What’s in the Water? Understanding Legal and Technical Protocols for Water Testing

By Chirasthi C. Mendis*

On April 5, 2012, a good mix of the environmental bar and consultants gathered in Toronto and through a live webcast to hear three distinguished panellists elucidate on water testing. We learnt that it is not what is tested, but how it is tested that will most affect the legal outcome.

The panellists were Mr. Vico Paloschi, Senior Vice President at Pinchin Environmental; Dr. Taras W. Obal, Director, Scientific Services and Development at Maxxam Analytics; and Ms. Tamara Farber, partner, Miller Thomson LLP. The program was chaired by the writer.

Mr. Paloschi commenced the discussion with an overview of the protocols that apply to water testing, with a focus on groundwater sampling. He pointed out that the data in a water sampling report is only as good as the quality of the samples. Thus, sampling protocols should be well documented, with reference to applicable regulatory protocols and guidelines that are consistently followed. For instance, a well-scoped sampling plan should include a consideration of issues particular to a site, the location of boreholes, and the contaminants that are to be analysed. Mr. Paloschi advised attendees to keep a keen focus on areas where human error is possible throughout the process; for instance, in labelling the samples, and in tracking the chain of custody of a sample. He warned against rushing the process: parties may want the data quickly; however, certain aspects of the process require time.

Dr. Obal followed with a discussion aimed at demystifying the laboratory report. He focussed on factors that affect variability in the lab analysis. He pointed out that in order to understand the reliability of the laboratory results and, ultimately, what they mean, it is important to understand what factors affect the variability of a number, and what steps need to be taken to maximize the representativeness of the data in the context of a site. This is expressed in terms of “measurement uncertainty”, meaning a “value that gives an idea or variability within a set of measurements that is specific to a sample or group of samples” or “a plus/minus value specific to the result”. Essentially, if one understands how the analysis was performed, then there is no bad data - however, the data may not always be helpful! Thus, as Dr. Obal pointed out, the protocols and processes followed by a specific laboratory and its quality assurance and control programs require careful consideration.
Ms. Farber then took the discussion from the laboratory to the courtroom, focussing on how water testing can impact litigation outcomes. Citing caselaw, Ms. Farber explained how failure to follow proper sampling methodology can create reasonable doubt (R. v. Ault Foods Ltd.; R. v. Abitibi Consolidated Inc.). She also discussed how the courts treat differences of opinion between experts, sometimes resulting in a dismissal of charges (R. v. Petro Canada; R. v. Inco). Next, the discussion turned to water testing in cases of alleged government negligence, where at least in one case, the government was found to have breached the duty of care (Nelson v. Saskatchewan). Ms. Farber ended with an analysis on the lawyer’s role, which is, in essence, to ask the right questions. A lawyer should investigate the applicable protocols, both sides’ experts, and what is being tested and its relevance to the legal burden.

With Mr. Paloschi and Dr. Obal, the audience had the benefit of hearing from experts who were at ease explaining eye-glazing sampling technicalities in plain English. They both focussed on following protocols and documenting the process well, the importance of which was underscored in Ms. Farber’s presentation.

This program was the last of a four part Passport Series for the 2011- 2012 season. The archived webcast will be available on the OBA website shortly.

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3 2009 ONCJ 179, 2009 ONCJ 179.
4 2000 ONCJ 332.
5 2003 SKQB 265.