

THE WALKERTON INQUIRY
IMPLICATIONS FOR THE PUBLIC HEALTH SECTOR

I would like to thank ALPHA for the opportunity to address you this morning on the implications of the Walkerton Inquiry for public health in Ontario. As senior Commission Counsel I had the privilege to be part of an endeavour, headed by Mr. Justice Dennis O'Connor, which was called upon to inquire into one of the most tragic events in Ontario's history. Among other challenges, the Commission was required to review how public health sector responded to the public health crisis which Ontario faced in May 2000. This was a crisis which seemed to be better placed in the third world. To have it occur in Ontario with its abundant supply of fresh water, was astounding to most Ontarians. Indeed, the Walkerton tragedy was news across the continent. It was a rude awakening from the culture of complacency which had developed in respect of our drinking water, particularly if it was from a groundwater source. This complacency in convergence with human error and extreme natural events led to the tragedy. Hopefully, two years after the events, Justice O'Connor's findings and recommendation have suggested a direction which may ensure that Walkerton will never happen again.

At the outset, let me stress that anything I say today reflects my own views and not those of the Commission or the Commissioner. As Commission Counsel I will confine my remarks to the findings and recommendations of the Commission. In light of this audience, I will focus upon the public health aspects of the Walkerton Inquiry. Initially, I will give an overview of the circumstances which gave rise to the Walkerton Inquiry. It might also be useful to review the process of the Inquiry and how it operated in trying to get to the bottom of the story. Then I will speak to what happened in Walkerton. This was the mandate of Part 1 of the Inquiry which called upon the Commission to inquire into the circumstances underlying the tragedy

In describing the events in Walkerton in May, 2000, I will refer to how the local public health authorities responded to the outbreak. In my concluding remarks on Part 1 I will refer to the recommendations of Justice O'Connor which have implications for the public health sector. Finally, I will refer to the

recommendations of Justice O'Connor in his Part 2 Report which may have impact upon public health authorities. The Part 2 and final report was released on May 23rd, exactly two years after the tragedy.

OVERVIEW

The background context to Walkerton is a startling one. For the first time in North America, we had a major crisis in a treated municipal water system. The contamination caused more than 2300 people to become ill and 7 of them to die. This was in a town of 4800 people about 100 miles northwest of Toronto.

Of the more than 2,300 people who became seriously ill with gastroenteritis, 65 were hospitalized and 27 developed Hemolytic Uremic Syndrome (HUS), a serious and sometimes fatal kidney ailment. Of those who contracted HUS and survived, some, particularly children, may suffer from lasting effects.

How could a fatal water borne disease epidemic happen in May of 2000, in North America, with proven water treatment technologies? How could it happen, despite near universal acceptance of the multi-barrier approach to water treatment, and despite oversight of the municipal water authorities by the provincial Ministry of the Environment?

Hopefully, the main lesson learned from the Walkerton tragedy is that we can never again afford to be complacent about something as fundamental to human health as safe drinking water.

Experts in water treatment stress that a multi-barrier approach is necessary to ensure safe drinking water.

The elements that they refer to are a safe-source of the water, effective water treatment, a secure distribution system, the monitoring of water quality, and appropriate responses to adverse water test results. This theme permeates the recommendations of the Walkerton Inquiry. Putting in place a series of measures, each independently acting as a barrier to water borne contaminants passing through the system to the consumers, achieves a greater overall level of protection than does relying on a single barrier such as water treatment. A failure of any given barrier will not cause the failure of the entire system. The challenge is to ensure that each of the barriers is functioning properly so that together they constitute the highest level of protection that is reasonably available.

The culture of complacency led to a number of human failures which resulted in a breakdown of the multi-barrier approach. At the local level, the deficient practices of the waterworks operators went back 20 years. At the provincial level, the Ministry of the Environment failed to discover and correct these deficient practices. An ineffective approvals process, faulty inspections and lax enforcement led to the tragedy. When extreme natural events occurred in May 2000, these in convergence with human error led to the crisis. Walkerton was a tragedy waiting to happen.

The tragedy led to a political crisis. Obviously the residents of Walkerton were devastated. They had lost trust and confidence in public institutions. The tragedy also triggered alarm about the safety of drinking water across the province. Questions abounded. What actually happened in Walkerton? Who was responsible? And most importantly, how can we ensure that this never happens again, anywhere. The province-wide concern led to the creation of the Walkerton Inquiry by the provincial government in June 2000.

PUBLIC INQUIRIES

Public Inquiries or Royal Commissions - they are essentially the same thing - have a long history in our system of government dating back the Middle Ages in Britain when the King would appoint a commissioner to obtain data and information to assist in making decision of public importance.

Today, public inquiries in Canada have become a regular part of public governance. Their American counterpart is the Congressional or Legislative Committee investigating how and why a particular event occurred.

Broadly speaking, there are two types of public inquiries. The first is the policy development type of inquiry. These are generally established to review and make recommendations in major public policy areas. These types of inquiries have resulted in some of the most innovative and significant initiatives for governments in Canada such as the Hall Commission on Health Services or the Royal Commission on Bilingualism and Biculturalism.

The second kind of inquiry is the investigative or post-mortem inquiry established to look into and report on a particular occurrence or series of events that have raised public alarm. Investigative public inquiries are frequently convened in the wake of a tragedy where the public is shocked and disillusioned by what

has happened. Typically, there has been a loss of public confidence in public institutions necessitating the need for a thorough, independent and open review of what went wrong and what can be done to avoid a similar tragedy in the future. It is the need for a review that is independent from the normal government institutions that leads to the establishment of the public inquiry. Investigative inquiries, such as the Walkerton Inquiry, sometimes have both an investigative as well as a policy development role. They are asked to report on what happened and then make recommendations to avoid the same in the future. It seems that whatever the issue, both kinds of public inquiries are able to focus public attention in ways seldom achieved through the normal political process.

THE MANDATE

The mandate for the Walkerton Inquiry was extremely broad. It could conveniently be divided into two parts. The first was an investigative type of inquiry. It directed the Commission to investigate and report on what had happened in Walkerton and why, and in particular, to look at the effect if any, of provincial government policies, practices and procedures on the events in Walkerton. This last part turned out to be an enormously time consuming and complex exercise both in terms of calling evidence and in writing the report.

The second part of the mandate was to make recommendations to ensure the safety of drinking water across the province. This part of the mandate was primarily a policy-based type of public inquiry. Much of what was involved in the review that was necessary to address this part of the inquiry had little to do with the problems in Walkerton.

One of the essential goals of any public inquiry looking into a tragedy like Walkerton must be to restore public confidence, to the extent possible, by bringing to light all of the facts about what went wrong and to do so in an open, independent and credible manner. The process that is followed in conducting an inquiry is critical to obtaining the public's confidence. It is not enough to simply deliver a good report or even an excellent report. A public inquiry will not gain public confidence without following a credible process.

One of the first decision we made in the Walkerton Inquiry was to create two very separate and distinct processes for the two parts of the mandate: The investigative and the policy development. For each, we developed very different procedural models and probably more so than other inquiries we separated the two processes.

PART 1

The Part 1 process involved a typical evidentiary legal type of hearing. The Commission counsel and staff conducted a full investigation, interviewing witnesses and examining documents. At the hearings, there were plenty of lawyers representing the 21 parties who were granted standing, there was sworn testimony, cross-examinations and closing arguments. The hearing was conducted in the same way as a Judge would conduct a trial. The evidence began in October 2000, five months after the events and was completed eight months later in June 2001. Argument was presented in August, 2001, and the Report was released in January 2002. Over one million documents were reviewed. In all, 114 witnesses were heard from. There were hundreds of exhibits containing thousands of documents. All of the hearings were held in Walkerton. The hearings were telecast twice per day on local cable TV. Needless to say, the Commission proceedings had the undivided attention of the residents of Walkerton.

EVENTS IN WALKERTON

I would now like to turn to the events in Walkerton which gave rise to the tragedy. The Commission concluded that a number of contaminants, including the bacteria *E coli 0157:H7* and *Campylobacter jejuni* entered the water system through Well 5 during and shortly after a period of heavy rain in May 2000. Of these two bacteria, *E coli 0157:H7* is the most lethal. It is found in the large intestines of cattle and produces verotoxins that cause colitis and in some cases, Hemolytic Uremic Syndrome or HUS. *E coli* is sometimes called “Hamburger Disease”, causing some people to wrongly conclude that it is solely a food borne disease.

In Ontario, the incidence of *E coli 0157:H7* infection to humans is highest in cattle producing areas. Southwestern Ontario, where Walkerton is located, is the province’s main cattle producing area.

The difficulty in guarding against *E coli* infection is heightened by the fact that *E coli 0157:H7* bacteria can survive at least 10 to 25 weeks in soil. Incubation periods for *E coli 0157:H7* range from 16 hours to 8 days, but normally fall within 3 to 4 days.

The symptoms of *E coli 0157:H7* infection include diarrhea lasting an average of 4 days. Bloody diarrhea often occurs 24 hours after onset of illness. Infection is usually accompanied by severe abdominal pain. Children under 5 years of age and the elderly infected with *E coli 0157:H7* can suffer from HUS. This is a life-threatening condition in which verotoxins produced by *E coli 0157:H7* cause acute kidney failure, anaemia and low platelet counts.

Epidemiologists have established that approximately 10 to 15% of children infected with *E coli 0157:H7* develop HUS. The sad and unalterable fact is that approximately 5% of children who contract HUS will die. The mortality rate for very elderly people afflicted with HUS is even higher.

The other strain of bacteria contributing to the Walkerton outbreak was *Campylobacter jejuni*. It is frequently found in the feces of livestock and wildlife. Roughly 50% of those infected with *Campylobacter jejuni* experience symptoms which include diarrhea, cramping, fever, and acute abdominal pain. But the vast majority of them fully recover and experience no long-term adverse effects. A very small percentage of people infected with *Campylobacter jejuni* develop nerve damage or reactive arthritis. The fatality rate for *Campylobacter jejuni* is much lower than for *E coli 0157:H7*.

Walkerton's water system was supplied by three groundwater sources. The oldest of these, Well 5, was constructed in 1978. The newest, deepest and safest, Well 7, was constructed in 1987. The water system was operated by the Walkerton public utilities commission, a special purpose board of the municipality.

The water system's operators were the PUC's general manager and the foreman, both of whom were "grandfathered" under a voluntary operator certification programme, as well as an unlicensed maintenance worker. None of the operators believed very strongly in water treatment. In fact, they habitually underchlorinated the water system and permitted it to run without chlorinators on occasion. Many residents complained to the PUC because of the taste of chlorinated water.

Well 5 was a shallow well, drilled to a depth of 49 feet. The overburden, the depth from the surface to bedrock, is only 8 feet. Moreover, the upper portion of the bedrock below the overburden is a very permeable, highly porous fractured limestone extending down about 24.5 feet. All of the water entering Well 5 came from shallow zones within that very permeable, highly porous rock.

During the hydrogeological investigation following the tragedy, the flows of springs close to Well 5 were shown to reverse when the well was being operated. In addition, there were numerous point source breaches (such as post holes) in the vicinity of the well.

The evidence from as early as 1978 established that the water from this well was properly characterized as groundwater under the direct influence of surface water. When confronted with preventable tragedies, it is always disturbing to realize that there was information available which could have prevented them. In Walkerton, the vulnerability of Well 5 to contamination from surface water was known in 1978, before the well was ever linked into the municipal water distribution system.

A hydrogeological report prepared then described the thin overburden and the shallow aquifer and suggested that springs in the area would flow only intermittently when the well was in production. It contained a statement that “results of the bacteriological examination indicate pollution from human or animal sources” and “the supply should definitely be chlorinated and the bacteria content of the raw and treated water supply should be monitored”. The report recommended that the municipality consider establishing a water protection area by acquiring additional property to the west and south in the vicinity of Well 5. It pointedly stated, “shallow aquifers are prone to pollution, and farming and human activities should be kept away from the site of the new well”.

In keeping with the practice of the times, no formal conditions were attached to Well 5's approval, although there was an understanding that the PUC would maintain a required minimum chlorine residual. It was also understood that the PUC would monitor chlorine residuals daily and record results in daily operating sheets.

In subsequent years, when the Ministry began including operating conditions in certificates of approval, it failed to review old approvals to determine whether conditions should have been added to meet current

standards. The failure continued even after 1994, when the Ministry began imposing operating conditions on certificates of approval for groundwater sources under the direct influence of water surface. The long-standing deficient practices of the local operators went on for over 20 years. These practices included failing to take daily chlorine residual measurements, operating well without chlorination, failing to adequately chlorinate the water, mislabeling sample bottles from microbiological testing, making false entries on daily operating sheets and submitting false annual reports to the Ministry of the Environment.

Were the waterworks operators incompetent? Overall, they knew how to operate the water system properly, but what made them incompetent was their failure to appreciate the purpose of water treatment and the health risks involved in improper operation. How did they get away with it, and especially, how did they get away with it for so long?

In answering that question, we have to consider the regulatory culture that prevailed in May 2000 in Ontario, as it related to municipal waterworks. A general point is that the Ministry of the Environment's requirements for treatment and monitoring were not immediately enforceable, in the sense that operators could be charged with failing to meet those requirements. This was because the Ontario Drinking Water Objectives and the Chlorination Bulletin, the documents that set out key components of the multi-barrier approach to providing safe drinking water, were guidelines. They did not have the force of law.

One measure of the regulatory culture was that throughout the 1990's, the PUC continually failed to follow the MOE's minimum sampling programme. So much for monitoring. Well, what about treatment? In fact, each of the three MOE inspections of the Walkerton waterworks in the 1990's showed that the PUC was failing to maintain the minimum chlorine residual established by the Chlorination Bulletin. Remarkably, the inspections showed this despite the fact that the MOE's practice at the time favoured "announced" inspections. In other words, even though they knew in advance that MOE officers were coming to inspect the waterworks, the operators still under-chlorinated water entering Walkerton's water system.

In their approach to Walkerton, MOE staff appeared to be reluctant to use mandatory abatement measures; rather, they sought voluntary compliance. This was consistent with the view that municipalities were cooperative institutions that voluntarily followed recommendations relating to drinking water. But the effect was to deny the people of Walkerton an important fail safe mechanism in the form of effective and diligent regulatory oversight of the waterworks.

So in summary, in Walkerton you had a poorly operated waterworks and a regulatory culture that did not cause the operators to change their deficient practices.. Those factors came together, with deadly results, in May 2000.

I would now like to briefly turn to the chronology of events which occurred in May 2000.

Between May 8 and May 12, heavy rain fell in Walkerton. During these 5 days, over 5.1/4 inches of rain fell, with 2.3/4 inches falling on Friday May 12 alone. Shortly after May 12, contaminated surface water carrying *E coli 0157:H7* and *Campylobacter jejuni* originating at the adjoining farm, entered Well 5.

The primary, if not the only source of contamination, was manure that had been spread on the adjoining farm on April 22. In all, approximately 70 tonnes of manure were spread. At its closest point, manure was applied 246 feet away from Well 5. Although few of the organisms would move below the cultivation depth of about an inch and a half, and although in the weeks after the application many bacteria would have died, a significant source of faecal coliforms was applied and incorporated into the soil near Well 5 on April 22, and remained viable when the storm conditions permitted entry into the well. On May 15, Well 5 was shut off and Well 7 without a chlorinator was operated. Between May 15 and May 19 at approximately noon, Well 7 pumped unchlorinated water into the distribution system. On May 15, water samples were taken from within the distribution system and purportedly from Well 7, but most likely from the PUC workshop, as well as from a water main installation project in the vicinity of Well 5. Those samples arrived at the private laboratory used by the PUC.

On May 17, the laboratory faxed results confirming that with one exception, all samples were positive for both *E coli* and total coliform. Membrane filtration testing disclosed massive contamination. Neither the MOE nor the local health unit received notice of these adverse laboratory results.

The private laboratory did not notify environmental and health officials about the adverse results because it was under no legal obligation to do so, and considered analytical results of clients' samples to be confidential. The general manager of the PUC apparently feared that the adverse results were caused by operating Well 7 without a chlorinator.

Again, we are confronted with the absence of a fail safe system to guard against the dishonest or incompetent operator. Until 1996, the government of Ontario provided laboratory testing services for municipal water supplies. After it discontinued these services, the government did not enact a regulation requiring that private testing laboratories immediately and directly notify both environmental and health officials about adverse test results. Had the government of Ontario done this, hundreds of illnesses would have been prevented in Walkerton.

By May 18, illnesses were emerging in the community, particularly among children. When members of the public contacted the PUC and inquired about the safety of the water, they were assured that the water was "fine".

By Friday, May 19, the scope of the outbreak expanded dramatically, with the local hospitals receiving reports of diarrhea, including bloody diarrhea and stomach cramps. By noon, a new chlorinator was installed at well 7. When he was contacted by the health unit after 2.00 p.m. the PUC's manager said that he "thought the water was OK".

Within 2 hours, the health unit again contacted the PUC asking whether anything unusual had occurred in the water system. The PUC's general manager continued to cover up the adverse results from the water system and the new water main. He also failed to disclose the fact that Well 7 had been pumping unchlorinated water. Had the general manager disclosed these facts, the health unit would have issued a boil water advisory then, and 300-400 illnesses would have been avoided.

On Saturday May 20, the outbreak continued to spread. Meanwhile, the cover-up by the PUC's general manager continued. He continued to withhold from the health unit key information about the adverse test results and about operating Well 7 without chlorination. It is ironic that this cover-up related to operating Well 7 without chlorination when the real problem was with Well 5. Without this crucial information, the health unit continued to investigate food borne sources.

On Sunday, May 21 at approximately 1.30 p.m. the health unit issued a boil water advisory, despite the PUC's general manager's continued assurances that he was unaware of any problems with the water system.

In his report, Mr. Justice O'Connor made several findings about how PUC waterworks operators, the PUC commissioners and the government of Ontario contributed to the circumstances that allowed the tragedy to occur.

THE ROLE OF THE WATERWORKS OPERATORS

First of all, dealing with the waterworks operators, he concluded that their failure to take daily chlorine residual measurements directly contributed to the outbreak. Had they measured the chlorine residual at Well 5 on May 13 or on the days following, as they should have, the waterworks operators would have discovered that incoming contamination was overwhelming the chlorine. They should then have been able to take the necessary steps to protect the community.

The general manager's failure to disclose laboratory results to the health unit and his misleading assurances that the water was safe, contributed to the extent of the outbreak.

Mr. Justice O'Connor also found that the PUC commissioners had inadequate knowledge of matters relating to water safety and the operation of the system. They relied excessively on the general manager

THE ROLE OF THE GOVERNMENT REGULATOR AND OVERSEER

Mr. Justice O'Connor also made a number of key findings about the Ministry of the Environment. He concluded that in or after 1994, the MOE's approvals program should have identified Well 5 as a water system supplied by a groundwater source that was under the direct influence of surface water, requiring the installation of continuous chlorine residual and turbidity monitors. The approvals program should

also have attached a condition to Well 5's certificate of approval, mandating the PUC to maintain a minimum chlorine residual.

The MOE's inspection program was found to be deficient as well. It should have detected the vulnerability of Well 5 to surface contamination and noted the need for continuous monitoring. It should also have detected the improper chlorination and monitoring practices of the Walkerton PUC and ensured that the PUC took the necessary steps to correct those practices. The Commissioner also found fault with the MOE's information system and its training requirements for its own employees and waterworks operators.

The regulatory culture concerning waterworks that prevailed until May 2000 also contributed to the tragedy. Mr. Justice O'Connor concluded that the MOE should have had legally enforceable regulations rather than guidelines when setting out the standards and procedures to be followed to ensure the safety of drinking water.

Among the key findings made by Mr. Justice O'Connor was that the government of Ontario's failure to enact a regulation requiring testing laboratories to follow a notification protocol when laboratory testing services were privatized increased the risk to public health. As I have said, in Walkerton, this denied a failsafe against dishonest and incompetent operators.

Finally, Mr. Justice O'Connor found that provincial government budget reductions contributed to the tragedy in two ways. First, the implementation of the decision to privatize the labs, a cost-cutting measure, was problematic because of the failure to enact the notification regulation which I earlier referred to. Secondly, the budget reductions made it less likely that the MOE would pursue proactive measures which might have prevented the outbreak or reduced its scope.

THE ROLE OF LOCAL PUBLIC HEALTH AUTHORITIES

I would now like to turn to the role of the public health authorities in the Walkerton outbreak. Of all of the public institutions, the local health unit performed its statutory mandate in a competent and responsible manner under extremely stressful conditions.

Mr. Justice O'Connor considered the role of the Bruce Grey Owen Sound Health Unit in relation to the events in Walkerton in three separate contexts: its role in overseeing the quality of the drinking water in

Walkerton over the years leading up to May 2000; its reaction to the privatization of laboratory testing services in 1996 and its response to the outbreak in May 2000.

Prior to May 2000, oversight role of the Health Unit involved the receipt of advance reports from the local operator and inspection reports from the MOE. Mr. Justice O'Connor found that it would have been preferable for the Health Unit to have been more proactive in response to these reports, he was satisfied that it did all that could have been expected of it. During the mid to late 1990's there were clear indications that the quality of Walkerton's water was deteriorating. However, even if the Health Unit was more active, it is unlikely that it would have had any input on the events in May 2000 because the required corrective responses were essentially operational which was the responsibility of the MOE. After lab testing services for municipalities were assumed by the private sector in 1996, the Health Unit sought assurances from the MOE's Owen Sound office that the Health Unit would continue to be notified of all adverse water quality results. It received those assurances. As a result, Mr. Justice O'Connor was satisfied that the Health Unit did what was reasonable in reacting to the privatization of laboratory services.

Finally, the Commission reviewed the health unit's response to the outbreak. It was first notified of the outbreak on Friday May 19, 2000, and issued a boil water advisory two days later on Sunday May 21, 2000. This was the Victoria Day long weekend. Mr. Justice O'Connor found that the health unit staff investigated the outbreak diligently. Although it first suspected a food borne source was the cause, this was reasonable in all of the circumstances particularly in light of the four assurances it received from the PUC that the water was fine. There was some local criticism that the health unit didn't immediately issue a boil water advisory on the Friday. However, Mr. Justice O'Connor did not fault the health unit for the timing of the boil water advisory although he commented that it might have been more broadly disseminated.

RECOMMENDATIONS RELATING TO THE PUBLIC HEALTH SECTOR

The Commission made 28 recommendations arising out of the circumstances in Walkerton in May, 2000.

(i) Government Regulator and Overseer and Operators

The Commission made a number of recommendations respecting the MOE's role as regulator and overseer of waterworks operations. These included:

- developing criteria for identifying “groundwater under the direct influence of surface water”
- an approved approvals process with the maintenance of an information data system and time limited approvals
- requiring continuous chlorine and turbidity monitors in appropriate circumstances
- an improved inspection process with
 - annual inspections as a matter of policy and annual inspections of poorly performing operations as a matter of law
 - adequate resources
 - distribution of inspection reports to a number of authorities
- C certification and defined training requirements for operators
- C strict enforcement of the regulations and effective follow-up
- C a new management information system
- C a review of the training requirements of MOE employees with sufficient resources directed to technical training.

(ii) **Local Public Health Authorities**

The Commission also made a number of recommendations relating to the local public health unit including:

- vacancies for local medical officers of health should be filled expeditiously by full-time officers;
- regular and random assessments of local health units to ensure compliance with required minimum programmes and services;
- the role of medical officers of health relating to safe drinking water should be defined and clarified;
- the health unit should regularly meet the local MOE office and have access to the new management information system of the MOE;

- A Boil Water Protocol should be developed to give guidance relating to when and how a boil water advisory or order should be issued and disseminated.

PART 2

Finally, I would like to briefly review the Part 2 Report which was released a few weeks ago. As I said earlier, Part 2 was the policy development phase of the Walkerton Inquiry which looked to the kind of water treatment system we should have in the future. The Part 2 recommendations reached beyond the circumstances in Walkerton. Although Mr. Justice O'Connor's recommendations are broad in their scope, Ontario's existing system does not need radical reform. The challenge is to ensure that best practices are implemented across the province.

The recommendations in the Part 2 Report are divided into 5 areas. The first is Source Protection. In this area, the Commission recommends a watershed based planning process led by the MOE and local conservation authorities. Large farms and small farms in sensitive areas would be required to develop water protection plans consistent with watershed based source protection plans. The second area is standards and technology for treating water and for monitoring its quality. The third area is municipal water providers. Local operators would have to be accredited and have an approved operational plan. The fourth area is provincial oversight.

The Commission recommends the strengthening of the regulatory and oversight roles of the provincial government. A government-wide drinking water policy and a Safe Drinking Water Act for Ontario is recommended. Strict enforcement of drinking water regulations is required. The Province should commit sufficient resources to ensure that the MOE can effectively perform its mandate. Finally, there are recommendations relating to special cases such as small water systems and First Nation water supplies.

There are a number of general principles and themes that underlie the approach adopted by the Commission in Part 2. The ultimate objective of the recommendations is to ensure that Ontario's drinking water systems deliver water with a level of risk so negligible that a reasonable and informed person would feel safe drinking the water. The means to achieve this objective would be the simultaneous implementation of four measures,:

- (i) the multi-barrier approach;
- (ii) the precautionary approach to decisions affecting drinking water safety;
- (iii) ensuring that water providers have sound quality management and operations systems; and
- (iv) providing for effective provincial government regulation and oversight.

RECOMMENDATIONS

I do not have time to review 93 recommendations made in the Part 2 Report. However, from your perspective some of the more significant recommendations are the following:

SOURCE PROTECTION

- watershed source protection plans for each watershed
- MOE approval of such plans and expanded role for conservation authorities
- provincial and municipal decisions and the regulation of non-farming industry must be consistent with such plans
- sufficient resources committed to the development of such plans
- certificates of approval for spreading of waste materials must be consistent with such plans
- MOE to take lead role in regulating farm activities which may impact on drinking water sources with technical advice from the Ministry of Agriculture, Food and Rural Affairs
- MOE to establish minimum regulatory requirements for such farming activities
- all large or intensive farms and farms in sensitive or high risk areas should be required to have binding individual water protection plans consistent with the source protection plan.

STANDARDS

- in setting drinking water quality standards, the objective should be such that if the standards are met, a reasonably and informed person would feel safe drinking the water
- standards should be based on the precautionary approach
- co-ordinated federal-provincial development of standards
- in setting standards the MOE should be advised by an Advisory Council in Standards

TREATMENT

- all raw water intended for drinking water should be subject to a characterization of each parameter which might pose a public health risk. The results should be used in designing and approving any treatment system
- adequate resources for the MOE to support a water sciences and standards function

DISTRIBUTION

- developing of standards for materials, including piping, valves, storage tanks and bulk chemicals that come in contact with the drinking water

MONITORING

- all municipal providers to have, as a minimum, continuous inline monitoring of turbidity, disinfectant residual and pressure at the treatment plant together with alarms accompanied with shut-off mechanisms where needed
- municipal providers to develop adequate sampling and continuous measurement plan as part of its operational plan
- regulatory standards for sampling and testing.

LABORATORIES

- mandatory accreditation for all testing parameters and all testing to be performed by accredited labs
- MOE licencing and periodic inspections of labs offering drinking water testing with continuing accreditation being a condition of the licence
- results of lab accreditation audits to be available to MOE and public

MUNICIPAL GOVERNMENT

- statutory standard of care for municipal overseers
- provincial government guidelines and technical advice and review of municipal financial plans for water system
- as a general principle, municipalities should plan to raise adequate resources for their water system from local revenue sources barring exceptional circumstances

- the Ontario Clean Water Agency should be maintained but its status and mandate should be clarified

QUALITY MANAGEMENT

- each municipal provider is to have an accredited operating agency as a licence condition, whether internal or external to the municipality
- accreditation to be based on an independent audit and a periodic review by a certified auditing body
- development of a provincial drinking water quality management standard
- municipal operational plans to be approved by MOE as part of approvals and inspections programme
- developing generic emergency response plan for municipal providers
- mandatory certification of individual operators with periodic recertification
- MOE requirements and standards for appropriate training of individual operators

PROVINCIAL GOVERNMENT

- developing a comprehensive ‘source to tap’ drinking water policy
- MOE to be lead ministry
- enactment of a Safe Drinking Water Act
- creation of a Drinking Water Branch and Watershed Management Branch in the MOE and an office of Chief Inspector Drinking Water Systems
- MOE to increase commitment to mandatory abatement and strict enforcement of regulations
- adequate funding of programmes relating to safety of drinking water
- MOE establish an information system which provides central electronic access to relevant information
- annual “State of Ontario’s Drinking Water Report” to be tabled in Legislature

SPECIAL CASES

- special recommendations for small water systems and First Nations.

The Walkerton Inquiry is now concluded. Both Reports are now under consideration by the provincial government. If there is any good news from Walkerton, it is, in my view, that the Commission through the strong leadership of Mr. Justice O'Connor has to a significant degree restored the confidence of the residents of Walkerton in public institutions. Moreover, I hope that the recommendations in the Report provide a realistic and practical direction in the future so that a Walkerton will never happen again in Ontario, or indeed, anywhere. Access to safe drinking water is an essential public service and should be a fundamental right in any civilized society. We cannot afford to be complacent in the future.

Finally, it would be remiss of me if I did not take this opportunity, on behalf of the Commission, to thank ALPHA and its counsel for their participation in the Inquiry. Your participation ensured that the Commission was given the public health sector perspective to the events which gave rise to the tragedy in Walkerton. In meeting the huge challenge which the Commission faced, it was greatly assisted by interested parties like ALPHA. The Commission is indebted for your contribution to the process.

Thank you.

