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# Laboratory Accreditation for Analysis of Drinking Water in Ontario

A presentation for the public hearing before  
The Honourable Justice Dennis R. O'Connor  
September 20, 2001



# Background

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- March 2001 paper on accreditation of drinking water labs submitted by the Standards Council of Canada, CAEAL, and the Canadian Council for Independent Laboratories.
- May 2001 (discussion draft) paper on laboratory accreditation by Jane Pagel
- May 2001 testimony by R. Wilson and R. Joshi
- Testimony of others from the laboratory industry, including R. Calow
- July 24, 2001 presentation by the Ontario Medical Association



# Our Objectives

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- Respond to issues raised by the Ontario Medical Association (OMA) on July 24, 2001
- Respond to Jane Pagel's recommendations
- Provide an update: the SCC/CAEAL program continues to grow and evolve

# OMA Criteria for Laboratories



- Obligatory participation in program
  - Mandatory accreditation, licensure and inspections
  - Obligatory participation in external quality assessment scheme and remediation
  - Remediation capability
  - Licensure should be lifted for non-proficiency and non-remediation
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- Also: Pre- and post-analytical phases

# Obligatory accreditation and participation



- Ontario's drinking water regulation (459/00) **requires** laboratories to be accredited, for every drinking water parameter analysed at the laboratory, by the Standards Council of Canada, or an equivalent program
  - » Except for the Ministry of Health laboratories
- The SCC accreditation for drinking water labs is delivered jointly by SCC and CAEAL, and it **requires** accredited labs to undergo on-site audit every two years (to an international standard) and to participate in CAEAL proficiency testing (PT)

# Remediation and Removal of Licence



- Failure of one PT: warning of possible suspension
- Second consecutive PT failure: suspension of accreditation for that parameter. The lab is provided with a reduced Scope of Accreditation.
- Third failure: withdrawal of accreditation.
- In Year 2000, there were:
  - » 110 suspensions
  - » 17 withdrawals
- Audit teams are provided with information on a lab's PT performance for review at the biennial on-site audit

# Pre- and Post-Analytical Activities



- CAEAL agrees with the OMA that:
  - » the laboratory analytical phase is but one part of the drinking water system
  - » quality assurance measures should be applied to the sampling and data interpretation elements as well
  - » the three parts should be linked to ensure quality throughout the system and to ensure appropriate checks and balances
- CAEAL:
  - » recognizes that the science and skills required in the three parts are very different
  - » believes strongly in public/private partnerships where appropriate
  - » believes that a single agency, in government, should be accountable for the entire system.

# Jane Pagel's Recommendations



- Ontario should expand accreditation requirements
- SCC/CAEAL should improve reciprocity with the United States
- CAEAL's PT Program should cover more drinking water parameters
  - » We have advised Dr. Pagel that the reasons for lack of coverage are technical, not financial.
  - » That said, we have continued our efforts to add more parameters and by January 2002 the coverage will more than double compared with June 2000.



# Increased Proficiency Testing



Category	Regulated	Pre-June 2000	Added in 2001	Will add in 2002	Total
<b>Micro-biology</b>	4	2	-	2	<b>4/4</b>
<b>Volatile Organics</b>	15	5	-	9	<b>14/15</b>
<b>Inorganics</b>	16	12	4	-	<b>16/16</b>
<b>Pesticides &amp; Others</b>	51	6	-	13	<b>19/51</b>
<b>Water Works</b>	12	3	3	-	<b>6/12</b>
<b>Total</b>	98	28	7	24	<b>59/98</b>

# National and International Recognition



- Six Canadian provinces specify, or have announced their intention, that environmental and/or drinking water data must originate from labs accredited by SCC/CAEAL.
- The SCC/CAEAL Program was successfully reviewed by an international team in 2000; the Program is recognized under three international reciprocity arrangements, including one signed with the United States in April 2001. This does not yet include US drinking water programs, but we are working on it.
- The Pan American Health Organization has chosen to partner with SCC/CAEAL to develop a drinking water accreditation system for Latin America (agreement signed in April 2001).

# Continuous Improvement



- Faster reports and follow-up after site audits
- Faster production of proficiency testing reports
  - » Mandatory web data entry in October 2001
- Faster posting of accreditation actions on internet listings on CAEAL and SCC web sites
- Surveillance between biennial audits increased
  - » All must respond to questionnaire about changes at lab
  - » “Verification” audits for about 20% of labs
- Corrective action reports for PT failures will be mandatory as of October 2001

# Better Performance of Accredited Laboratories



Percentage of Labs with Unsatisfactory Scores (5% expected due to statistical scoring), 1997-1999.

