



Guideline for
Professional Practice
Management Plans

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The Association of Professional
Engineers and Geoscientists of Alberta

FOREWORD

APEGA publishes practice standards and guidelines for the purpose of educating its members and the public about matters of professional practice. Practice standards and guidelines are not intended to be short courses in engineering or geoscience. In general, these documents are produced to meet the following objectives:

- To assist APEGA members in performing their professional role in accordance with the *Engineering and Geoscience Professions Act* and the *Engineering and Geoscience Professions Regulation* under the act.
- To help the public understand the role of APEGA members and the responsibilities members have when performing their professional services.

This revision of the previous guideline reflects changes to the name of the Association and the governing legislation that became effective in 2012.

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1 OVERVIEW

As of February 2003, section 48(1)(d) of the *Engineering and Geoscience Professions Regulation* under the *Engineering and Geoscience Professions Act* requires all APEGA permit holders to develop and maintain a Professional Practice Management Plan (PPMP) that is appropriate to their practices.

A PPMP is a written description of corporate policies, procedures and systems used to ensure that appropriate standards of professional practice are maintained. It is a management tool that documents a permit holder's procedures for planning, implementing, documenting, and assessing the effectiveness of activities that constitute the organization's scope of practice.

If the public is to have confidence in the quality of the services of professional engineers and geoscientists, there needs to be a structured process in place for managing professional practice. As the regulator of the professions of engineering or geoscience, one of APEGA's roles is to maintain appropriate standards of professional practice with a view to protection of the public. The requirement for PPMPs is one means of fulfilling that role.

1.1 Scope

This is a guideline for the preparation of Professional Practice Management Plans by APEGA permit holders. Recognizing that "one size doesn't fit all", it nevertheless pertains to all permit-holding entities, from incorporated sole-practitioners to multi-disciplinary corporations. The guideline addresses the development and content requirements for a PPMP, as befitting a permit holder's professional practice.

1.2 Purpose

This guideline is meant to assist APEGA permit holders to prepare a PPMP that will satisfy the regulatory requirements. Its primary purpose is to describe what kind of information should generally be included in a PPMP. It is not intended to describe how a permit holder's practice should be managed specifically. However, Section 3 of this document gives the components of a PPMP, which may be used as an outline for permit holders to develop their own PPMPs. Ideally, this document will also be helpful to permit holders in considering how they manage their professional practices.

1.3 References

This guideline should be read in conjunction with the following documents (available on APEGA's website, www.apega.ca):

Practice Standard for Authenticating Professional Documents

Guideline for Ethical Practice

Guideline for Professionals Relying on Work of Others

1.4 Definitions

For the purposes of this guideline, the following terms and definitions apply.

Act

The *Engineering and Geoscience Professions Act* of Alberta.

Association

Association of Professional Engineers and Geoscientists of Alberta (APEGA).

COO or Authorized Designate

Chief Operating Officer or authorized designate, as named on the Permit for taking corporate responsibility for the organization.

Code of Ethics

APEGA's Code of Ethics established pursuant to section 19(1)(j) of the *Engineering and Geoscience Professions Act*.

Due Diligence

The care that a reasonable person exercises under the circumstances to avoid harm to other persons or their property.

Organization

Permit holder.

Permit

The right to practice granted to a partnership, corporation or other entity that practices engineering or geoscience in its own name pursuant to the *Engineering and Geoscience Professions Act*.

Permit Number

The number issued to a permit holder (a professional corporation, company, association, firm, partnership, society, organization, or other entity that practices engineering or geoscience in its own name) pursuant to the *Engineering and Geoscience Professions Act*.

Professional Member

A professional engineer, professional geoscientist, licensee, professional licensee (engineering) or professional licensee (geoscience) entitled to engage in the practice of engineering or geoscience under the Act.

Professional Practice Management Plan (PPMP)

A written description of a permit holder's corporate policies, procedures and systems used to ensure that appropriate standards of professional practice are maintained.

Regulations

Engineering and Geoscience Professions General Regulation

Responsible Member

A individual member who has undertaken to provide responsible direction and personal supervision to all or part of a Permit holder's professional practice and who has agreed to conduct the professional practice for which he or she has assumed responsibility in strict accordance with the requirements of relevant legislation and regulations.

2. GENERAL CONTENT AND DETAIL REQUIREMENTS

A PPMP does not need to be submitted to APEGA for approval. However, PPMPs may be subject to review, either through a random selection process or as a result of a specific initiative. Issuance or renewal of an APEGA permit may be conditional on an appropriate PPMP being in place.

2.1 General Content

The PPMP should document the permit holder's management processes that are important to conducting a professional practice and assuring due diligence has been fulfilled. Specific PPMP content requirements are described in Section 3. Each permit holder should evaluate these requirements for applicability to its needs. If valid, the permit holder may use these components as section headings or as an outline in the development of its own PPMP.

A PPMP need not duplicate existing documentation. Supporting and/or more detailed documentation may be incorporated by reference (i.e., existing loss control plan, risk management program, or formal quality management plan like ISO 9001/12001) and need not be rewritten or summarized for inclusion in the PPMP.

2.2 Level of Detail

The PPMP should describe the processes that are designed to support the objectives of the organization. The level of effort expended to develop a PPMP should be based on the scope of its professional practice. A PPMP would vary considerably in complexity, degree of detail and specific content depending on the size and nature of the professional organization. For example, consulting and operating companies will have different needs.

The PPMP should be sufficiently inclusive, explicit, and readable to enable both management and staff to understand the priority which management places on quality practice management activities, the established quality policies and procedures, and their respective quality-related roles and responsibilities.

The PPMP should be written so that an assessment of the suitability and effectiveness of the organization's professional practice management system can be accomplished. Such assessments will enable management to determine if the professional practice management system meets the needs of the organization.

The PPMP should be focused on the processes and procedures used to plan, implement, and assess the programs to which it is applied, and should include definitions of appropriate authorities and responsibilities for managers, responsible members and staff.

2.3 PPMP Preparation

The organization's responsible members are responsible for assuring the preparation of a PPMP covers the scope of professional practice undertaken by the organization. They, along with the senior management who are accountable for overall operations of the organization, are responsible for ensuring that the PPMP is prepared, and that the procedures documented in the Plan are appropriate and recognize all regulatory requirements that may apply to the organization's professional work. It is essential that all management and professional levels understand fully the content of the Plan and concur with its implementation.

The Plan shall be approved by the COO or authorized designate (as indicated on the permit application) and signed by one or more responsible members of the organization who have the authority to represent the permit holder in this regard. This will certify that the organization has conducted an internal review of the Plan and that management has concurred with its contents.

2.4 PPMP Revisions

Each permit holder should review its Plan at least annually to verify its suitability and effectiveness. The process of developing, annually reviewing and revising (as needed) the Plan enables the organization to clarify roles and responsibilities, examine areas of concern, and implement changes. Having a current Plan is an important part in effectively managing a professional practice.

Those people in the organization that are affected by the scope of the PPMP should be kept aware of revised procedures.

3 ELEMENTS OF A PROFESSIONAL PRACTICE MANAGEMENT PLAN

As a minimum, a PPMP shall address the following:

- Management, Organization, and Responsibilities – ensuring that it is conducive to professional practice
- Ethical Standards - ensuring that the professional practice of the organization is defined, communicated, and implemented in accordance with the Code of Ethics and that due diligence is fulfilled.

- Professional and Technical Resources - ensuring that the work is carried out by appropriately qualified professionals and that appropriate technical facilities and resources are maintained, communicated, and available - commensurate with the professional services being provided. This would include items such as establishing clear lines of professional responsibility, assignment of appropriately skilled staff, and continuing competence of professionals.
- Quality Control - ensuring that the permit holder has adequate supervision and controls of all the professional work to ensure that it is done competently and with due diligence. It may include: definition of project scope and objectives, use of codes and standards, checking work for accuracy, independent reviews, conformance with current acceptable professional practices, coordination of multi-disciplinary teams, and possible presence of a formal quality management plan.
- Professional Documents and Records - ensuring that appropriate and sufficient records are produced, maintained, and available as required.

3.1 Management, Organization and Responsibilities

The Plan should document the overall policy, scope, applicability and management responsibilities of the permit holder's professional practice management process. The PPMP should include the following:

- A statement of the permit holder's policy on professional practice management including the importance of professional practice management procedures to the organization and why.
- Identification of the COO or authorized designate who is responsible for the permit and a discussion of the authorities of the organization's responsible members.
- An organizational structure including lines of authority and communication. Alternative organizational arrangements established for special projects, such as reference to required Project Execution Plan.
- Lines of technical responsibility from Chief Operating Officer and/or Responsible Member down through the organization to Members in Training and Technologists.

3.2 Ethical Standards

All APEGA members are responsible and accountable for practicing in a professional manner - ethically, competently and in compliance with the *Engineering and Geoscience Professions Act*. Permit holders are further obligated to provide an environment that ensures the appropriate standards of professional conduct and technical competency are maintained and to support professional employees in discharging their legal and ethical duties under the Act.

APEGA members have an obligation to practice their professions in accordance with the Code of Ethics. APEGA's *Guideline for Ethical Practice* provides an amplification and interpretation of the Code of Ethics, complete with illustrative case studies.

A written commitment to the standards of professional conduct prescribed in the Code of Ethics should preface a Professional Practice Management Plan. This commitment becomes intrinsic to all policies, procedures, and systems addressed in the PPMP.

3.3 Professional and Technical Resources

3.3.1 Professional Resources and Responsibilities

Maintenance of professional resources and technical staff is the responsibility of the permit holder and is directly related to ensuring a properly managed practice. The PPMP should document the procedures for assuring that the personnel performing professional work for an organization have the necessary qualifications to effectively accomplish their work. The Plan should include an account of the following:

- Policies on hiring (i.e., personnel must be qualified and competent).
- Inventory of expertise/competencies available to conduct the work of an organization and provision of supervision, where required. Job descriptions including areas of special expertise and registration requirements for individuals engaging in the practice of engineering and geoscience. Assurance of appropriate technical and other staff support.
- Policies and procedures for reviewing and authenticating work completed by others to ensure that all safety, regulatory, and due diligence issues are addressed; especially work substantially completed outside of Alberta or without the direct supervision of the professional who is assuming professional responsibility for such work.
- Methods of assessing and reviewing employees' skills including an annual review of Continuing Professional Development submissions and/or formal performance reviews. Training plans for professionals (professional development plans) to maintain and develop competencies including formal and informal training, direct supervision, ongoing communications in work procedures, policies, standards, and specifications.

3.3.2 Technical Facilities and Resources

Necessary and appropriate technical facilities and resources must be maintained, communicated, and available to professional members so they are able to adequately perform the professional services offered by the permit holder. The PPMP should generally describe the available technical facilities and resources, such as:

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- Reference materials (e.g., relevant current codes and standards, technical journals, operating manuals, including new/revised APEGA guidelines).
 - Standard company contract forms and general conditions of contracts - subject to professional and legal reviews on a regular basis.
 - Information Technology policy, if available.
 - Appropriate computer hardware and software with adequate number of licenses.
 - Necessary laboratory or testing equipment.

3.4 Quality Control

Quality Control is ensuring that the permit holder has adequate supervision and controls of all the professional work it produces. In the context of professional practice by APEGA permit holders, quality control is concerned with providing conditions conducive to professional practice and maintaining appropriate quality standards. Where appropriate, the PPMP should describe the following:

Professional Business Practices

- Corporate strategy - objectives, purposes, goals, internal/external clients, and major policies stated so as to define the business of the permit holder.
- Policies and procedures on handling confidential materials.
- Policies and procedures on dispute/conflict resolution between professionals and with clients.
- Policies on advertising and corporate promotion.
- Policies on handling intellectual property.
- Policies/guidelines on conflict of interest including the handling of obligating gratuities.
- Methods of negotiating and contracting professional services, including sample contracts.
- Methods of co-ordination of multi-disciplinary teams and teamwork.
- Description of resident Loss Control and Risk Management programs or formal quality management plan (e.g. ISO 9001, 12001).

Technical Work

- Due diligence requirements for relying on work by others ¹ including procedures for assuring that technical work is done competently, with due diligence, and in accordance with applicable codes, standards, and specified design requirements.
- Training in and use of all applicable codes, standards, regulations and other relevant documents and techniques.
- Methods of documenting assumptions, reviewing the operation and limitations of computer programs, verifying the results obtained from computer software, training for users of equipment and software.
- Appropriate independent checks and documentation of concepts, processes and procedures.

Project Management

- Procedures for preparing cost estimates and tracking expenditure commitments.
- Project management systems defining the organizational structure, lines of communication, project scope and quality management system, definition of deliverables, provision of appropriate professional expertise; development of work plan, budget and schedules; implementation of the assignment; documenting and distributing change orders and modifications to contracts; project close-out.
- Procedures for handling change requests, change orders, progress payment processing, shop drawing reviews and other documentation.
- Qualified personnel conducting field reviews of projects during construction (subject to scope of services agreed to with client).

Outsourced Professional Work

Outsourced professional work is defined here as engineering or geoscience obtained from sources that are external to the permit holder's organizational unit requiring the work. The work could be outsourced to a local (Alberta) organization, to a permit holder's office in another province or in the United States, or to an overseas subcontractor. Outsourced work includes "offshore" work, here meaning professional work obtained from another country, usually overseas.

- Permit holders that rely on outsourced professional work should include a section in their PPMPs that addresses their procedures for quality assurance and control of such work. Those procedures should include an audit trail of deficiencies found and corrected.

¹ *Guideline for Professionals Relying on Work of Others*

3.5 Professional Documents and Records

The PPMP should address appropriate controls for the development and handling of documents of a professional nature.

The Plan should describe or reference the procedure(s), including the roles, responsibilities and authorities of senior management, responsible members and professional staff and support personnel, for the following:

- Identifying the organization's professional documents requiring controls (printed and electronic). Depending on the scope of practice, documents may include contracts, investigations, reports, designs and design changes, recommendations, field reviews, and certifications.
- Preparing, reviewing, approving, issuing, using and revising document and records.
- Determining responsibility for authentication (sealing, signing and dating) professional documents.
- Managing and maintaining documents and records including, transmittal, retention (including retention times), access, protection (from loss, damage and deterioration), retrieval, and disposal.
- Ensuring compliance with applicable regulatory codes, standards, etc.
- Recording communications.

APPENDIX A – ADDITIONAL REFERENCES AND RESOURCES

A-1 APEGA SELECTED PUBLICATIONS

Engineering and Geoscience Professions Act, Regulations and Bylaws (including Code of Ethics)

The Concepts of Professionalism

The Practice of the Professions of Geology and Geophysics, 2nd Edition

The Practice and Regulation of Engineering, Geology & Geophysics – A Position Paper

Professional Development: A Guideline for Members-in-Training, Examination Candidates, Students and Applicants

Continuing Professional Development Program

Strategies for Success in Mentoring – A Handbook for Mentors and Proteges

Human Rights Issues in Professional Practice, A Guideline

Guideline for Professional Practice

Guideline for Environmental Practice

Guideline for Advertising of Professional Services

Guideline for Selecting Engineering and Geoscience Consultants

Guideline for Copying & Use of Computer Software

A-2 BOOKS

Andrews, G.C. and J.D. Kemper (1999) *Canadian Professional Engineering Practice and Ethics, 2nd edition*. Harcourt, Brace & Company, Toronto.

Unger, S.H. (1994) *Controlling Technology: Ethics and the Responsible Engineer, 2nd edition*. Wiley, New York