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# ***FOREWORD***

The APEGGA Code of Ethics, as revised by the membership in 1987, consists of brief statements of ethical principles in the form of a Preamble, and eleven enforceable Rules of Conduct. It comprises part of the Regulations (Schedule A). The Manual of Practice was developed subsequently, and approved by the Council of the Association in 1989. The revised code was approved by the Lieutenant Governor in Council in 1990.

This manual is an interpretive document which amplifies the Code of Ethics. Each article of the Preamble and the Rules of Conduct is repeated, followed by further guidelines and commentary to assist APEGGA members in dealing with ethical situations and to assist all professionals in their understanding and application of the Code. After the commentary on each rule, case studies of typical ethical examples are included.

The manual will not provide quick solutions to all ethical situations. Members of APEGGA are reminded that at all times they should be guided by the spirit of the Code of Ethics.

The Code of Ethics applies to all APEGGA members whether they are actively engaged in engineering, geological or geophysical work or are working in other areas such as management, and it applies to APEGGA members employed by the buyers of professional services as well as the consultants they retain.

# ***SECTION 1***

## ***CODE OF ETHICS***

**(established pursuant to section 18(1)(h) of the Engineering, Geological and Geophysical Professions Act)**

### **Preamble**

Professional engineers, geologists and geophysicists shall recognize that professional ethics is founded upon integrity, competence, and devotion to service and to the advancement of human welfare. This concept shall guide their conduct at all times. In this way each professional's actions will enhance the dignity and status of the professions.

Professional engineers, geologists and geophysicists, through their practice, are charged with extending public understanding of the professions and should serve in public affairs when their professional knowledge may be of benefit to the public.

Professional engineers, geologists and geophysicists will build their reputations on the basis of merit of the services performed or offered and shall not compete unfairly with others or compete primarily on the basis of fees without due consideration for other factors.

Professional engineers, geologists and geophysicists will maintain a special obligation to demonstrate understanding, professionalism and technical expertise to members-in-training under their supervision.

### **Rules of Conduct**

1. Professional engineers, geologists, and geophysicists shall have proper regard in all their work for the safety and welfare of all persons and for the physical environment affected by their work.
2. Professional engineers, geologists and geophysicists shall undertake only work that they are competent to perform by virtue of training and experience and shall express opinions on engineering, geological or geophysical matters only on the basis of adequate knowledge and honest conviction.
3. Professional engineers, geologists and geophysicists shall sign and seal only reports, plans or documents that they have prepared or that have been prepared under their direct supervision and control.

4. Professional engineers, geologists and geophysicists shall act for their clients or employers as faithful agents or trustees, always acting independently and with fairness and justice to all parties.
5. Professional engineers, geologists and geophysicists shall not engage in activities or accept remuneration for services rendered that may create a conflict of interest with their clients or employers, without the knowledge and consent of their clients or employers.
6. Professional engineers, geologists and geophysicists shall not disclose confidential information without the consent of their clients or employers, unless the withholding of the information is considered contrary to the safety of the public.
7. Professional engineers, geologists and geophysicists shall present clearly to their clients or employers the consequences to be expected if their professional judgement is overruled by other authorities in matters pertaining to work for which they are professionally responsible.
8. Professional engineers, geologists and geophysicists shall not offer or accept covert payment for the purpose of securing an engineering, geological or geophysical assignment.
9. Professional engineers, geologists and geophysicists shall represent their qualifications and competence, or advertise professional services offered, only through factual representation without exaggeration.
10. Professional engineers, geologists and geophysicists shall conduct themselves toward other professional engineers, geologists, and geophysicists, and toward employees and others with fairness and good faith.
11. Professional engineers, geologists and geophysicists shall advise the Registrar of any practice by a member of the Association that they believe to be contrary to this Code of Ethics.

Under section 43 of the Act, a contravention of this Code of Ethics may constitute unprofessional conduct or unskilled practice which is subject to disciplinary action.

## ***SECTION 2***

# ***THE PROFESSIONS***

A profession is a learned calling with specialized skills, distinctive functions and recognized social obligations and has unique characteristics.

- It renders services based upon advanced knowledge, skill and judgement.
- It is charged with a substantial degree of public obligation and performs its services largely in the general public interest.
- It is bound by a distinctive ethical code in its relationships with clients, employees, colleagues and the public.
- It assumes responsibility for actions related to professional services provided in a personal or supervisory capacity.

Professions such as engineering, geology and geophysics are generally highly organized; they have definitive standards of admission (which are minimum standards only and make no distinction between the least competent persons and the outstanding leaders of the profession); they regulate the activities of their members; they promote the advancement of knowledge, skill and experience; and they encourage the formulation of standards. While professionals should be fairly remunerated for their services, their members are expected to put service above gain, excellence above quantity, rewards of self-expression above any pecuniary incentive, and a code of honour above competitive spirit.

Professional engineers, geologists and geophysicists must be accountable for their profession generally, their own professional practice and for the professional practice of those under their supervision. They also have an obligation to conduct themselves and practice their profession in accordance with ethical standards. Professionals depend on confidence of two kinds for effective pursuit of their work — the personal confidence of the client or employer in the technical competence of the engineer, geologist or geophysicist and the confidence of the public at large in the integrity and ethical conduct of the profession as a whole. This, in turn, imposes a correlative duty and responsibility upon both the profession and the individual engineer, geologist and geophysicist to justify the trust they enjoy from the public, the client or the employer.

The accountability and responsibility accepted by professionals are also a part of their obligations to society. In their practice they are concerned about maintaining the physical environment so as to ensure the well-being of future generations.

Further discussions on the professions may be found in "Engineers and Their Profession" by J.D. Kemper, as well as the APEGGA publications "Concepts of Professionalism" and "The Practice of the Professions of Geology and Geophysics" which are available from the APEGGA office.

## ***SECTION 3***

### ***ETHICS***

The word "Ethics" comes from the Greek word "Ethos" and is defined as the study of standards of right and wrong: that part of science and philosophy dealing with moral conduct, duty and judgement. Ethics deals with voluntary actions specifically taken by an individual with sufficient knowledge of the options available to him or her.

Codes of Ethics are drawn up to express the expectations of a group of persons of common vocation with regard to their conduct.

The professional engineer, geologist or geophysicist has specific privileges and responsibilities which have meaning and substance in our society only when they are coupled with a sense of ethical behaviour. Because society is changing rapidly, a high level of ethical behaviour on the part of the professional is increasingly important.

The professional engineer, geologist and geophysicist should apply the Code of Ethics not in passive observance but as a set of principles dynamically guiding his or her professional conduct. The true professional will then incorporate ethics into his or her daily decision-making situations.

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

# ***SECTION 4 INTERPRETATION AND AMPLIFICATION OF THE CODE OF ETHICS***

## ***Preamble — Service and Human Welfare***

**Professional engineers, geologists and geophysicists shall recognize that professional ethics is founded upon integrity, competence, and devotion to service and to the advancement of human welfare. This concept shall guide their conduct at all times. In this way each professional's actions will enhance the dignity and status of the professions.**

They shall be consistently honest, impartial and fair in their relationships with clients, associates, the public and others affected by their actions. (See also Rule 10.)

They shall diligently complete their undertakings in good conscience, putting aside self-interest and demonstrating concern for the expectations and welfare of the public.

They shall, as recipients of specialized training in the applied sciences, be responsible for exercising these skills in a conscientious manner so as to benefit the safety, health and welfare of the public, and society generally.

They shall respect the privilege of professionalism by adhering to the requirements of legislation governing their professions and in so doing be worthy of the trust of society.

They shall practice good stewardship to ensure well-planned and cost effective use of resources.

They shall avoid associating with professionals who do not conform to recognized ethical practices and with individuals of questionable integrity.

In simple words, they should do the best possible job, maintain and improve standards, and attempt to make the world a better place. This in turn will give visible credibility and dignity to their professions.

## ***Preamble — Public Involvement***

**Professional engineers, geologists and geophysicists, through their practice, are charged with extending public understanding of the professions and should**



**serve in public affairs when their professional knowledge may be of benefit to the public.**

They shall endeavour to promote and present their professions to the public in a clear and positive manner and to extend public knowledge and appreciation of the professions and their achievements.

They shall serve on public boards, boards of directors and other organizations but in so doing shall not use their position to exert inappropriate influence to secure professional assignments. (See also Rule 8.)

They shall endeavour to participate in society at all levels, from community affairs to public office, with attention to the professional integrity, tact and the decorum expected from APEGGA members.

### ***Preamble — Reputation Through Merit***

**Professional engineers, geologists and geophysicists will build their reputations on the basis of merit of the services performed or offered and shall not compete unfairly with others, or compete primarily on the basis of fees without due consideration of other factors.**

They shall offer proposals for service based on fair and complete analysis of the requirements for professional accomplishment of the work.

They shall determine fees by reference to the scope of work and the level of service required without compromising quantity and quality of work.

They shall not request or accept professional commissions under circumstances which may, or might appear to, compromise their professional judgement.

### ***Preamble — Professional Leadership***

**Professional engineers, geologists and geophysicists will maintain a special obligation to demonstrate understanding, professionalism and technical expertise to members-in-training under their supervision.**

They shall ask for, and expect, the thorough performance of assigned tasks and also take time to review the quality of work and general performance to assist in the personal growth of members-in-training.

They shall assign duties to members-in-training that make use of their training and experience and give them maximum exposure to the background, training and knowledge of experienced professionals.

They shall provide leadership by becoming active members in the engineering, geological or geophysical societies that embrace their technical specialty, and they shall encourage members-in-training to follow this example.

They shall encourage members-in-training to participate in professional development seminars and continuing education programs offered by APEGGA and encourage participation in the presentation of papers at professional meetings.

They shall promote informal discussions with senior professionals on ethical dilemmas, individual interests, and professional growth in order to maintain an up-to-date and competitive capability to serve clients and the public.

They shall encourage members-in-training to become professional members when they demonstrate adequate qualifications.

## ***Rule 1 — Public Safety and Welfare***

**Professional engineers, geologists and geophysicists shall have proper regard in all their work for the safety and welfare of all persons and for the physical environment affected by their work.**

### **Amplification**

- a. They shall regard their duty to the public safety and welfare as paramount.
- b. They shall take appropriate action or notify proper authorities of any instance where, in their professional opinion, they believe that public safety or welfare is endangered or the physical environment is adversely affected. (See also Rule 11.)
- c. They shall not complete, sign or seal plans or other documents that, in their professional opinion, would result in projects hazardous to the public or detrimental to human welfare, would have unnecessary adverse effects on the environment or would not conform to current engineering, geological or geophysical standards. If the clients or employers insist on such conduct, and the professional is unable to dissuade them, then the commentary regarding Rule 7 should be followed.

## Commentary

Professionals must understand their obligations with respect to the many "external" regulations bearing on the public safety and welfare, including environmental protection and health, industrial and construction safety acts and current building codes.

The professional employee should maintain a responsible interest in both the immediate and long-term effects of the application of practices and technologies that affect public welfare and, if necessary, advise corporate management accordingly.

### Case Study 1

*A professional engineer was responsible for supervising the perforating procedures for the well casing opposite a potential gas producing zone. There was no fluid within the casing; therefore the flow of natural gas after perforation would not be contained within the producing formation by the hydrostatic pressure of fluid.*

*A professional geologist, who was familiar with operations at the well site and knew that the well could produce significant volumes of gas at a high formation pressure, had correctly selected the depth intervals at which the casing was to be perforated.*

*The perforating company, acting under the supervision of the engineer, proceeded to perforate the "dry" casing. The perforating tools and cable were blown from the well by a significant, uncontrolled flow of high pressure gas. A nearly unmanageable amount of natural gas flowed from the well, creating hazards to equipment and placing several lives at risk.*

*Fortunately the well was brought under control and capped without injury to the workers. This might not have been accomplished under other circumstances, for example, if the gas flow had been greater, or if the gas had contained hydrogen sulphide.*

The failure in communication between two technical professionals endangered the lives of fellow workers and could have caused significant economic loss as well as damage to the environment. Rule 1 of the Code was clearly violated.

The professional geologist failed to caution the supervising engineer regarding the high gas zone, and the potential hazard of a "blowout".

The professional engineer on site was responsible for anticipating a variety of possible hazards involved in perforating a well casing opposite a potentially high pressure gas zone. He should have consulted the geologist regarding the well before he decided upon perforating procedures. The correct procedures for perforating under the existing circumstances would have been to control the gas flow by filling the well casing with a drilling or completion fluid prior to perforating it.

### Case Study 2

*A professional engineer is a member of a design team with MM Design Build Corporation, an*

*APEGGA Permit Holder. The corporation has been retained to design a pulp mill near Innesville in northern Alberta and complete operational trials up to a specified capacity. The professional engineer was born in this area and spent all his pre-university years on a farm near Innesville.*

*Instructions to the design team include rigid compliance with all government regulations concerning environmental damage as well as permissible volumes and contents of liquid and airborne pollutants.*

*As the design proceeds and initial visits are made to the site, the engineer realizes that airborne pollution will barely satisfy current regulations. From his local knowledge, he realizes that the mill odours carried by prevailing winds at the site will significantly affect the quality of life in two major communities within 20 miles of the site.*

*What action should the professional engineer take?*

The professional engineer has a prime responsibility to complete his technical responsibilities efficiently with regard to this project according to existing regulations. He should also inform his supervisors at MM Corporation of his special concern regarding the local area as a part of his desire for a totally successful project. (See also Rule 7.)

The potentially negative public reaction to both MM Corporation and future projects of this type should cause the corporation to review the matter with the owners. At this early stage of design it may be practical to introduce low-cost modifications to reduce or eliminate these potential environmental hazards resulting from airborne pollution.

## ***Rule 2 — Competence and Knowledge***

**Professional engineers, geologists and geophysicists shall undertake only such work as they are competent to perform by virtue of training and experience and shall express opinions on engineering, geological and geophysical matters only on the basis of adequate knowledge and honest conviction.**

### **Amplification**

The first part of this rule is considered to be sufficiently explicit without further amplification. The second part is amplified as follows:

- a. They shall clearly distinguish between facts, assumptions and opinions in reference to engineering, geology or geophysics in group discussion, public forum or publication of articles.
- b. They shall not make statements, criticisms, or arguments inspired or paid for by

private interests on matters related to public policy, unless they indicate on whose behalf they are making the statement.

- c. They shall ensure, to the best of their ability, that statements on engineering, geological or geophysical matters attributed to them properly reflect their professional opinion.

## Commentary

Professional engineers, geologists or geophysicists should undertake assignments only when they believe that they are competent to do so. This is a separate consideration from the standard of care that a court would require in dealing with negligence; it is an ethical issue requiring honesty with one's client or employer and one's self.

This honesty extends also to the results of one's work. It is incumbent upon professionals to express the results clearly and accurately; to place an appropriate qualification on the results when a matter is only partially resolved, and to avoid bias due to political, economic or other nontechnical factors. In both corporate and societal settings, they must focus discussion on the facts of the issue and do their best to ensure that their professional opinions are accurately represented. When presenting complex issues to a non-technical audience, the professional must simplify his or her discussion without losing the critical elements in order to avoid misinterpretation by the audience.

This rule clearly does not prevent professional engineers, geologists and geophysicists from tackling new challenges and learning new skills as long as the successful completion of the assignment is not jeopardized, and honesty is maintained with the client or employer. In a related sense, professionals should not overlook the fact that today's technical society demands specialized knowledge to be efficient and competitive. Every professional should establish a personal program of continuing education to maintain and upgrade their knowledge and competence.

Professionals need not be devoid of personal or political interests; rather, they should separate their personal views from their professional activities and be impartial and factual when expressing professional opinions. (see Preamble 2).

### Case Study

*To a number of prospective clients, Engineer A advertised his project management skills, experience in process engineering, research accomplished on critical process components, and ownership of patentable processes.*

*Following submission of a proposal, Engineer A was retained by Company XYZ to design a specialized process plant and conduct research and testing of critical components required to achieve full production at the facility. As work proceeded delays occurred, primarily due to lack of adequately detailed drawings from Engineer A. As soon as the operating equipment was installed, a check run was conducted to assess the process capacity. Despite numerous time consuming adjustments, the tests never achieved the minimum flow estimated by Engineer A. Revised designs*

*required purchase of additional equipment jeopardizing the economics of the plant. When clarification was requested on the ownership of patentable processes no information was provided by Engineer A. Company XYZ contacted APEGGA with a complaint that Engineer A had misrepresented his capabilities to handle the project.*

*A formal hearing confirmed that Engineer A and his company had not performed in a skillful manner, had not coordinated the plant design, and had not monitored the capacities of various components and had not displayed the competency that was promised.*

Engineer A clearly violated Rule 2 of the Code of Ethics. He "over sold" his capabilities, and when it became clear that the design was not progressing well, he did not seek expert assistance.

It is most important, especially today, that each professional regularly review his own and his firm's capabilities to provide specific services to the public. Many "proven" specialty companies are available to call on when required. However, if specialized assistance is needed, it is important that the company's credentials be checked out with some care, particularly when a lack of capability could result in serious adverse consequences.

When subconsultant expertise is retained, it must be with the client's full knowledge and approval.

## ***Rule 3 — Signing and Sealing***

**Professional engineers, geologists and geophysicists shall sign and seal only reports, plans or documents that they have prepared or that have been prepared under their direct supervision and control.**

### **Amplification**

- a. A professional stamp or seal affixed to a document is intended to indicate to the public that the document has been produced under the supervision and control of a fully qualified professional member of APEGGA. Professional stamps and seals must be affixed, signed and dated only after the responsible member is satisfied that the document or component for which he or she is professionally responsible is complete and correct.
- b. An adequate supervision and control system is defined as a system which permits an APEGGA member to properly accept professional responsibility to the public for the results of the engineering, geological and geophysical tasks performed by others working under his or her supervision and control. Additional information on this topic is available in the APEGGA guideline "Professional Designations, Professional Seals and Permit Stamps".

## Commentary

Professional engineers, geologists and geophysicists who apply their seals or stamps to reports, plans or other documents are in effect stating that they understand and are in agreement with these documents. If documents were prepared by other members of the engineering or earth science team, the responsible professional must have exercised sufficient supervision and control so that he or she can sign based on personal knowledge.

Professionals must as a matter of practice keep their stamps and seals under immediate and direct control.

The absence of a seal or stamp does not necessarily indicate that the document has not been reviewed by a professional member, nor does it relieve the member from professional or legal responsibility if it can be shown that he or she was involved with the work.

Engineer M did some work for his personal friend who owned ABC Steel Industries. He had signed and stamped welding report forms without having visited the premises for all the required inspections.

### Case Study 1

*During an APEGGA disciplinary hearing, Engineer M stated that he normally would visit the shop and have the shop foreman fill out certain parts of the inspection report. He would then conduct his inspection and sign the report form, signifying his agreement with the information provided.*

*Engineer M acknowledged that he signed the reports on certain occasions without making the required inspections but indicated that his action was prompted by a request from his friend the shop owner. In these instances, he did consult with the shop foreman by telephone.*

*Considering that Engineer M neither asked for nor received a fee for signing the reports or for the inspections he did make, did he violate Rule 3 of the code of ethics?*

No matter what his motives were, Engineer M violated Rule 3 by indicating that he had witnessed and had personal knowledge of specific welding work.

A practical alternative for this type of inspection process might be to develop a mutually acceptable alternative report certifying approval of those operational procedures used by the shop foreman and reviewed during the engineer's inspection visits to support his confidence in the foreman's understanding of the work.

### Case Study 2

*A geophysical consulting company was awarded an assignment to design a drilling program, interpret data, evaluate the potential of the field and prepare a report for use by a client to raise capital from the public. The President was a professional geophysicist and he assumed both corporate and professional responsibility for the professional practice of the company. He*

*maintained custody of the permit stamp and only he was authorized to affix and sign it before completed documents were issued.*

*Because the assignment came at a time when the company was extremely busy, the professional geophysicist assigned to direct and control the project was not able to devote as much attention to the assignment as he believed was needed to provide an adequate level of professional direction.*

*When the report was completed the project geophysicist discussed the report with the President. Although he believed that the project staff had performed their respective duties responsibly and well, he expressed concern that he had not been able to properly supervise the work. He explained that for this reason he had not affixed his professional stamp to the final report. The President accepted this explanation and without further review affixed and signed the permit stamp to the report and mailed it to the client.*

*The report was accepted and used to develop a prospectus for distribution to potential investors. Several years later an error was discovered in the report which had the effect of overstating the investment potential by a factor of three.*

*The client sued the consulting company and named the consulting company, the President and the responsible geophysicist in the lawsuit. One of the investors complained to APEGGA.*

*Who should bear the major responsibility for the error that precipitated the lawsuit - the President of the consulting company or the responsible geophysicist?*

*To what extent is the geophysicist responsible, having refused to affix his professional stamp?*

The President of the consulting company must bear the major responsibility for two reasons:

- He neglected to review the geophysicist's workload before assigning the assignment to him;
- He neglected to review the report himself or have it reviewed by the geophysicist before applying the permit stamp and issuing it to the client.

The geophysicist, however, is not without blame. He should have told the President that he would be unable to properly supervise this project when it was assigned to him.

## ***Rule 4 — Faithful Agent or Trustee***

**Professional engineers, geologists and geophysicists shall act for their clients or employers as a faithful agent or trustee, always acting independently and with fairness and justice to all parties.**



## **Amplification**

- a. They shall hold their client's or employer's interests in high regard. Three duties take precedence over the interests of their client or employer:
- their duties to protect the safety of the public;
  - their duties to their professions under the Code of Ethics;
  - their duties to act fairly and justly to all parties when administering a contract on behalf of their client or employer.

Where the interests of their client or employer are in conflict with the above enumerated duties, they shall advise their client or employer.

- b. They shall engage, or provide advice on engaging, experts and specialists when in their judgement such services are to their client's or employer's best interest.
- c. They shall act with fairness and justice to all parties when administering a contract on behalf of their client or employer.
- d. They shall be realistic and honest in all estimates, reports and statements.

## **Commentary**

In providing services to a client, professionals should consider themselves part of the client's organization, or team, with high regard for the client's interests. This is implicit in the terms "faithful agent or trustee" and should be the basis of the professional-client relationship. The professional's duties of care for client's interests must not supersede the professional's duties to protect public safety and other duties which may be in conflict with his or her client's interest. Professionals must put their client's interests before their personal interests. (See also Rule 6.)

If professionals become aware of errors or omissions in their services, they should report these to their superiors immediately and work positively to remedy such errors and omissions. Where questions of insurance coverage and liability arise, professionals should address these matters through the appropriate authority in their own organizations.

Professionals have an obligation to provide timely notification and advice to their clients when they believe a project will not be successful.

Professionals involved in project management, contract supervision, contract administration or review during construction should spend sufficient time on the job to ensure that their direction, reports and estimates reflect actual site conditions and progress. Their interpretation of agreements and contract documents should reflect the spirit and intent of the documents.

The relationships of professionals with their business associates should be friendly but independent

and free from obligating gratuities. (See also Rule 8.)

### Case Study

*John Smith, an engineer employed by the ABC Manufacturing Company, in the course of his work as a design engineer conceived an idea which in his opinion would produce a commercial product which could be manufactured by his employer at less than present cost. Smith was also of the opinion that the idea was patentable. However, he did not disclose the idea to his superiors in the company and shortly thereafter left the employ of the ABC Manufacturing Company to develop his idea and to initiate action to obtain a patent on it.*

*When first employed by the ABC Manufacturing Company, Smith had signed the usual agreement that he would disclose to his employer any inventions developed or conceived by him in the course of his employment and would assign to his employer all rights, title, and interest to such inventions. As part of Smith's agreement, the ABC Manufacturing Company agreed to pay Smith the sum of \$50 upon disclosure of the invention and an additional \$100 when and if a patent was granted.*

*Was it ethical for Smith to withhold disclosure of his invention contrary to his agreement with his employer?*

*If he had not signed the agreement with ABC Manufacturing Company, would the situation be changed?*

Smith by his actions did not conform to the concept of being a "trustee" or "faithful agent". As a faithful agent or trustee of his employer, Smith was required to act in a manner intended to serve his employer's best interests. By withholding his patentable idea he acted contrary to the interests of his employer.

If the disclosure agreement between Smith and his employer had not been in place, he would still be ethically obligated, as a faithful agent of ABC Manufacturing Company, to disclose his invention which was developed in the course of his employment. This does not require Smith to relinquish his patent rights.

Had Smith followed the ethical procedure of informing the company of his idea and had the company declined to pursue it, he could then have obtained a written release to enable him to legally pursue this idea in his own time.

## ***Rule 5 — Conflict of Interest***

**Professional engineers, geologists and geophysicists shall not engage in activities nor accept remuneration for services rendered that may create a conflict of interest with their clients or employers, without the knowledge and consent of their clients or employers.**

## Amplification

- a. They shall not accept compensation from more than one interested party for the same service, or for services pertaining to the same work under circumstances where there may be a conflict of interest without the consent of all interested parties. In any cases, conflicts of interest must be disclosed before accepting assignments.
- b. They shall not accept any royalty or commission on any article or process used on the work for which they are responsible without the consent of their clients or employers.
- c. They shall not act as a consultant respecting any work for which they may become a contractor or have any contractual involvement on a project where they may be acting as a consultant without first informing and receiving approval from their clients.
- d. They shall not accept assignments the results of which they know they may later act upon as members of a public or quasi-judicial board without first informing and receiving approval from their clients and the board. Along with this approval, there should be a clear understanding that when the matter comes up for a vote before the board, they shall declare a conflict of interest.

## Commentary

The professional should inform his client or employer of any business connections, interests or circumstances which, through a potential conflict of interest, may be deemed to influence his judgement or the quality of his services. The client or employer should have the unencumbered service of the professional, and where this cannot be supplied the professional shall first inform his or her client or employer and receive approval before proceeding.

Because gratuities may cause conflict of interest, vigilance on the conservative side must be practiced by the professional.

The professional should avoid apparent as well as actual conflict of interest.

### Case Study 1

*James Brown, a professional engineer, is a municipal engineer and a member of a Regional Planning Board. He also engages in a part-time consulting practice.*

*In his capacity as a consulting engineer, Brown first prepared the plans for a subdivision development; then as a municipal engineer he recommended approval of his plans to the Regional Planning Board. As a member of the Regional Planning Board, he later voted to approve these plans.*

*Are Brown's activities as described above in conflict with the Code of Ethics?*

Engineer Brown's activities, as described, are in clear conflict with the Code of Ethics, and are unethical.

It is self-evident that a professional person should not take action or make decisions which would divide his loyalties or interests from those of his employer or client.

### Case Study 2

*Jane Doe, P. Geoph. is a consulting geophysicist specializing in seismic interpretation in oil and gas exploration. While on contract to Company A, she made a seismic interpretation and evaluation of several of its oil and gas leases using data purchased by Company A from an independent company. This included a seismic survey in the area which the company had conducted on a speculative basis hoping to sell the data to any interested potential purchaser. The seismic data covered Company A leases and also several adjacent sections of Crown land. Jane Doe's report indicated that several seismic anomalies existed on the Crown lands. These anomalies were similar to a seismic feature previously explored by Company A which proved to be a prolific gas discovery.*

*Several months later when the Crown Petroleum and Natural Gas rights were posted for sale by the province, Company B approached Jane Doe to do a seismic evaluation of the area including the Crown mineral rights. Prior to accepting the assignment, Doe learns that the seismic data to be used is the same data that she had previously evaluated for Company A, but Company B's data does not cover Company A's gas discovery well, which is being held confidential by Company A.*

*Can Doe accept an assignment from Company B without a conflict of interest?*

Jane Doe clearly has an obligation to protect her client's competitive advantage in this area. Company A has drilled a seismic anomaly and has a prolific gas discovery which is still confidential to it. Similar anomalies are present on lands posted for an upcoming sale of Crown Petroleum and Natural Gas rights. This puts Company A at a great competitive advantage in bidding at the sale and therefore Doe should not even contemplate an offer to evaluate the leases for Company B. This is true regardless of the seismic data sets used.

In addition, Doe's obligation continues whether or not Company A continues to use her services. Should Company A retain another geophysicist to evaluate the crown mineral rights, Doe is still not free to work for Company B in this competitive situation.

## ***Rule 6 — Confidentiality of Information***

**Professional engineers, geologists and geophysicists shall not disclose confidential information without the consent of their clients or employers, unless the withholding of the information is considered contrary to the safety**

**of the public.**

## **Amplification**

- a. They shall not use information coming to them confidentially in the course of their assignments for personal gain.
- b. They shall not divulge any confidential findings of studies or actions of any commission or board of which they are members, or for which they are acting, without official consent except as required by law.
- c. They shall not divulge specific confidential information acquired during the course of an assignment for a client or while employed by a former employer to either another client or new employer, unless permission is obtained from the previous client or employer.
- d. They shall not divulge any information of a confidential nature to public authorities unless required by law to do so and then only to the extent required by law. Where any confidential information is disclosed to public authorities, the members shall ensure that their former or present employers and clients are advised to such disclosure as soon as practicable.

## **Commentary**

All information coming to the knowledge of a professional from his or her employer or client should be considered as confidential. Confidential information, where specifically noted as such, is privileged and proprietary information and is only loaned to a professional to enable him or her to appraise a situation for a specific project.

Process information and/or all confidential information received during professional service shall be considered the exclusive property of its owner and shall not be disclosed to others except with the owner's specific approval. Particular care should be taken regarding trade practices that may be unique and all practices that identify the owner's special attributes.

When professionals use designs supplied by clients, the designs remain the property of the clients and should not be duplicated by the professionals for others without the express permission of the first client.

Professionals may contemplate engaging in new work that would require the application of confidential knowledge that was obtained through other projects; however, they should not promote such work or employment, or negotiate for it, without the consent of all parties connected with the prior projects that were of a confidential nature.

Technical knowledge gained by an individual through exposure to the work environment is part of

the professional's experience and may be freely used in subsequent projects without consent from other parties.

The duty not to disseminate secret and confidential information obtained in the course of one's work is an obligation recognized and enforced by common law, oaths of secrecy, the Criminal Code, and non-disclosure provisions of specific statutes. However, many legal uncertainties remain regarding laws requiring disclosure and laws requiring confidentiality.

These conflicting requirements may present a dilemma to the professional engaged to design and/or supervise a project that may be dangerous to the public. The professional's responsibility to protect the well-being and safety of the public may well be in conflict with the duty to client or employer to act as a loyal agent and not disclose, without consent, confidential information concerning the client's or employer's business affairs, technical methods, or processes.

Since duty to the public is paramount, a professional in such conflict is required to advise the employer or client, preferably in writing, of a concern regarding the material threat to the public. If the concern is ignored or overruled and the client or employer continues to follow a course of action that is harmful, the professional must inform his other employer or client that he or she is ethically bound to present the concern to the appropriate authorities and perhaps even disassociate himself or herself from the project. Whatever the professional chooses to do, in discussing the concern, he or she must not disclose the employer's or client's confidential information gained during the term or employment, except as required by law. (See Rule 11.)

Where, in the opinion of the professional, the withholding of confidential information jeopardizes public safety, he or she should make every effort to contact all parties before disclosure of this information to the proper authority.

#### Case Study 1

*The XYZ Corporation has been advised by a pollution control agency that it has 60 days to apply for a permit to discharge manufacturing wastes into an adjacent lake. The agency has also advised XYZ of the minimum standard that must be met.*

*In an effort to convince the agency that the lake will still meet established environmental standards after receiving the manufacturing wastes, the corporation employs Engineer Jones to perform consulting engineering services and submit a detailed report.*

*After completion of his studies, but before completion of any written report, Jones concludes that the discharge from the plant will lower the quality of the lake below established standards. He further concludes that corrective action will be very costly. Jones verbally advises the XYZ Corporation of his findings. Subsequently, the corporation terminates the contract with Jones with full payment for his services performed and instructs him not to render a written report to the corporation.*

*Thereafter, Jones learns that the authority has called a public hearing and that the XYZ Corporation*

*has presented information to support its view that the present discharge meets minimum standards.*

*Does Jones have an ethical obligation to report his findings to the agency upon learning of the hearing? If so, how should he go about reporting these findings to the agency? Does he have any obligation to notify the XYZ corporation of his intended actions before proceeding?*

The failure to meet minimum standards established by law is detrimental to public health and safety. Therefore, upon learning of the hearing, Jones must first consider his obligations to the public, and these obligations override considerations of confidentiality of information.

As well, Jones did not complete his actions — he should have rendered a written report, despite the company's instructions not to do so. He might later have to attend a public hearing and if he has rendered a report he will be acting from a position of strength.

To enable the issue to be resolved with all facts available, Jones must find a way to see that his report findings are considered at the hearing along with other information submitted by XYZ Corporation.

While appearances would indicate that XYZ Corporation may be presenting a case which may leave out some critical factors it is also possible that they have used the verbal reports from Engineer Jones to find acceptable alternate methods of satisfying the minimum standards.

Jones should approach senior officials of XYZ Corporation to clarify whether his findings have been incorporated in their presentation to the pollution control agency. If not, he should explain clearly to XYZ that he has a professional obligation to advise the regulatory agency of the additional information.

## Case Study 2

*Company X sets up a computer system in its home office and purchases appropriate software packages for its business operation. Engineer Gray holds a senior position with the company and his expertise is called on for making revisions and modifications to the software so that the packages become tailor-made for the company's use. Gray takes a disc copy of the completed program home and is later discharged from the job because of a downturn in business that forces the company to reduce its staff.*

*At this time, Gray forms his own company and uses the software, after he has extensively updated it to suit his own business purposes. Although the nature of Gray's work is not in competition with his former employer, his use of the software becomes known and Company X sues Gray for damages.*

*Has Gray acted ethically towards Company X, and is he legally liable for damages by using a modified copy of software that he assisted in creating?*

The line dividing the use by an employee of his own knowledge and skills, and the use of his employer's proprietary or trade secrets is very difficult to draw. However, loyalty, good faith and avoidance of a conflict between professional duty and self interest are the key ethical issues in this

case. Taking, and using or modifying, a client's computer disk for personal gain is a breach of trust and confidentiality.

To the extent that the original program was developed by personnel besides Gray and to the extent that portions of the original program are still used by him, he is in breach of Rule 6.

Legally, Gray was judged to have caused damages under the principle of unjust enrichment, even though Company X was not deprived of the use of its software or infringed upon in the area of competitive work.

This does not mean that the employee must erase from his memory, so to speak, of skills and experience gained from a former employer. The distinction between skills and knowledge gained while on the job versus trade secrets that are the confidential property of the employer must be mutually determined and respected. Had Gray not taken a copy of the disk home (i.e. worked from memory), the situation would still have been the same.

## ***Rule 7 — Overruling of Judgement***

**Professional engineers, geologists and geophysicists shall present clearly to their clients or employers the consequences to be expected if their professional judgement is overruled by other authorities in matters pertaining to work for which they are professionally responsible.**

This rule needs no further amplification..

### **Commentary**

Professional engineers, geologists and geophysicists may occasionally find themselves in a situation where their recommendation is being questioned by their employer, client, or another expert.

When the disagreement is between two professionals, the duty of the individual who bears professional responsibility for the recommendation is to ensure that his or her facts and recommendations are correct and that the information and assumptions are laid out simply and lucidly. This should be done both in writing and by personal contact for contentious issues. If the senior professional chooses to overrule the other professional's recommendation, in full knowledge of its basis, the senior professional consciously takes responsibility.

A professional has continuing obligations although his or her recommendations may be overruled by others.

When professionals find themselves in a situation where their recommendation is being questioned by a non-professional, an additional element of difficulty is introduced. The non-professional may lack the technical sophistication to appreciate both the rationale of the recommendation and the



potential consequences of failure to accept the recommendation. In such instances the professional must ensure that an appropriate decision is made. He or she remains the last line of defense for the public welfare.

When a client or employer makes a decision that adversely affects the public interest and is contrary to the recommendation of the professional, he or she should inform the client or employer of the consequences of the decision. If the client or employer is unavailable or unresponsive, the professional should notify the appropriate regulatory authorities who have the ability to evaluate the concerns and the power to suspend activities until the technical issue is resolved. (See also Rule 1)

#### Case Study 1

*Engineers of Company A prepared plans and specifications for machinery to be used in a manufacturing process. Company A turned them over to Company B for production. In reviewing the plans and specifications, the engineers of Company B came to the conclusion that the plans included certain miscalculations and technical deficiencies of a nature that would likely make the final product unsuitable for the purposes of the users. In addition, they concluded that the equipment, if built according to the original plans and specifications, might endanger the lives of persons close to it.*

*The engineers of Company B called the matter to the attention of appropriate officers of their employer who, in turn, advised Company A of the concern expressed by the engineers of Company B. Company A replied that its engineers felt that the design and specifications for the equipment were adequate and safe and that Company B should proceed to build the equipment as designed and specified. The officers of Company B instructed its engineers to proceed with the work.*

*Under these circumstances what should the engineers of Company B do now?*

To proceed with production without resolving their concerns would put the engineers of Company B in violation of Rule 7.

After checking their conclusion that the machinery would be unsafe, the engineers should restate their concern in unequivocal terms to the management of Company B, noting the potential for injury or death to workers. A meeting should be held with the engineers of Company A to explore why they had come to the conclusion the machinery was safe. (If possible, the engineers of Company B should prepare some general suggestions regarding economical ways to deal with their concerns, in order to provide a positive perspective.) If their concerns are not resolved, the engineers of Company B should report the danger to the authority having jurisdiction and should advise the Registrar respecting the apparent breach of the Code of Ethics by the engineers of Company A.

#### Case Study 2

*Engineer C, a geotechnical consultant with an M.Sc. and five years experience, employed by a consulting firm has designed a ten metre high earth dam for an industrial project in northern Alberta. His recommendations are developed from a computer analysis, which in turn is based on soil properties derived from a limited field investigation.*

*Engineer D, a principal in the consulting firm, reviews the report before submission to the client. His experience suggests that steeper side slopes can be used, reducing the earth fill volume by about fifteen percent. He requests that Engineer C change the report accordingly. After considerable discussion, C agrees to recheck the analysis, but remains unconvinced that D is correct.*

*What should Engineer C do now?*

Engineer C is on the right track: rechecking assumptions, calculations and relative conservatism of the design approach is the first step in deciding how vigorously to defend the original design. Further, because significant earthmoving savings are at stake, additional work may be justified in refining soil properties or conducting an alternate analysis.

If Engineer C remains convinced that the original design is correct, he should so advise Engineer D, providing a clear explanation of his reasoning. If Engineer D then chooses to overrule C, they should agree that D accepts professional responsibility for the report with his signature and seal. Engineer C cannot sign or seal recommendations with which he does not personally accept.

Because a senior professional has accepted responsibility and in such a case as this there is little or no jeopardy to human safety as a result of potential failure, the discussion would not normally go beyond the two professionals.

## ***Rule 8 — Securing Assignments***

**Professional engineers, geologists and geophysicists shall not offer or accept covert payment for the purpose of securing an engineering, geological or geophysical assignment.**

### **Amplification**

- a. They shall not make political contributions for the purpose of influencing the selection of engineers, geologists and geophysicists on future engagements.
- b. They shall not give or receive any payments for the purpose of influencing the selection of a professional for an engineering, geological or geophysical engagement.
- c. They shall not create obligation on prospective clients or employers through extravagant entertainment, gifts, or other gratuities. (See also Rule 5.)

### **Commentary**

Professional engineers, geologists and geophysicists have a right to make political contributions but

they have a duty under the Code of Ethics to avoid doing so in such a manner that professional stature would be damaged or exposed to misunderstanding on the part of the public.

The securing of personnel to fill salaried positions through employment agencies is not a violation of Rule 8.

### Case Study

*A local group of business and community leaders banded together and organized a "Promotion Committee" for the purpose of raising funds and conducting an educational program in support of a favourable vote for a major hydroelectric dam project. The project would entail extensive engineering services of substantial value to local engineering firms.*

*The Promotion Committee approached local engineering firms and made similar contacts with bankers, realtors, insurance companies, and other local businessmen to solicit funds for the public education program in support of the dam project.*

*Is it ethical for engineering firms to contribute funds to the promotion fund in the expectation or possibility that those firms might later seek design commissions arising from the project?*

It is assumed that the proposed dam would advance the well-being of the citizenry. On that basis it would be proper and desirable for engineers, along with others, to actively support the project through monetary contributions and volunteer work.

In the circumstances of this case, any degree of self-serving motivation is considered to be sufficiently remote and removed from undue influence that Rule 8 (i.e. amplification a.) is not violated.

The case does not state the amount contributed by engineering firms to the total fund. As a general guideline, the financial support of the engineering firms should be in line with those of other elements of the community, and not specifically be aimed at "buying in" for future commissions.

In this particular case, it is considered ethical for the engineering firms to contribute funds despite the future possibility of obtaining a design commission for a portion of this project.

## ***Rule 9 — Professional Advertising***

**Professional engineers, geologists, and geophysicists shall represent their qualifications and competence, or advertise professional services offered, only through factual representation without exaggeration.**

### **Amplification**

- a. They shall not attempt to enhance their qualifications by claiming or implying personal credit for technical information from reports or papers published by others.
- b. They shall not be a party to misleading literature or advertising which exaggerates their project involvement, their experience, or their level of expertise in various areas of work.
- c. They shall not otherwise imply or publish literature which falsely suggests the ready availability of staff and expertise for projects if the arrangements for such staff are not in place.
- d. They shall ensure that information included in resumes used for employment purposes is factual.
- e. They shall not refer to other competitor professionals in such a way as to suggest a negative comparison. (See also Rule 10.)

## Commentary

Specific guidelines for various forms of professional advertising are contained in the APEGGA Guideline on Professional Advertising. These allow the nature of professional services and expertise available to be made known without violating Rule 9.

Professionals can satisfy their publicity objectives by advertising with honesty and good taste and need not get involved with the sensationalism that is sometimes seen in advertising for other services and products.

### Case Study 1

*An advertisement for Inspection Company A, an APEGGA permit holder, contained the following words:*

*"a new concept in inspection"  
"industry has long needed a leader in the stand against poor workmanship"  
"main concern is factual interpretation"  
"qualified technicians who can render true results"  
"50 level II inspectors"*

*This advertisement was reviewed by APEGGA after receiving a complaint by Inspection Company B that this advertisement violated the Association rules for professional advertising.*

APEGGA determined that the language of the advertisement was not factual, was misleading as it implied the competition in the same field was incompetent, and exaggerated the availability of qualified staff. This advertisement contravenes Rule 9.

## Case Study 2

The following paid advertisement was published in the classified section of a local telephone directory:

**CONSULTING STRUCTURAL ENGINEERS**  
(Doe and Roe)

<i>Sound</i>	<i>Building Design</i>	*	<i>Industrial and Commercial</i>
<i>Low</i>	<i>Appraisal</i>	*	<i>DON'T Sign That Building</i>
<i>Cost</i>	<i>Cost Estimates</i>		<i>Contract Yet!</i>
<i>Structures</i>	<i>Heavy Machines</i>		
<i>Start</i>	<i>Foundations</i>	*	<i>WE can save YOU future</i>
<i>With</i>	<i>Vibration Control</i>		<i>worries and needless</i>
<i>Good</i>	<i>Soil Investigations</i>		<i>expense through proper</i>
<i>Design</i>	<i>Safe Floor Loads</i>		<i>DESIGN and SUPERVISION</i>
	<i>Expert Testimony</i>	*	<i>A FREE PHONE CALL MAY</i>
			<i>HELP</i>

*Business Ph.* \_\_\_\_\_ *Residence Ph.* \_\_\_\_\_ *Pager* \_\_\_\_\_

*CALL 24 HOURS                      7 DAYS A WEEK*

Rule 9 is based on the understanding, expressed in the Engineering, Geological and Geophysical Professions Act, that professionals must not do anything that would harm or tend to harm the standing of their professions generally. Consequently, advertisements must be clear, factual and truthful. Content should be limited to that needed to identify the firm, its principals and their affiliations; to clarify fields of specialization and expertise; to provide location and contact information; and to indicate date of founding and/or years of service. In addition, content must not criticize, or imply criticism, of other professionals. This advertisement includes extraneous information that tends to exaggerate, that implies criticism of the ability and ethics of other professionals, and that tends to lower the public perception of the profession. It clearly contravenes Rule 9.

## ***Rule 10 — Conduct Towards Others***

**Professional engineers, geologists and geophysicists shall conduct themselves toward other professional engineers, geologists and geophysicists, and toward employees and others with fairness and good faith.**

### **Amplification**

- a. They shall not maliciously injure the character or the prospects of business of another professional engineer, geologist, geophysicist or other individual, being as careful with a colleague's reputation as with their own. (See also Rule 9.)
- b. They shall undertake an assignment to critique the work of another professional engineer, geologist or geophysicist that calls into question the professional conduct or technical competence of that individual only with the knowledge of and after communication with such engineer, geologist, or geophysicist such that the reviewer is fully appraised of all relevant information.

## **Commentary**

Unless the information under review is of a confidential nature (see Rule 6), the reviewer should contact the professional in question. Contacting a professional whose work is to be reviewed is a professional courtesy. If the results of such a review demonstrate concerns that affect the public interest or call into question the professional conduct or technical competence of that individual, it is mandatory that the first professional engineer, geologist or geophysicist be contacted again to review these concerns in order to provide him or her with an opportunity to comment prior to further action.

If a client requests a review of the work of a professional and further stipulates that the professional under review not be contacted, and the reviewer concludes that the review may call into question the professional conduct or technical competence of the reviewee, the client must be advised that his instructions are contrary to the spirit and intent of the APEGGA Code of Ethics. If, in the reviewer's opinion practice has occurred that the reviewer believes to be contrary to the Code of Ethics, it is the legal responsibility of the professional to report unprofessional practice of another APEGGA member to the Registrar (see Rule 11).

Professional engineers, geologists and geophysicists are entitled to review and evaluate the work of other professionals when so required by their employment duties. Open communication should exist between the two professionals so that underlying assumptions are understood by the reviewing professional, and so that the first professional has an opportunity to respond to any comments or criticisms.

When a professional reviews the work of others, he or she should prepare a separate letter outlining the extent or specific areas which he or she has reviewed and the conclusions he or she has reached as a result of this review. This letter must be signed and sealed by the professional. (See also Rule 3.)

Situations exist where the duty of confidentiality to a client (see Rule 6) may create an exception to, and take precedence over, the duty of courtesy to contact a fellow professional engineer, geologist or geophysicist (see Rule 10). Examples are:

1. Work of a confidential nature such that a client's interests might be damaged if it

became known that the work was taking place. An example common to the petroleum industry is the practice of reviewing an exploration prospect. In such cases the client's wish for secrecy needs to be respected.

2. Information under review of a propriety nature such that the reviewer cannot freely discuss the subject.

Rights of a client respecting confidentiality do not extend to circumstances where public safety is, or could be affected (see Rule 1). Public safety is paramount and must take precedence over client confidentiality.

In instances where a review is of a confidential or propriety nature, the reviewer must:

- establish that the work is of a confidential or proprietary nature.
- establish with the client that the review will be undertaken without contacting the original party.
- establish that any contact with the reviewee will be the responsibility of the client.
- undertake the review in a professional manner such that the reviewer is fully appraised of all the relevant facts and is competent and knowledgeable with respect to the area under review.

The rights of a client to confidentiality may create a conflict with the responsibility of the reviewer to become fully appraised of the relevant facts. An assignment should not be accepted or should be terminated if the confidentiality requirements of the client prevent full determination of all the relevant facts.

- c. They shall not attempt to supplant another professional engineer, geologist or geophysicist in an engagement after they have knowledge that definite steps have been taken towards the employment of others.

### **Commentary**

The professional, when accepting an assignment, might ensure this subject is introduced in pre-contract discussions.

They should not continue to seek employment on a specific engagement after being advised that another professional has been selected subject to approval of detailed arrangements.

- d. They shall not use the advantages of a salaried position to compete unfairly with another professional engineer, geologist or geophysicist.

## Commentary

Professionals should not engage in outside engineering, geological or geophysical work to an extent prejudicial to their salaried position; or to an extent that is detrimental to established engineering, geological or geophysical services; or which would result in a conflict of interest.

They should not use the influence of a salaried position to direct clients to an engineering, geological or geophysical office in which they have a financial interest.

Professional engineers, geologists or geophysicists should not use equipment, supplies, laboratory or office facilities of their employer to carry on outside practice without the employer's consent.

- e. They shall uphold the principle of appropriate and adequate compensation for those engaged in engineering, geological or geophysical work. This may prevent the possibility of "less than adequate" work being done which can result from unrealistically low compensation.
- f. They shall treat employees with courtesy and respect and give credit to those who are entitled to it for engineering, geological or geophysical work in publications and papers. They shall recognize the proprietary rights of others. (See also Rule 9.)
- g. They shall provide, when requested, a frank but private appraisal of employees or of engineers, geologists or geophysicists being considered for employment.
- h. Professional engineers, geologists and geophysicists in sales or industrial employ are entitled to make factual engineering comparisons of represented products with products of other suppliers.

### Case Study 1

*Consulting Engineer X submitted an engineering proposal to a developer for work related to a shopping centre project in Alberta. The developer acknowledged that his proposal had been received and was under consideration. At this time he had not been retained and no commitment had been made to him.*

*Engineer Y, knowing that the proposal by Engineer X was under consideration by the developer submitted his own well-prepared proposal for similar services without reference in any way to the proposal by Engineer X.*

*Engineer X learned and complained of Engineer Y's actions and complains to APEGGA, alleging that Engineer Y acted improperly.*

*Did Engineer Y act unethically?*



Engineer Y did not act unethically in presenting a proposal under the circumstances stated, in that no firm contract or letter of intent had been issued by the shopping centre developer to Engineer X.

The word "supplant" implies deliberate and conscious effort to bring about the rejection of proposals by other consulting engineers for this work (Amplification c). This was not the case in this situation because the developer had not taken "definite steps" toward awarding the engineering work to Engineer X.

### Case Study 2

*John Jones, who is a principal in an architectural engineering firm, retained Art Smith, a consultant, to design one phase of a major project. Compensation was on an hourly basis. The project was built and all parties were paid for this specific project.*

*One year later the client contacted Jones, requesting that he duplicate the building for a new site. Jones was well qualified in the field of design which had been executed by Smith for the original project, and using internal geotechnical and structural engineering capabilities, he made the few minor changes to Smith's work to fit the new site. He did not contact Smith.*

*Is Jones ethically obligated to compensate Smith in connection with the duplicate project?*

Jones was ethically obligated to contact Smith and negotiate acceptable compensation for the duplicate project.

It is generally accepted, unless otherwise set out in a contract, that plans and specifications for a particular project remain the property of the engineer who prepared them. The fact that Smith was compensated on an hourly basis is immaterial. Not only is a share of fees (as negotiated for a repeat project) due to Smith, but he should have been contacted for permission to use them for a second time.

### Case Study 3

*A government agency advertised its intention to retain an engineering firm for the design of a highway bridge. The advertisement called for all interested firms to state their qualifications, following which the agency selection board would prepare a "short list" of the three best qualified firms. Then the three firms would be requested to attend a "scope of project" meeting, following which they would be asked to submit a detailed engineering proposal and an estimate of time and fees. The confidential engineering estimate for the design of this highway bridge, based on updated past costs for similar well-designed successful projects, was \$130,000.*

*After a review of competency of all the firms by the agency engineering staff, Firms A, B and C were placed on the "short list" and the principals of those firms attended the "scope of project" meeting. The firms then submitted proposals including fee estimates as follows: Firm A - \$120,000; Firm B - \$90,000; Firm C - \$200,000.*

*The agency announced its intention to award the contract to Firm B.*

*Assuming that all three firms were equally competent and having made an analysis of the engagement were familiar with the project requirements, were the engineer principals for Firm B unethical in submitting their price proposals as stated? Were the engineering staff of the government agency unethical in selecting Firm B?*

It is not necessarily unethical for an engineering firm to lose money on an engagement by applying its profits made on other work. However, it would be unethical for a firm to cut fees to such an extent as would lead to rendering an incompetent and dangerous service.

If the assumption of equal competence of the three firms is valid, then both Firm B and the government agency may not be upholding the principle of "appropriate and adequate compensation". The fee estimates submitted may also vary due to other unknown factors related to the design of this type of structure.

## ***Rule 11 — Reporting Unprofessional Practice***

**Professional engineers, geologists and geophysicists shall advise the Registrar of any practice by another member of the Association which they believe to be contrary to this Code of Ethics.**

This rule needs no further amplification.

### **Commentary**

Through informal contact, normal working relationships, or special circumstances such as design reviews, one professional may develop the opinion that the work of another professional is deficient. The inadequacies may arise from unskilled practice and/or unprofessional conduct.

While it is not the role of the first professional to conduct a disciplinary investigation, he or she should be certain there is sufficient substance to warrant a serious allegation against a colleague. A professional should carefully consider the necessity and merits for disciplinary action for minor unprofessional inadequacies where protection of the public is not involved. But if it is decided to proceed, as a general rule, the first professional should discuss the situation with the second professional to clarify the facts and check for extenuating circumstances.

Ignoring unprofessional practices, either for expediency or sympathy, may indirectly endanger the public and certainly circumvents the responsibility of self-regulation that has been granted to the profession. Intentionally refraining from reporting substantive breaches of the Code of Ethics on the part of another member of APEGGA therefore constitutes unprofessional conduct.

If the immediate physical safety of the public is in jeopardy, speedy notification of the owner,

operator or appropriate regulatory authorities is the immediate duty of the professional. So that a full investigation may either substantiate or dismiss the concern, notification to the Registrar is the professional's next duty. Prompt notification is necessary to prevent potential harm to the public through the continuation of unacceptable engineering, geological or geophysical practices. Professionals have a responsibility to be aware of hazards to society created by their profession, and also have a responsibility to report unethical practice so it may be dealt with through the disciplinary process. (See also Rules 7 and 10.)

### Case Study

*A major bank received a prospectus from an exploration company seeking an extension to its operating loan to pursue development of a new field. The prospectus was signed by both the company President and Vice President A, a professional geologist. It contained excerpts of a report by B, a consulting professional geophysicist. The bank asked professional geologist C, an employee in its Mineral Resources department, to review the technical aspects of the application.*

*C telephoned B, to discuss the prospectus. B confirmed the quotations from his report, but noted it was rumoured that follow up detailed geophysical work commissioned by A had proven much less optimistic than B's initial assessment. Subsequent work by a fourth professional had apparently resulted in re-evaluation of a large anticlinal structure as a chain of pinnacle reefs.*

*C recommended that his bank not extend additional credit to the petroleum exploration company until clarification was obtained; however, he was left in a quandary with respect to the professionalism of the actions of Vice President A. What is the proper course of action for C?*

C should telephone or meet with A to ask if the rumoured additional study is in fact available and, if so, why it had not been included. If C believes that the Vice President or others have deliberately omitted unfavourable information, violating the Code of Ethics, a complaint is warranted.

# ***SECTION 5 APEGGA DISCIPLINARY PROCEDURES***

One of the noteworthy characteristics of professions granted self-governing status under provincial statute is the authority to discipline their members who fail to comply with proper standards of practice and conduct. In APEGGA this authority is effected through a disciplinary process which is the responsibility of a body of professional members, the Discipline Committee. Full details are contained in the Engineering, Geological and Geophysical Professions Act and its accompanying regulations.

Complaints about the conduct of professional members, licensees, permit holders, certificate holders or members-in-training may be made by "any person", such as a member of the public or another APEGGA member. Receipt of a complaint sets the discipline process in motion. All complaints are investigated "forthwith" through a preliminary investigation into the matter which involves the member complained against (investigated person). If there is sufficient substance to the complaint, a Formal Hearing is held. This is a semi-judicial internal professional investigation into the conduct of the investigated person by a panel of at least three members of the Discipline Committee.

Following a Formal Hearing, the Discipline Committee may find that the conduct of the investigated person constitutes unskilled practice of the profession or unprofessional conduct or both (Act, Section 43), whether or not the conduct is disgraceful or dishonourable, if the conduct of the investigated person has violated one or more of the following conditions:

- a. is detrimental to the best interests of the public,
- b. contravenes the Code of Ethics of the profession as established under the regulations,
- c. harms or tends to harm the standing of the profession generally,
- d. displays a lack of knowledge of or lack of skill or judgement in the practice of the profession, or
- e. displays a lack of knowledge of or lack of skill or judgement in the carrying out of any duty or obligation undertaken in the practice of the profession.

The Discipline Committee has adopted the following interpretations of the Act, with the provision that the committee will deviate from the interpretations with cause, as appropriate:

- a. "Unskilled Practice of the Profession" means practice by APEGGA members which is deemed by their peers to be below the standards of practice acceptable to the

Association:

- i. in technical competence
  - ii. in the overall performance of the scope of services undertaken.
- b. "Unprofessional Conduct" means conduct by APEGGA members which is in violation of the Code of Ethics of the Association.

Consequences of a finding of unskilled practice or unprofessional conduct, as ordered by the Discipline Committee, are prescribed in the Act. Penalties vary in level of severity such as reprimand, suspension for a specified period, suspension pending completion of specified conditions, practice under certain conditions, and cancellation of registration (Act, Section 60). In addition, the Discipline Committee may order the investigated person to pay all or part of the costs of the hearing, a fine up to \$10,000, or both costs and a fine.

The Act provides for a disciplined member, or a complainant whose complaint was dismissed at the preliminary investigation stage, to appeal the decision to the Association.

## ***HISTORICAL BACKGROUND — APEGGA CODE OF ETHICS***

The Association, then known as the Association of Professional Engineers of Alberta, was incorporated by provincial statute in 1920. The following year a standing committee was established to formulate a Code of Ethics. Little was accomplished until 1928, when a committee commenced work on revisions to the Engineering Profession Act, making recommendations including one that a "Code of Ethics, controlled by the By-Laws, be devised to keep the practice of the members within their respective fields."

The By-Laws accompanying the 1930 Act contained a Code of Ethics as an Appendix to which members and licensees were required to conform. This Code contained 10 specific articles preceded by two "whereas" paragraphs as a preamble.

In 1949-50 the Council approved a revised Code of Ethics which was approved a year later by the membership and incorporated into the By-Laws. This revised Code was essentially the same as the 1930 Code with minor revisions to some of the articles, but it also included an additional article on signing and sealing — "He shall sign and seal only those plans, specifications and reports actually made by him or under his personal supervision and direction" — making 11 in all. In addition, the Canons of Ethics for Engineers recommended by the Engineers' Council for Professional Development was repeated for use as a guide. These Canons consisted of 28 articles or sections under four headings: Professional Life, Relations with the Public, Relations with Clients and Employers, and Relations with Engineers. While the Canons were intended only to be used as a guide, members were expected to conform to the Code. The categories of members to which the Code applied was expanded to consist of Members, Visitors or Licensees, Engineers-in-Training and Students.

By 1975 the Code of Ethics had evolved into the familiar 21 article Code for professional engineers, geologists and geophysicists assembled into three broad groupings — duties to the public, to client or employer, and to the profession. This was supplemented by a booklet which elaborated and explained most of the articles, A Guide to Professional Practice under the Code of Ethics, which was published in 1978. Except for a revision to article 20 on conditions for making proposals which was approved in 1981, this Code was incorporated into the Regulations and remained in effect until the current Code of Ethics was introduced.

In 1985 Council established a Task Force to review the Code of Ethics. The review, carried out over the next two year period, was initiated by concerns the Discipline Committee had developed in applying the Act, and by concerns of the Practice Standards Committee on the lack of consistency in the nature of separate articles in the existing Code. The membership supported the basic philosophical approach of having the Code consist of a general statement of principles (preamble) plus specific enforceable rules of conduct. The existing Code was considered to cover the intended

content, and the work of the Task Force was concentrated on reorganizing and reviewing individual articles for inclusion or modification. A revised Code was developed through a series of drafts and approved at the 1987 Annual General Meeting. The membership also recognized that a supplementary document elaborating on the new Code was required.

## ***ACKNOWLEDGEMENTS***

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3. U.S. National Society of Professional Engineers, *Opinions of the Board of Ethical Review*, Vols. I — V, 1965-1981 (Case studies Rules 3-6, 8-10).
4. C. Morrison and P. Hughes, *Professional Engineering Practice, Ethical Aspects*, Second Edition 1988, McGraw Hill — Ryerson (Case study Rule 7).
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6. APEGGA En Garde Articles, the PEGG, Discipline Cases (Case Studies Rules 2, 3, 9.)
7. APEGGA Guideline — A Guide to Selecting a Consultant (Preamble 3).
8. Professional Designations, Professional Stamps and Permit Stamps — an APEGGA Guideline (Rule 3).
9. Review During Construction on Building Projects — APEGGA Guideline (Rule 4).
10. Professional Advertising — APEGGA Guideline (Rule 9)

Note: The Association has published several other guidelines on professional practice which may be useful in dealing with ethical questions. These are available at APEGGA's Edmonton and Calgary offices.