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Minutes

PROFESSIONAL STANDARDS COMMITTEE MEETING
Tuesday, March 8, 2016
PEO Offices

Members:

Jamie Catania, P. Eng.
Denis Dixon, P. Eng.
Dale Kerr, P. Eng.
Colin Moore, P. Eng.
Nicholas Pfeiffer, P. Eng. (Chair)
Brian Ross, P. Eng.
Heather Swan, P. Eng.

Staff:

Sherin Khalil, P. Eng.
José Vera, P. Eng.

Regrets:

Roger Jones, P. Eng.
Neil Kennedy, P. Eng.
Fanny Wong, P. Eng. (Vice-Chair)

Guests:

Lisa MacCumber, P. Eng. (MOECC)

1. OPENING OF MEETING

The Chair called the meeting to order at 6:00 p.m., with 7 members of the Committee in attendance. Consequently, quorum was attained.

1.1 Approval of Agenda

The agenda was modified to remove Item 5.2 - PSC Work Plan.

A motion was made to approve the agenda as modified.

Moved by: C. Moore **Seconded by: D. Kerr** **CARRIED**

2. MINUTES OF PREVIOUS MEETING

2.1 Approval of Minutes of February 9, 2016 Meeting

A motion was made to approve the Minutes of the February 9, 2016 meeting as written.

Moved by: B. Ross **Seconded by: C. Moore** **CARRIED**

2.2 Action Items of February 9, 2016 Meeting

Staff reported on the status of the Action Items.

Previously, there was a discussion regarding Licensed Engineering Technologist and Limited Licence.

Action: Staff to obtain more information on the Limited Licence and Licensed Engineering Technologist.

Action: Staff to send to the PSC Chair the original request from the Registrar regarding the Dam Safety Review Guideline.

3. STANDARDS

3.1 MOECC - Performance Standard for the Environmental Site Dispersion Model (ESDM)

Follow-Up: Staff sent the "Air Dispersion Modelling Guideline for Ontario" and "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" to the PSC members.

Follow-Up: Staff edited the Terms of Reference and sent the final version to PSC members.

Previously, the PSC members had some comments regarding the Terms of Reference, and had some questions regarding the Ministry of the Environment and Climate Change's (MOECC) request to develop this performance standard.

L. MacCumber, P. Eng. from the MOECC attended the meeting and addressed the following questions:

Question: Why is a performance standard required when the MOECC already produced the "Air Dispersion Modelling Guideline for Ontario" and "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" guidelines to assist in meeting these requirements? What is the exact problem, and are the engineers not complying with the MOECC's guidelines?

Answer: The scope is not consistent for practitioners preparing ESDM reports. For example, some practitioners will complete a model, but not compile the results to ensure that the MOECC limits are met. The scope of a project is beyond the requirements in the MOECC guidelines. Review of reports and quality assurance is also beyond the scope of MOECC guidance. The quality of existing submitted reports is not consistent among practitioners and, since there is a regulatory review, the practitioners rely on the Ministry to inform them that the report does not meet the minimum requirements. There is currently no requirement that an engineer must prepare an ESDM report or that any type of internal review/quality assurance steps should occur before the reports are submitted to the MOECC.

Question: Are there any legal cases which point toward the need for clear benchmarks and best practices for engineers preparing ESDM reports?

Answer: Some examples in the last 10 years are as follows:

Bogan *v.* Ontario (2007 ERT) - Waste Management Canada landfill gas to energy facility in Ottawa - The model used to predict Point of Impingement (POI) concentrations is inadequate, the contaminant emissions analysis is incomplete and inaccurate, the POI concentrations that were calculated for benzene are not in accordance with O. Reg. 419/15.

Toronto (City) *v.* Ontario (2009 ERT) - New Sabby Concrete and Supplies - was initially refused a C of A (now ECA), but was later issued one. The ESDM report was incomplete among other considerations regarding noise, particularly, matter control plan and operating hour restrictions.

Environment Hamilton Inc. *v.* Director (2013) - Visible air emissions from Sunrise Metals' metal cutting activity and the fact that the Enviromental Compliance Approval (ECA) was granted without a condition that source testing be required in order to verify contaminant emission rates used in the ESDM report. Concerns were also raised regarding the health effects of the cumulative impact of metal cutting and fugitive emissions from the facility, which is located in an area with a compromised air shed.

Question: Has the MOECC exercised any regulatory powers to address the issue of unacceptable ESDM reports; for example, has MOECC used the complaints process at PEO?

Answer: The MOECC has not used the complaints process at PEO with regards to unacceptable ESDM reports. Currently, there is no legal requirement for an engineer to prepare the report, which differs from the requirements to obtain building permits, as an example. The Ministry has a "Complete Submission" regulation, and has refused and/or returned applications. Currently, the Ministry has also consistently requested further information from the technical expert that has completed the application.

Question: Currently, how many of the unacceptable reports are prepared by engineers? How many unacceptable reports are prepared by non-engineers?

Answer: The Ministry currently does not collect specific data on unacceptable reports and who prepares them.

Question: How did the MOECC decide on engineers as qualified persons for preparing ESDM reports; for example, why not competent technologists?

Answer: It is likely that most of the persons preparing ESDM reports today would be eligible to apply for a limited licence under the *Professional Engineers Act*. Engineers at the MOECC are currently reviewing ESDM reports as part of the ECA process. It is proposed to limit the qualified person to engineers at the current time. As well, engineers are members of a self-regulated profession with a defined discipline process.

Question: Under what circumstances will there be ESDM reports prepared by engineers, but without a regulatory review by the MOECC?

Answer: The Ministry is looking to develop new regulations that would require an ESDM report that would not have a regulatory review process, but would be completed by a qualified person. This could include regulations for the Environmental Activity and Sector Registry.

Question: Since there is a request for a PEO guideline and performance standard on ESDM reports, will there also be a request for a guideline and performance standard on Acoustic Assessment Reports?

Answer: It is likely that, following the development of a guideline and standard for ESDM reports, there would also be a request for a guideline and/or standard for Acoustic Assessment Reports.

Question: How many engineers does the MOECC anticipate will be preparing ESDM reports in the province; for example, 25 engineers?

Answer: The Ministry currently does not collect specific data on how many engineers prepare ESDM reports. It is estimated that, currently, there are hundreds of engineers and other practitioners preparing ESDM reports.

Question: What is the impact to the public by this area of practice? What are the potential consequences of an unacceptable ESDM report, e.g. pollutants released to dangerous leads?

Answer: The ESDM report is used to predict potential concentrations of contaminants at the nearest point of impingement to a sensitive

receptor to ensure that it is within the MOECC requirements. In addition to modelling and completing an ESDM report, the Ministry can issue a site specific standard or technical standard. Further, the Ministry can request source testing for emissions, among other requirements. There is a requirement to report notices of exceedances to the Ministry as well.

Finally, L. MacCumber stated that Professional Engineers Ontario is the regulator of engineering, and the MOECC does not want to interfere with this jurisdiction.

The PSC Chair stated that the process evaluation should be applied when determining if a new guideline and performance standard should be developed.

Action: Staff to provide the process evaluation at the next PSC meeting to determine if the performance standard on the ESDM is required or not based on the evaluation.

3.2 Supervising and Delegating Standard

Staff previously advised that the Legislative Counsel indicated that the *Professional Engineers Act* does not provide PEO with authority to create regulations regarding many of the items in the standard, nor mention anything regarding supervision, except in the context of supervising the services provided by a Certificate of Authorization.

Currently, staff is working on a seed document to determine different solutions for this issue. Staff will update the PSC members at the April 2016 meeting.

3.3 Projects without Permit

Staff provided a presentation describing the background, and outlined the following:

- Council Briefing Note for Professional Standard - General Review of Building Projects Proceeding Without Building or Demolition Permits - prepared for April 2011 Council meeting.

- Motion to approve this Performance Standard was defeated.

- Currently, the General Review Guideline covers a procedure for projects without a building permit, and it may be misconduct to review a site without permit.

Action: Staff to provide the comments that were received from the public consultation on the Projects without Permit performance standard to the PSC members at the April 2016 meeting.

4. GUIDELINES

4.1 Guideline for Structural Engineering Design in Buildings

Staff advised that the subcommittee members will meet on March 22, 2016 to complete addressing the public consultation comments.

Comments were received from the Ontario Association of Architects, the Ministry of Municipal Affairs and Housing, the Large Municipalities Chief Building Officials, and Consulting Engineers of Ontario.

4.2 Condo Reserve Studies Guideline

It was previously reported that D. Kerr reviewed the guideline and addressed all comments that were received.

Action: Staff to update the draft guideline.

4.3 Solid Waste Management Guideline

It was previously reported that the public consultation began on January 15, 2016 and closes on March 15, 2016.

The guideline was sent to the stakeholders for their feedback, such as:

- Ministry of the Environment and Climate Change
- Solid Waste Association of North America
- Ontario Waste Management Association

Action: Staff to send a reminder to the Ministry of the Environment and Climate Change and Solid Waste Association of North America to provide their feedback on the Solid Waste Management Guideline.

4.4 Guideline for Preparing As-Built and Record Documents

Staff reported that the subcommittee members met on February 23, 2016 to address the comments that were received from the PSC members.

The subcommittee members will meet on March 15, 2016 to complete addressing the PSC comments.

Action: Staff to propose to the subcommittee that stakeholders may need to be invited as guests after the draft guideline is completed.

Staff advised that two members from the Preparing As-Built and Record Documents Subcommittee would be able to attend the next PSC meeting to address all questions that the PSC members might have regarding the draft guideline.

The PSC members agreed on the above suggestion.

Action: Staff to invite P. Rusch and J. Lowe Preparing As-Built and Record Documents Subcommittee to attend the next PSC meeting in April 2016.

4.5 Guideline for Structural Condition Assessments

The subcommittee members met on February 11, 2016 to complete addressing the comments that were received from the Ministry of Municipal Affairs and Housing, the Building Safety Technical Advisory Panel, the Ministry of Labour, and the PSC.

The draft guideline was approved by the PSC for public consultation via a doodle poll in late February 2016. Currently, the guideline is under public consultation, from March 1, 2016 to April 29, 2016.

4.6 Data Matrix Bulletin

PEO staff has reported that the Draft data Matrix Bulletin has been sent to the experts for their comments and feedback. An expert suggested to share the draft bulletin with other independent engineers who would be able to provide feedback.

Action: Staff to send the draft bulletin to other independent engineers for their feedback.

A final version of the bulletin will be sent to the PSC members for their comments and suggestions.

4.7 Guideline for Design Evaluation of Demountable Event Structures

Staff previously reported that, at the November 2015 meeting, Council approved the development of a practice guideline for Design Evaluation of Demountable Event Structures.

Staff previously provided the list of the volunteer engineers who were interesed in contributing to the Design Evaluation of Demountable Event Structures Subcommittee. Furthermore, staff prepared the list of the volunteer engineers who were interested in contributing to the Review Network.

A motion was made by the PSC members to approve the volunteer engineers who are to become members of the Design Evaluation of Demountable Event Structures Subcommittee.

Moved by: C. Moore **Seconded by: B. Ross** **CARRIED**

The Review Network volunteers will be approved at a later PSC meeting.
Staff reported that the list of volunteer engineers will be approved by Council at the March 2016 meeting.

Staff will update the PSC members at the April 2016 meeting.

4.8 Use of Seal Guideline

Previously, a motion was made that staff draft the Terms of Reference for the Use of the Professional Engineer's Seal Guideline subcommittee to update the existing guideline and to complete the Performance Standard.

Moved by: R. Jones **Seconded by: J. Catania** **CARRIED**

Staff reported that the Draft Terms of Reference will be sent to the PSC members at the April 2016 meeting.

Action: Staff to prepare the Terms of Reference and send to the PSC members for the April 2016 meeting.

4.9 Professional Engineers Providing Reports on Mineral Properties Guideline

Staff previously contacted William E. Roscoe to verify if the guideline requires update.

It was previously reported that W. Roscoe advised that the existing guideline is worth updating, but it should place more reliance by reference to other

documents such as NI 43-101 and CIM Definition Standards, which have both been updated approximately three times since 2002. It could still play a useful role in providing guidelines for economic studies such as, Preliminary Economic Analysis (a.k.a. scoping studies), Prefeasibility Studies, and Feasibility Studies. These studies are summarized in NI 43-101 reports, but could use some guidance for the more comprehensive PFS and FS level studies.

The PSC members advised that the process evaluation should be applied when determining if a new guideline should be developed, or if an existing guideline should be updated.

Action: Staff to obtain more information from W. Roscoe and verify if there is evidence of a problem in this area of practice.

Action: Staff to update the PSC members on next steps regarding this item.

4.10 Professional Engineering Practice Guideline

Staff reviewed the Professional Engineering Practice Guideline, and recommended removing some information relating to temporary, limited and provisional licence holders, as this information is covered in other licensing guides (available on the PEO website).

The PSC members suggested removing the specific details on the temporary, limited and provisional licence holders and point out the general requirements.

Action: Staff to revise this section in the Professional Engineering Practice Guideline and make reference to the document that has all the details for the requirements on the temporary, limited and provisional licence holders.

5. OTHER BUSINESS

5.1 Status of PSC Projects

Follow-Up: Staff provided information on the Review With/Without Permit at the PSC meeting.

Follow-Up: Staff reviewed the Professional Engineering Practice Guideline and proposed some changes due to the new Limited Licence regulations.

Action: Staff to provide additional information on the proposed Guideline Interpreting PEA for Regulators.

5.3 Elliot Lake Recommendations

Staff reported that a member of the Building Safety Technical Advisory Panel have received a message from the Ministry of Municipal Affairs and Housing, indicating that the report has been received by the Minister. At this time, the Minister has decided not to make the report public as the Ministry develops its response to the Belanger Commission recommendations.

5.4 Climate Change and Engineering

Staff previously reported that the National Guideline link is now available on the PEO website.

Follow-Up: Staff provided the list of the national guidelines to the PSC members at the meeting to determine which guideline should be added to the PEO website.

Action: PSC members to revisit the Engineers Canada national guidelines and determine which guideline can be added to PEO website.

5.5 Site Remediation

Staff previously reported that Engineers Canada has a model guide for "Professional Engineers Providing Services in Environmental Site Assessment, Remediation and Management". When updating the Site Remediation Guideline, the Engineers Canada model guide should be considered.

Previously, H. Swan advised that there is an expert who may be able to review the guideline and advise if the guideline needs technical update.

Staff contacted H. Swan to verify if the expert can review the existing guideline and help determine if the guideline needs update.

H. Swan will update the PSC members at the next meeting on whether the guideline is worth updating or not based on the information that she will recieve from the expert.

Follow-Up: Staff sent PEO's Site Remediation Guideline and Engineers Canada model guide to the PSC members to help verify if the Site Remediation Guideline needs to be updated.

H. Swan reported on the answers that she received from her colleague experts to the questions that were received by PEO:

1. Do you and your colleagues use the PEO guideline "Professional Engineers Providing Services in Environmental Site Assessment, Remediation and Management"?

   Many colleagues were entirely unaware of both guidelines.

2. Do you know if the PEO guideline is frequently used in your industry?

   We have not heard of any use of either guideline.

3. In your view, is the PEO guideline still relevant?

   The most widely-used reference standard used in industry in Ontario is O. Reg. 153/04: Record of Site Condition - Part XV.1 of the *Environmental Protection Act*. This standard has been updated numerous times since 1996. This standard is often used for property transfer, but sets general expectations that are adopted as standard practice for other projects within the realm of phased environmental site assessments and remediation. This is a law that applies to a certain type of site; it is prescriptive and has strict requirements.

   Other commonly used standards include:

   - Government of Canada: A Federal Approach to Contaminated Sites, 1999
   - CSA Z768-01 (R2012) - Phase I Environmental Site Assessment
   - CSA Z769-00 (R2013) - Phase II Environmental Site Assessment
   - ASTM E1527 - 13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
   - ASTM E1903 - 11 Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process

   The standards and guidelines listed above are generally more accepted references than the current PEO guideline. The current PEO guideline is also evidently outdated as it was published in 1996. At this time, it is not believed that the current PEO guideline is relevant.

4. Should the PEO guideline be updated? If so, what specific areas need updating?

   The current guideline presents information that is best captured by the above references. These references are more comprehensive, set with more practical considerations, and are more continuously monitored and updated. Professionals that are qualified to undertake the type of work outlined in this document are likely to be aware of the more current practices.

   An updated version of this document would certainly be valuable, but this standard would best serve as guidance for engineers from an ethical and legal standpoint. A revised document should consider a discussion of the engineer's professional obligations as they relate to the Code of Ethics. It should address how projects of this type relate to the engineer's duty to society, employers, clients, colleagues, the profession, and himself/herself.

   It may be a good idea to issue separate guidance briefs for both phased environmental site assessments and spills and remediations as they deal with different phases in a project.

5. Is there content in the Engineers Canada model guide that is valuable and needs to be considered in the PEO guideline?

   The Engineers Canada document includes several valuable sections and references that could be incorporated into the PEO guideline. The six sections presented in this guide are all relevant to a rounded discussion of the engineer's duty. PEO might consider using abbreviated content from this document.

5.6 Council Update

There was nothing new to report.

5.7 Building Safety Technical Advisory Panel Final Report

This item was covered under Item 5.3.

5.8 Lessons Learned

The PSC members discussed the lessons learned from past projects. A member suggested that is not necessary for the Subcommittee Chair to be a PSC member, and that is more important for the Subcommittee Chair to be an expert.

A PSC member recommended having an introductory session prior to approving the subcommittee volunteers to determine who are ideal candidates.

Follow-Up: The PSC members discussed the lessons learned from past projects.

Action: Staff to draft a document outlining the challenges from past projects for discussion at the next PSC meeting.

5.9 Nuclear Industry Issues

Staff previously reported that Eugene Sokolov is requesting a new guideline on the design of Nuclear Pressure Retained Structures.

Furthermore, Eugene Sokolov provided the industry issues and other information that engineers encountered while working in this area.

Follow-Up: PSC members reviewed the documents that were received by Eugene Sokolov and will discuss further at the next meeting.

Follow-Up: Staff obtained clarification from the Enforcement Department on PEO's jurisdiction in this area of practice.

Staff provided a presentation applying the evaluation process, as follows:

1. First Test: Does the design of Nuclear Pressure Retained Structures fall within PEO's jurisdiction?

   Professional engineers in this industry can be disciplined by PEO;
   Use of Seal requirements apply to this industry; and
   In general, the *Professional Engineers Act* applies to federal undertakings.

2. Second Test: What number of members are affected by this area of practice?

   SNC-Lavalin, Westinghouse/Toshiba, GE, Aecon are currently involved in refurbishing projects.

   Probably several hundred engineers are simultaneously involved in nuclear industry activities in Ontario.

3. Third Test: What is the impact on the public by this area of practice?

   The quantity of the nuclear reactors per capita in Canada/Ontario is highest in the world.

   Uniqueness of hazard associated with this technology.

   Chalk River reactor shut down lead to isotope shortage.

4. Fourth Test: Number of inquiries made to PEO about practice?

   The Practice Standards group receives approximately five questions per year from engineers working in the nuclear industry. However, the questions tend to be about the Use of Seal and general requirements, i.e. they are not specific to obligations in the nuclear industry.

5. Fifth Test: Evidence of a problem involving engineering practice?

   Several serious incidents were cited. However, it is not clear that these problems are related to engineering practice in Ontario.

   For the Chalk River incident Mr. Sokolov states that, although no inquiry was initiated, professional engineers are responsible for lack of in-service control of the aging reactor's degrading characteristics.

Consequently, the above issues could be addressed by filing a Complaint.

Action: Staff and the PSC Chair to prepare a response to Eugene Sokolov with regards to his request on developing a new guideline on the design of Nuclear Pressure Retained Structures.

6. ADJOURNMENT AND NEXT MEETING

The meeting adjourned at 8:00 p.m.

Below are the meeting dates for the 2016:

April 12, 2016	October 18, 2016
May 10, 2016	November 8, 2016
June 14, 2016	December 13, 2016
September 13, 2016	