statement as to his current employment status, he must determine that this part-time employment will not affect his current employment, and he must inform his employer that he is taking on this part-time employment.

Moreover, he must deal fairly with his current employer and therefore ensure that the part-time work does not affect his performance. He has a duty to personal integrity in ensuring that neither his employer nor EngCo are adversely affected by his dual-employment status.

Finally, it would constitute a professional misconduct not to make prompt, voluntary and complete disclosure of a shared interests between the work performed by the two companies, either direct or indirect, that might in any way be, or be construed as, prejudicial to Prodigy's professional judgment to an employer or to a client without making a full disclosure. Specifically, Prodigy should ensure that any work he does for EngCo does not directly or indirectly compete with MajorEng.

Appendix A

References

Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB)
<https://www.apegnb.com/>

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