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Monday, November 6, 2017

Dr. Sharon Cowling
22 Russell St
Toronto, ON
M5S 3B1

CONFIDENTIAL
REGISTERED MAIL
Ref: C-124/7 -April-2017

Dear Dr. Cowling,

Notification of Intention to Dismiss

This letter is to advise you that the investigation of the complaint brought to the attention of Association of Professional Geoscientists of Ontario (APGO), on April 7, 2017, which contained allegations against Mr. Peter Gray P.Geo. (APGO Member #0335) now been reviewed by an APGO Complaints Committee Preliminary Review Panel (PRP) and the PRP's report and recommendations have been provided to the Association.

The PRP has directed me to send to you this notice of its intention to dismiss the complaint. The report provided by the PRP is enclosed. This letter will therefore serve as notice to you of the PRP's intention to dismiss the complaint. Please note that as the Complainant you have 30 days from the date of this notice to make further written submissions in response to this notice as per O.Reg. 258/02 Section (2) (a link to the regulation may be found at <https://www.ontario.ca/laws/regulation/020258>)

Should no further written submissions be received from you by December 6, 2017, the PRP shall make an order dismissing the complaint and such notice will be submitted to all parties. Should further written submissions be received by the Association from you, the complaint will be referred to a separately constituted review panel for further review.

Should you have any questions, please contact me at 416-203-2746 Ext.34 or at nhowell@apgo.net

Sincerely

Nathaniel Howell
Acting Deputy Registrar

CC. Chair – APGO Complaints Committee

Association of Professional Geoscientists of Ontario (APGO)

Complaint Panel, Complaint C-124

Date: November 1, 2017

Review Panel Members: Mr. David Kerr, P.Geo. (Chair)
Ms. Shelley Kilby, P.Geo.
Ms. Francoise Gervais., P.Geo.
Ms. Visha Sukdeo (Non-Member Appointee Councillor)

Technical Advisor: Mr. Ray Blackport, P.Geo.

Dr. Sharon Cowling Ph.D., Complainant

-And-

Mr. Peter Gray, P.Geo, MTE Consultants Inc., Respondent

Decision and Reasons

Introduction

Dr. Cowling is a concerned citizen and an Associate Professor in the Department of Earth Sciences at the University of Toronto. Doctor Cowling is not a registered Professional Geoscientist with APGO. However she does indicate in her complaint documentation that she is responding as a “private citizen” as well as an academic with scientific knowledge as indicated in the content of her complaint. Her complaint is filed in a letter to APGO. Peter Gray is a Geoscientist employed by MTE Consultants Inc. (MTE). MTE have been retained by Freymond Lumber Ltd. to conduct and report on Hydrogeological Investigations in support of a proposed quarry south of Bancroft. In a formal complaint to the APGO, Dr. Cowling alleges that Mr. Gray has produced reports on behalf of MTE without scientific integrity and has intentionally ignored scientific processes.

Composition of the Complaint Panel

The members of the Complaint Panel (Panel) have no stake or obligation, financial or otherwise, in any of the parties involved in this complaint. The panel is constituted of volunteers who also have full-time employment and receive no compensation from the APGO or any other party to undertake such reviews. In accordance with APGO’s procedure for complaints the complaint review panel consisted of three volunteer members and one non-member appointee Councillor from APGO.

Decision

Disciplinary action is not recommended. The consensus of the Panel is that there is no evidence of misconduct by Mr. Peter Gray P. Geo. requiring referral of the complaint to the Discipline Committee of the APGO.

Agreed Upon Information

The original complaint to the APGO was made by Dr. Cowling on 7 April, 2017 (Referenced in *Information Considered*, below) in connection with the hydrogeological investigations and reporting overseen by Mr. Gray under the employment of MTE and on behalf of Freymond Lumber.

Information Considered

The Panel carefully considered the entire investigative file in this matter as delivered by the APGO to the Panel, including the following material:

1. The Letter of Complaint (on University of Toronto Letterhead) dated April 7, 2017 from Sharon Cowling Ph.D. addressed to Mr. Louis Kan, APGO. This letter has 3 attached Appendices. Appendix A is a 3 page document signed by Sharon Cowling, Ph.D. detailing the rationale that her complaint was based on with specific examples. Appendix B is a 2 page document from Peter Gray P.Geo. to Dr. Pysklywec and Dr. Cameron (Dean U of T) responding to comments of Dr. Cowling in connection with the proposed Freymond quarry. Appendix C is a one page document from Jay Pratt, Vice Dean, (U of T), on behalf of Dean Cameron to Mr. Gray in connection with the complaint
2. The Letter of May 4, 2017 of Peter Gray (on MTE letterhead) to Mr. Louis Kan, APGO responding to the formal April 7, 2017 complaint by Sharon Cowling; Subject: *Formal Complaint Registered With the APGO re: Peter A. Gray, P. Geo, Member No. 0335*.
3. Email correspondence from Sharon Cowling to Nate Howell, APGO dated May 16, 2017, Subject: *Complaint: Cowling vs Gray*. This email provides additional rationale and details from Dr. Cowling to support her complaint.
4. The report entitled "Level 1/2 Hydrogeological Investigation, Proposed Freymond Quarry" dated June 3, 2015 and revised March 27, 2015 (prepared by MTE). It should be noted that the original complaint package submitted to the Panel did not include a subsequent version of this report. However the Panel became aware of a 2016 report through the investigation of the complaint which they reviewed.
5. Aggregate Resources Act and associated Policies and Standards for Category 2 (i.e. quarry operations which involve extraction of material below the groundwater table). These documents were not part of the original submission however were reviewed by the Panel in order to put context into the reporting requirements.

Independent Third Party Review

As part of the Panel deliberations many of the scientific details within the MTE report(s) in question by Dr. Cowling involved very specialized hydrogeological interpretation which was beyond the expertise of the Panel. Therefore the Panel sought and considered the advice of an independent, third party, technical expert before they made their decision. The third party reviewer selected was Ray Blackport, P. Geo., of Blackport Hydrogeology Inc. Mr. Blackport was selected on the basis he has over 30 years experience conducting hydrogeological investigations, many of which are related to proposed and existing quarries and he has provided expert testimony to the Ontario Municipal Board. Mr. Blackport was provided the above listed information to review. After his Review he provided a report to the Panel dated September 15, 2017, which summarizes his findings. A copy of this report (hereinafter referred to as the Investigators report) is attached.

The Complaint

The complaint(s) generally focused on Scientific integrity and can be summarized in general as follows:

- The Reports produced are scientifically erroneous and Mr. Gray has intentionally ignored watershed –level processes. As a result the reports are absent of scientific integrity. The author has written the reports with impunity believing the Professional Geoscientists Act (2000) protected him from outside criticism.
- By ignoring watershed level features, Mr. Gray was able to fabricate a false identity for the site in question, implying that it was an unconfined aquifer where groundwater is a relatively unimportant component of the hydrogeological balance and below ground faults, fissures and springs are completely lacking.

The Panel also considered six (6) specific complaints raised by the Complainant as follows:

1. MTE incorrectly identifies the hydrogeological regime as an “ideal confined aquifer” and this would indicate minimal movement of water into or out of the confined aquifer. The word “ideal” is incorrect as water must be moving from one place to another through underground springs created by faulting of the geologic rock
2. MTE did not call the study site an ideal confined aquifer in the second report because an unconfined aquifer is a relatively uncomplicated hydrological regime. The actual characterization is that of a complex confined aquifer
3. Groundwater is a major component of the water balance evaluations and MTE avoided its discussion because they pretended the site was an unconfined aquifer where groundwater is much less important. MTE should have discussed groundwater as a major component of the water balance because the site is a complex confined aquifer
4. MTE does not conclude that a permanent wetland on-site would have to be spring fed. MTE overlooks the groundwater component and concludes that most water on-site is surface water.
5. MTE incorrectly (in fact blatantly false) that there are no faults on site and further MTE has gone to extremes to avoid using terminology like fissures and fractures within their reports
6. An appropriate range of hydraulic conductivities was not used in the assessment; in particular the full range of five orders of magnitude should have been used to assess the zone of influence in the model simulations

Analysis of Complaints

In order to make a fair and reasonable decision, the panel considered the six (6) specific complaints raised by Dr. Cowling after reviewing the “Investigators report” and whether or not the concerns warrant a referral to Discipline Committee?

The complaints were reviewed under the assumption that it is not the role of this Panel to arbitrate technical issues and disagreements related to the completion and acceptability of the license sought by MTE on behalf of Freymond Lumber for a quarry under the Aggregate Resources Act. Those matters are rightfully the jurisdiction of the regulatory agencies such as the MNR, MOECC and host municipality etc. The onus is on the practitioner to be satisfied that they can defend the work once an application for licensing of an aggregate extraction is submitted. After application submission there is a significant approval process that may involve further clarification, as well as additional testing or investigation. This level of scrutiny by technical professionals within the public agencies is included as part of the approval process.

Reasonable Prospect of Proving the Allegations

With input from the Investigator, the Panel considered whether there was a reasonable prospect of proving the allegations true if they were referred to discipline committee. The Panel

concluded that many of the concerns raised centered around scientific integrity of the MTE report concerning the interpretation of the hydrogeological regime and whether due reasonable consideration had been given to relevant material available at the time of the writing the report. The mandate of the Panel was not to technically review all aspects of the report, but to determine if the allegations raised by the Complainant were of sufficient importance or accuracy that they should be referred for disciplinary action including if there was a reasonable chance of the allegations being proven. The Panel concluded that this was not the case and that there was insufficient substance in the complaint to forward to discipline committee.

Discussion of the Complaint(s)

In general, the Panel agrees with the Investigators assessment and concurs with Mr. Gray's response in his letter of May 4, 2017 to Mr. Louis Kan, APGO formally responding to the complaint by Sharon Cowling. The specific complaints are listed below with a discussion of each complaint included in italics below each complaint:

1. MTE incorrectly identifies the hydrogeological regime as an "ideal confined aquifer" and this would indicate minimal movement of water into or out of the confined aquifer. The word "ideal" is incorrect as water must be moving from one place to another through underground springs created by faulting of the geologic rock
Response: The discussion regarding "ideal confined aquifer" was taken out of context by Dr. Cowling. The "ideal confined aquifer" is a term used related to the analytical model selected for the assessment and the assumptions associated with it. The term is not an interpretation of site conditions and is one of the assumptions used for the model.
2. MTE did not call the study site an ideal confined aquifer in the second report because an unconfined aquifer is a relatively uncomplicated hydrological regime. The actual characterization is that of a complex confined aquifer.
Response: MTE did discuss fracture flow throughout the report. Dr. Cowling appears to have taken a comment on the surface water system and somehow equated the comment to MTE interpreting this to mean the site is an unconfined aquifer. MTE indicated there were no references to an unconfined aquifer in either report.
3. Groundwater is a major component of the water balance evaluations and MTE avoided its discussion because they pretended the site was an unconfined aquifer where groundwater is much less important. MTE should have discussed groundwater as a major component of the water balance because the site was a complex confined aquifer.
Response: MTE indicated the groundwater portion of the water balance has not been ignored, but that the hydrologic system is primarily surface water driven. MTE indicated that, given the low permeability of the bedrock on-site there is limited infiltration and subsequently limited groundwater flow through the bedrock
4. MTE does not conclude that a permanent wetland on-site would have to be spring fed. MTE overlooks the groundwater component and concludes that most water on-site is surface water
Response: same as no. 3 response above
5. MTE incorrectly (in fact blatantly false) that there are no faults on site and further MTE has gone to extremes to avoid using terminology like fissures and fractures within their reports
Response: MTE indicated that Dr. Cowling is mixing "faults" and "fractures" and they responded by highlighting the many locations throughout the report where fractures were discussed
6. An appropriate range of hydraulic conductivities was not used in the assessment ; in particular the full range of five orders of magnitude should have been used to assess the zone of influence in the model simulations

Response: MTE disputed the above comment and mentioned the onsite tested values were relatively low as per scientific literature. MTE also stated that a range in hydraulic conductivity does not necessarily indicate the presence of fractures. MTE indicated that using a geometric mean hydraulic conductivity is common modelling practice to estimate bulk hydraulic conductivity

Even stepping back from the specific issues, the Panel could not identify any broad or general concern about the approach undertaken by Mr. Gray.

As a result of the review of both the investigators report and Mr. Grays response to the complaint(s) the Panel is in agreement that referral of the complaint to Discipline Committee is not warranted.

Adequacy of the Investigation

Based on the documents provided to the Panel by the APGO, the information listed the listed in the *Information Considered* and the third party independent review by Mr. Blackport the Panel does not consider any additional investigation as being appropriate, warranted by the Panel.

In the opinion of the Panel there is, no evidence that purposeful misrepresentation of the information or other form of improper interpretation has occurred such as negligence and incompetence, hence a referral to the Discipline Committee is not recommended.

Conclusions and Recommendations

The consensus of the Complaint Panel is that there is no evidence of professional misconduct, negligence or incompetence in the practice of Geoscience by Mr. Gray requiring referral of the complaint to the Discipline Committee of the APGO.

One item of note that is beyond the scope of the Complaint Panel but worth mentioning and included as a recommendation in the Investigators Report is that APGO may wish to review an approach to further educating the members and non members (with some technical expertise) and the general public, as to the purpose and mandate of the APGO.

Panel Report Dated November 1, 2017 and prepared by :



David Kerr, P.Geo. (Chair of the Panel)