



Environmental Review Tribunal

Case No.: 00-119/00-120/00-121/00-122/
00-123/00-124

Dillon et al. v. Director, Ministry of the Environment

In the matter of appeals by Carol and Melvyn Dillon filed November 17, 2000; Michael and Maureen Cassidy filed November 20, 2000; The Council of Canadians; Kathleen Corrigan; Anne German; and Eileen Naboznak; filed November 21, 2000, for a hearing before the Environmental Review Tribunal (formerly the Environmental Appeal Board) pursuant to Part II of the *Environmental Bill of Rights, 1993* with respect to a decision by the Director, Ministry of the Environment, under section 34 of the *Ontario Water Resources Act*, to issue Permit to Take Water No. 00-P-4096 to OMYA (Canada) Inc. for the taking of water from the Tay River for process water at Lot 18, Concession 2, Former Township of Bathurst, now part of the Township of Bathurst, Burgess and Sherbrooke, County of Lanark, Ontario; and
In the matter of a preliminary hearing on February 6, March 5-6, April 2-3 and the hearing on June 21, 25- 29, July 3-6, 10-11, August 2, October 19-12, 15-19, 22-26 and 29-31, 2001 in Perth, Ontario.

Before: Pauline Browes, Vice-Chair

Appearances:

Alan Bryant - Counsel for OMYA (Canada) Inc.
Doug Watters - Counsel for the Director
Steven Shrybman - Counsel for the Council of Canadians
Carol & Melvyn Dillon
Michael & Maureen Cassidy
Ann German
Eileen Naboznak
Kathleen Corrigan

Dated this 19th day of February, 2002.

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Reasons for Decision

Background:

The Application by OMYA (Canada) Inc. for a Permit to Take Water

OMYA (Canada) Inc. (“OMYA”), operates a calcium carbonate processing facility on Highway #7 approximately five kilometres west of the Town of Perth. The process consists of crushing and grinding calcite for use in specific applications. Calcite for OMYA’s operation is obtained from a quarry owned and operated by OMYA near Tatlock, in Lanark Highlands Township, located approximately 30-40 km north of the plant site. The quarry is licensed by the Ministry of Natural Resources (“MNR”) under the *Aggregate Resources Act*. OMYA’s processing facility also requires water. At present OMYA has a Permit to Take Water (No.97-P-4018) under the *Ontario Water Resources Act*¹ (“OWRA”) issued on April 17, 1997 for the taking of 872 m³/day of water from nine wells on their premises. The product is sold in a slurry form which is then transported by tanker truck or by rail.

On February 28, 2000, Simmering and Associates Ltd. made application on behalf of OMYA to the Director, Ministry of the Environment (“Director”) for a further Permit to Take Water under ss. 34(3) of the *OWRA*. (Ex. 15, Tab 6) The location of the proposed water taking is from the Tay River, at Lot 18, Concession 2, Township of Bathurst, Burgess and Sherbrooke. The intake location for the proposed water taking on the Tay River is approximately 1,500 metres south of the OMYA plant site. A diagram showing most of the areas described above is attached as Appendix ‘F’.² The projected estimates for the proposed water taking were as follows:

¹ R.S.O. 1990, c. O.40, as amended.

² This diagram was prepared by the Tribunal for illustrative purposes. It is based on Exhibit 86a

Table 1 : Water Needs Summary (Ex. 15, Tab 6, p. 5)

Year	Maximum Daily Water Taking (m ³ /day)
present	864
end of 2000	1152
end of 2001	1210
end of 2002	1440
end of 2003	1483
end of 2004	2333
end of 2009	4500

Included in the application was information concerning:

- < the design sketches of the proposed intake site (Ex. 15, Tab 6, Appendix A);
- < the Tay River Flow data and graphs (Ex. 15, Tab 6, Appendix B & C); and
- < the public consultation conducted by OMYA (Ex. 15, Tab 6, Appendix D).

The application requested that:

a Permit to Take Water be issued to OMYA (Canada) Inc. for a maximum of 4,500 m³/day. This Permit should include the following provisions to ensure that minimum impact on the Tay River drainage area and to ensure a continuous, reliable source of process water to this industry:

1. Prior to commencement of water taking, approvals from appropriate provincial and federal regulators be obtained.
2. The pumping station be equipped with appropriate monitoring and recording equipment to confirm that water taking does not exceed the approved amount.
3. OMYA (Canada) Inc. make arrangements with the Township of Bathurst for a river management program to prevent diversion of low summer flows. (Ex. 39, Tab 6, p. 13)

On March 24, 2000, Simmering Associates Ltd. submitted additional information on behalf of OMYA, Addendum #1 (Ex. 15, Tab 9) which provided information regarding the Bob's Lake Outlet Control at Bolingbroke Dam (where Bob's Lake flows into the Tay River) operated by Parks Canada.

The Application Process

As required by the *Environmental Bill of Rights, 1993*³ (EBR), OMYA's application for a PTTW was posted on the EBR Registry for public notice and comment. In the 30 day public comment period which ended April 9, 2000, some 283 submissions were received from individuals, agencies and organizations expressing an interest and concern about the application. These comments were considered by Brian Kaye, a Director for purposes for s. 34 of the *OWRA*. Mr. Kaye stated:

The Director is not obligated to respond to the persons making the submissions, but is obligated to consider those submissions and explain what impact they had on the decision. (Brian Kaye's Statement, Ex. 71, Tab 4, p. 63)

Mr. Kaye, a hydrogeologist, provided an overview of the PTTW program with reference to the various tools that are available to the Director in making a decision regarding a permit application. While there are programs which deal specifically with the protection and improvement of the quality of water within Ontario, he stated that it is the intent of the PTTW program to deal with water quantity issues. He said that the administration of the PTTW program is described in the "Permit to Take Water Program: Guidelines and Procedures Manual", revised April 14, 1999 (Ex. 16, Tab 36) The manual contains sections on:

- < Permit to Take Water Legislation and Its Intent
- < Enforcement Procedures
- < Water Supply Interference Guidelines and
- < Permit Processing

The revised manual reflected the legislative and policy changes which took place after 1984, which are:

³ S.O. 1993, c. 28, as amended.

- < The Great Lakes Charter, signed by the Governors and Premiers of the Great Lakes States and Provinces (1985)⁴
- < *EBR* (1993)
- < *OWRA* - Regulation 285/99 : Water Taking and Transfer (1999)

Victor Castro, a surface water scientist with the Ministry of the Environment (“MOE”), stated that he had been involved with the OMYA application since January 2000 having attended a pre-submission consultation meeting to discuss a conceptual plan by OMYA to obtain a supply of water to meet the operational needs of the company. After the OMYA application was submitted, Mr. Castro convened a meeting on April 4, 2000 with technical agencies that included: MNR, The Rideau Valley Conservation Authority and Parks Canada. He stated that the purpose of the meeting was to explain the PTTW process, including the consultation process under the *EBR* and solicit comments on the Permit applications as it related to the mandated areas of their agencies. On May 10, 2000, Mr. Castro also met with representatives of the Federal Department of Fisheries and Oceans.

Mr. Castro stated:

After receiving comments from the technical agencies and reviewing the supporting information provided by the proponent’s consultant, including addendum reports, and reviewing the public input received through the *EBR* posting, I recommended the permit be phased in order to minimize any significant environmental impacts both upstream and downstream of the proposed taking. I also recommended conditions in the Permit requiring detailed studies and river flow monitoring, prior to the approval of Phase II of the Permit.

A draft permit was circulated to all the technical agencies, including the Federal Department of Fisheries and Oceans. I reviewed the comments on the draft Permit as provided by the technical agencies and made additional recommendations for changes. (Ex. 71, Tab 3, pp. 11-12)

On August 24, 2000 the Director issued a “phased” Permit to Take Water (“the OMYA PTTW”) to OMYA. The OMYA PTTW states:

⁴ The Great Lake Charter Annex was subsequently issued June 18, 2001 (Ex. 76, Tab 4)

The rate of taking shall not exceed 1,020 litres per minute for a maximum of 1,483 cubic metres per day prior to January 1, 2004, or 3,125 litres per minute for a maximum of 4,500 cubic metres per day prior on or after January 1, 2004, subject to the conditions of the Permit. (Ex. 2)

As a result of this provision, the OMYA PTTW was referred to throughout the hearing as a “phased” PTTW.

There were 27 conditions attached to the permit including the following key condition:

The Permit Holder shall immediately stop the taking of water authorized by this permit if the amount of water flow measured in the Tay River at the Bowes Road bridge continuous recording streamflow gauging station...falls to 1 cubic metre per second or less.

The Application for Leave to Appeal

On November 6, 2000, another member of the Environmental Review Tribunal, Len Gertler, granted leave to appeal the Director’s decision to issue the Permit (Ex. 1) to the following persons who had sought leave to appeal under s. 38 of the *EBR*:

Carol and Melvyn Dillon (Exhibit 3A)

Michael and Maureen Cassidy (Exhibit 3B)

Council of Canadians (Exhibit 3C)

Kathleen Corrigan, Ann German, Eileen Naboznak and Barbara and Ray Zents⁵ (Exhibit 3D)

Ken McRae (Exhibit 3E)

Each of the above persons subsequently filed a Notice of Appeal.

The Tribunal’s Authority

The Environmental Review Tribunal’s legal authority to hear these appeals flows from the following statutes.

⁵ Barbara and Ray Zents requested to withdraw their appeal and did not attend the preliminary hearing.

The *EBR*⁶ provides:

Grounds for appeal decision

44. The appellate body shall make its determination in an appeal under this Part on grounds similar to those that would apply to an appeal relating to the same proposal and of a similar nature brought by a person referred to in paragraph 2 of ss. 38 (1).⁷

⁶ S.O. 1993, c. 28, as amended.

⁷ Subsection 38(1) of the *EBR* states that “[a]ny person resident in Ontario may seek leave to appeal from a decision whether or not to implement a proposal for a Class I or II instrument of which notice is required to be given under s. 22, if the following two conditions are met:

1. The person seeking leave to appeal has an interest in the decision.
2. Another person has a right under another Act to appeal from a decision whether or not to implement the proposal

Powers on appeal

45. The appellate body has similar powers on an appeal under this Part to those the appellate body would have on an appeal relating to the same proposal and of a similar nature brought by a person referred to in paragraph 2 of subsection 38 (1).

Procedure

46. The appellate body hearing an application for leave to appeal or an appeal under this Part may follow procedures similar to those the appellate body would follow on an appeal relating to the same proposal and of a similar nature brought by a person referred to in paragraph 2 of subsection 38 (1), or may vary those procedures as appropriate.

The appeal process for a person applying for a PTTW is described in s. 100 of the *OWRA* which, in part, provides:

When approval, etc., refused

100. (3) When a Director,

(a) refuses to issue or renew, or cancels or suspends a licence or permit, or refuses to grant an approval;

(b) imposes terms and conditions in issuing a licence or permit or in granting an approval;

(c) alters the terms and conditions of a permit or approval after it is issued or granted;

(d) imposes new terms and conditions on a permit or approval after it is issued or granted;
or

(e) gives or makes any notice, direction, report or order, except an order under section 74, the Director shall serve written notice of the refusal, cancellation or suspension referred to in clause (a), the terms and conditions imposed or altered as referred to in clause (b), (c) or (d), or a written copy of the notice, direction, report or order referred to in clause (e), and written reasons therefor, upon the applicant or the person to whom the licence, permit, approval, direction, order, report or notice is issued or granted.

Hearing may be required

(4) The applicant or person may, by written notice served upon the Director and the Tribunal within fifteen days after the service of the notice referred to in subsection (3), require a hearing by the Tribunal.

Hearing

(8) The provisions of section 144 of the *Environmental Protection Act* apply with necessary modifications to a hearing by the Tribunal under this section.

Parties to hearing

(9) The applicant or person requiring the hearing, the Director referred to in subsection (3) and any other persons specified by the Tribunal are parties to the hearing.

In turn the *Environmental Protection Act*⁸ (“EPA”) provides:

Powers of Tribunal

144. (1) A hearing by the Tribunal shall be a new hearing and the Tribunal may confirm, alter or revoke the action of the Director that is the subject-matter of the hearing and may by order direct the Director to take such action as the Tribunal considers the Director should take in accordance with this Act and the regulations, and, for such purposes, the Tribunal may substitute its opinion for that of the Director.

Procedural Matters

A preliminary hearing was held on February 5 and 6, 2001 in Perth, Ontario in preparation for the appeal hearing. A procedural Order was issued by the Tribunal on February 9, 2001 (Exhibit 9) outlining the parties (the appellants as listed above, OMYA, the Director, and Ms. Sulyn Cedar who represented the Lanark County Citizen’s Action Group, two participants Jim Ronson, representing the Perth Community Association and Charles Stewart, representing the Greater Bobs and Crows Lake Association. As well, a joint issues list submitted by the appellants, was included in the procedural Order.

On February 23, 2001, OMYA submitted a notice of motion (Exhibit 7) requesting from the Tribunal an Order to:

⁸ R.S.O. 1990, c. E.19, as amended.

- < quash certain grounds of appeal set out in the notices of appeal
- < direct that Ms. Cedar not be a party to these proceedings
- < attain particulars in respect to the Cassidy and Council of Canadians appeals.

On February 23, 2001, the Director submitted a Notice of Motion requesting from the Tribunal an Order to:

- < strike out grounds of appeal raised in the respondents' appeals;
- < refuse leave to add grounds of appeal;
- < require particulars of and the answers concerning any grounds of appeal remaining;
- < if necessary, require notice of proposed summons, and disclosure of the evidence of any summoned and other witnesses, and the two participants with respect to any grounds of appeal remaining; and
- < if necessary, require the provision of notice to the Attorneys General of Canada and Ontario with respect to constitutional issues by any grounds of appeal remaining which may raise issues. (Exhibit 8)

Orders outlining the resolution of these motions were issued on April 6, 2001 (Exhibit 27) and May 2, 2001 (Exhibit 28).

- < The motion brought by OMYA to deny the granting of party status to Ms. Cedar was denied.
- < The motion brought by OMYA (Canada) Inc. for an order quashing certain grounds of appeal set out in the respondents' Notices of Appeal was dismissed.
- < The motion brought by the Director for an order striking out certain grounds raised in the respondents' Notices of Appeals was dismissed.
- < The motion brought by the Director for an order refusing leave to add proposed grounds of appeal as set out in the Joint Issues List was granted in part.

< The issues to be addressed at the hearing were those contained in the Notices of Appeal and in the Revised Joint Issues list submitted by the appellants.

Notice of the constitutional issue cited concerning Canada's obligations under the North American Free Trade Agreement and the World Trade Organization Agreement (Ex. 32 & 36) was provided by way of letters to the Attorneys General of Ontario and Canada. The Counsel for the Department of Justice of Canada responded that they did not see the issue as a clear constitutional question and did not intervene in the hearing. (Ex. 50) The Ministry of the Attorney General for Ontario responded with further questions to the Council of Canadians (COC) concerning the parameters of the issues to be brought forward by the COC. (Ex. 35) Mr. Shrybman, Counsel for the COC corresponded further to clarify his issues. Neither the Attorneys General of Ontario or Canada intervened in the proceedings.

The Tribunal ordered that particulars and interrogatories be exchanged between the parties in order to facilitate the disclosure of information.

Ken McRae, who had been granted leave to appeal under the EBR process and Robert Lovelace on behalf of the Algonquin Ardoch First Nations, who had requested and granted party status at the second preliminary hearing, both requested to withdraw as parties and this was accepted by the Tribunal. However, they both made oral presentations (Exhibits 84 and 85) during the regular hearing schedule.

A number of summonses were issued by the Tribunal on request of the parties for the presence of witnesses at the hearing.

Because of the acute interest in the issues within the community concerning this hearing, a public evening session was held at the Perth Lions Centre on June 26, 2001 with an attendance of over 400 persons. Twenty-seven persons presented oral testimony at the public evening session with some presentations in favour of the appeal and some in favour of the PTTW as issued.

A site visit was conducted on June 28, 2001 with the following locations visited:

- < the OMYA quarry
- < the Bolingbroke Dam
- < the location of the “intake” pipe on the Tay River

A further site visit was made to the Perth Water Gauge Station on the Tay River, downstream from the proposed water intake location, which demonstrated the type of gauge station that would be required to be installed by the instrument holder for this proposal of the Permit To Take Water.

The OMYA plant was not visited as OMYA required an agreement to be signed which stated in part, “The Undersigned agrees to receive and hold any confidential information which it may obtain during or as a result of the visit to the plant, in confidence and shall not disclose the same to others.” It was not appropriate for me to sign such an agreement and therefore the visit to the plant was not made.

The Regulatory Framework

The taking of water in Ontario is regulated under s. 34 of the *Ontario Water Resources Act* and Regulation 285/99.

Section 34 of the *OWRA* states, in part, that

Taking of water regulated

(3) Despite any general or special Act or any regulation or order made thereunder and subject to subsection (5), no person shall take more than a total of 50,000 litres of water in a day,

(a) by means of a well or wells that are constructed or deepened after the 29th day of March, 1961; or

(b) by means of an inlet or inlets from a surface source of supply, where the inlet or inlets is or are installed in the source of supply or is or are enlarged after the 29th day of March, 1961; or

(c) by means of a structure or works constructed after the 29th day of March, 1961 for the diversion or storage of water; or

(d) by any combination of the means referred to in clauses (a), (b) and (c), without a permit issued by a Director.

Where taking of water interferes with other person's interest in water

(4) Despite any general or special Act or any regulation or order made thereunder, where the taking of water for any purpose, other than the taking of water by any person except a municipality or company public utility for use for ordinary household purposes or for the watering of livestock or poultry and other than the taking of water by any person for firefighting, interferes, in the opinion of a Director, with any public or private interest in any water, the Director may, by notice served on or sent by registered mail to the person who is taking or is responsible for the taking of water that so interferes, prohibit the person from so taking water without a permit issued by the Director.

Application to domestic and farm use

(5) Subsection (3) does not apply to the taking of water by any person for use for domestic or farm purposes or for firefighting.

Permit

(6) A Director may in his or her discretion issue, refuse to issue or cancel a permit, may impose such terms and conditions in issuing a permit as he or she considers proper and may alter the terms and conditions of a permit after it is issued.

Offences

(8) Every person who contravenes,
(a) subsection (3) or (4);
(b) a notice served on him, her or it or received by him, her or it or on his, her or its behalf under subsection (4) or (7); or
(c) any of the terms and conditions of a permit issued by a Director, is guilty of an offence.

The issuance of permits to take water is further regulated by Regulation 285/99, entitled "Water Taking and Transfer", which is reproduced as Appendix "B".

Issues:

The issues, as identified by the appellants and addressed by the parties and the participants at the hearing, are set out under the broad headings of:

(1) The Environmental Impact

- (2) Bulk water transfer restrictions
- (3) Trade Agreement Implications
- (4) OMYA's Environmental Track Record

The Environmental Impact

(1) The Need for, and Meaning of, an "Ecosystem Approach"

The appellants submitted that the Director failed to apply an "ecosystem approach" in assessing OMYA's application for a PTTW. The appellants submitted that this approach is mandated by the Ministry's Statement of Environmental Values and by Regulation 285/99.

(A) The Statement of Environmental Values

The Ministry of the Environment's Statement of Environmental Values ("SEV") (Ex. 16., Tab 39) describes the mandate of the Ministry as follows:

The mandate of the ministry of the Ministry of Environment and Energy is to protect the quality of the natural environment so as to safeguard the ecosystem and human health; coordinate the government's energy supply and demand-related activities; and foster the efficient use and conservation of resources.

The SEV states that the Ministry will apply the following guiding principles when making decisions that might significantly affect the environment:

- < The Ecosystem Approach
- < Environmental Protection
- < Resource Conservation

The SEV describes the "ecosystem approach" as follows:

The Ministry will adopt an ecosystem approach to environmental protection and resource management. This approach views the ecosystem as composed of air, land, water and living organisms, including humans, and the interactions among them.

When making decisions, the Ministry will consider: the cumulative effects on the environment; the interdependence of air, land, water and living organisms; and the interrelations among the environment, the economy and society.

It was the MOE's position that the guiding principles of the SEV were required to be included within the Acts, regulation or policies before the SEV could be considered applicable.

The MOE quoted Part VI of the SEV which states:

The Ministry will apply the purposes of the EBR and the guiding principles listed in Part III and integrate them with those considerations set out in Part V, as it develops Acts, regulations, and policies. The principles and considerations will also guide the Ministry's internal management policies.

According to the Director, only those elements of the SEV which are specifically included in legislation, regulations and policies are applicable, otherwise it is not applicable. The Director submitted that the "ecosystem" principle found in the SEV was reflected in the requirement in Regulation 285/99 that the Director shall consider the protection of the ecosystem when assessing the merits of an application for a PTTW.

The Director also stated that the "ecosystem" principle found in the SEV was not directly applicable when considering the merit of an application for a PTTW. Instead the Director submitted that a PTTW is an "instrument" and that the SEV does not apply to instruments.

Gordon Miller, the Environmental Commissioner of Ontario ("ECO") testified at this hearing under subpoena at the request of the COC, stated that when government decision-making takes place with respect to decisions, legislation, regulations and policy decisions, there would normally be some kind of documentation that responded to the SEV which would be sent to the Commissioner's office. He stated that in the case of the Ministry of the Environment, his office receives documentation of consideration of the Statement of Environmental Values for decisions relating to legislation or regulations or policy decisions but he does not receive documentation with regard to decisions about "instruments". The PTTW is an instrument under the legislation.

The Appellants believed that the SEV was a document that they could rely on in total and expressed disappointment that the MOE took a narrow interpretation of it. With the definition of “ecosystem approach” in the SEV, the Dillons stated that although evidence was presented by the MOE and OMYA on water quantity and aquatic habitat, the “interrelations among the environment, the economy and society” had not been addressed.

The Cassidys also believed that the MOE’s interpretation put a straitjacket around the application of the ecosystem approach to environmental decision-making, even though it is the centrepiece of the Ministry’s SEV. They stated that “the Ministry’s SEV is meant to be an integral to its decision-making process, and that the ecosystem approach need not be confined to a watershed as MOE witnesses had testified”.(Final submission, Nov. 14, 2001, p.4)

Ms. Cedar commented that “it is time that the articles of the EBR and the intent of the SEV’s were observed by government employees”.

(B) Regulation 285/99

Clause 2(1)1. of Regulation 285/99 states that a Director who is considering an application for a PTTW shall consider the “protection of the natural functions of the ecosystem” in accordance with the procedures set out in the Ministry’s publication entitled “Permits to Take Water, Guidelines and Procedures Manual, 1999” (“the Manual”).

However, the Ministry’s Manual does not outline the procedures that should be followed to evaluate whether the natural functions of the ecosystem will be protected. In fact this issue is not even mentioned in the Manual. The Manual suggests that this issue, and others raised by Regulation 285/99, will be addressed in the future. In speaking of Regulation 285/99 it states, at page 3, that:

The effect of these and other changes in law, practice and policy which now apply will be integrated into the next major revision of this manual.

The Director referred to the definition of the “ecosystem approach” found in the Ministry of the Environment’s 1994 publication “Water Management: Policies, Guidelines, Provincial Water Quality Objectives”. Section 1.4 states that:

The ecosystem approach views the ecosystem as composed of air, water, land and living organisms, and the interactions among them. It is the basis for environmental protection and

resource management. It requires consideration of the cumulative effects on the environment, the inter-dependence of air, water and living organisms, the relationships among the environment, the economy and society. Within the context of water resource management, ecosystem management includes the physical, chemical and biological components and their inter-relationships. (Ex 71, Tab 4)

The Director also stated that this definition of “ecosystem approach” is similar to that found in the SEV and this is at the conceptual level of describing the ecosystem approach. It was stated by the Director that what is missing from the documents are guidelines that describe an accepted method of actually implementing an “ecosystem approach”.

The evidence of Mr. Kaye at the hearing was that the ecosystem in this case consisted of the Tay River Watershed but what was considered first was the aquatic ecosystem within the Tay River Watershed.

The Director submitted:

Regulation 285/99 refers to “the ecosystem” suggesting the existence of only one ecosystem. It is the Director’s opinion that it is reasonable to conclude that the referenced ecosystem is the “aquatic ecosystem” since the overriding statute is the *OWRA*. (Interrogatory # 9 - part answer to Cassidys from MOE, May 24, 2001)

Since the Director was satisfied that there were no impacts to the aquatic ecosystem then no further consideration of the ecosystem was considered necessary or required.

Gordon Miller, ECO, provided his views concerning the ecosystem approach required by Regulation 285/99 but he did not testify about merits of the OMYA PTTW. Mr. Miller stated that:

Regulation 285/99 certainly, and the Statement of Environmental Values more generally, implied a burden on the Ministry of the Environment officials to consider...the wording of the regulation, ... “natural functions of the ecosystem”....that implies a serious ecosystem approach, which is a scientific approach based on ecology. (Transcript, June 28. 2001, p. 45)

He continued by commenting that:

... in order to make these kinds of determinations of the ecosystem approach...one has to know something of the structure – not only the physical structure, such as the flow and temperature regimes, et cetera, but also the trophic structure, the living things that are there, and how they relate to one another in terms of herbivores, carnivores and such things.

He stated that “all trained ecologists know that the ecosystem is not something that is removed from human systems...we operate within it and we are very much a part of.” (p. 49) “And so the ecosystem approach is proactive and preventative and should work collectively to produce sustainability in our society.” (p. 50)

In response to questioning from Mr. Bryant with respect to defining an ecosystem, Mr. Miller stated: “the watershed is not an ecosystem but it is a suitable proxy ... it is a useful and practical planning concept that will, to a large degree, integrate much of which is an ecosystem.” (Transcript, June 28, 2001 p. 126)

Mr. Miller further commented on the importance of cumulative effects and he stated that,

...the issue of cumulative effects...is actually a component of the ecosystem approach...the ecosystem approach requires consideration of the ecosystem in both space and time, and cumulative effects is really an issue of time.

Ecosystems, of course, function in the very, very long term, and we as humans can set time lines relevant to our life experience and life patterns, but they're not really very meaningful in terms of the long term processes that occur in nature.

So, in that context, to us as humans, events that occur now, and perhaps another event that occurs 10 or 15 or 20 years from now, seem unrelated, seem remote, but in the natural systems, that is not necessarily so. Often the changes that occur now will accumulate some small tension or some small alteration in a natural ecosystem, that when some longer period later, many years later, when another change occurs, that it on its own does not appear to be consequential or of a serious nature, but it will be additive to what happened a decade or two before....

It's a very difficult thing to deal with cumulative effects, but one has to have, in their assessment in an ecosystem approach, some sense of what's happened over time from the past, that you can determine to now, and what you expect to happen in the reasonably predictable future, and that is the issue.

So, where cumulative effects in other examples have been important is where people have gone on and made short term decisions which – any one of which could be easily defensible and seem sound, but when taken in total over a period of time have resulted in structural or functional damage to an ecosystem such that the entire ecosystem went into some state of decay or damage. So, it is perhaps the greatest challenge in the area of environmental protection is to consider and work on cumulative effects. (Transcript, June 28, 2001, pp.51-53)

Dr. Ted Mosquin, biologist, called as a witness by Ms. Cedar, provided testimony concerning the ecosystem approach. He outlined eighteen functions of ecosystems and their organisms that, over 3.5 billion

years, have caused the Earth's ecosphere to evolve. (Ex. 62, p. 5) Dr. Mosquin stated in his witness statement that:

The MOE sees the Tay River and its waters, not as a creative ecosystem but as a utility to be used for industrial purposes. It is not logical that an ecosystem approach should degrade ecosystems; rather, it should leave them unimpaired or restored, in the context of human activities carrying on and evolving. (Ex. 68, Supplementary witness statement, p. 7)

Dr. Mosquin was critical of the Director stating that he had not seen anywhere in the documentation that an ecosystem analysis of the PTTW had been performed. He said that:

The legal onus is clearly on the Director to consider the protection of the natural functions of the Tay ecosystem. I suggest that the Director did not have any information on which functions would be degraded or lost along the Tay due to the increases in the withdrawal of the relatively clean water from the ecosystem. If knowledge of the natural functions of the ecosystem was lacking, then clearly, a scholarly investigation of this matter should take place before proceeding with the application. (Ex. 62, Supp. Witness Statement, p. 8)

Mr. Robert Lovelace, Chief of the Ardoch Algonquin First Nation, presented a First Nations perspective concerning the water taking application. In respect to the ecosystem, he stated:

For the Algonquin Scientist research is not an occupation or speciality to be utilised after the fact but is rather a lifelong vocation of knowing and recognising your place in the ecosystem. This knowledge is rooted in place and is shared from generation to generation. (Ex. 84, p. 2)

Dr. Nancy Doubleday, a witness called by the Cassidys stated that she was providing evidence in respect of the interface between natural science and social science by using the ecosystem approach very broadly as a problem solving approach to environmental issues. Dr. Doubleday is also a lawyer. She referred to the ecosystem approach as having physical, biological and chemical components. She stated that the definition of "ecosystem approach" as defined in the SEV is a reasonable summary of her opinion of it. Dr. Doubleday stated that:

If one is assessing the implications of a proposal for development and the development takes place within a watershed, one might be inclined to choose watershed boundaries. However, if the project or proposal or program of development has implications which extend beyond the boundaries of a watershed, one might choose other ways of limiting the unit concern....

If we consider the ecosystem approach as we understand it in contemporary terms...we recognize that the human is in fact inside the ecosystem (Transcript , June 27, 2001, p. 124 and p. 125)

Dr. Doubleday indicated that the role of the public is a central issue in respect of planning and she stated that, “democratization of the public planning process is a critical aspect of an ecosystem approach”. (Transcript, June 27, 2001, p. 138) She indicated that she believed with respect to the ecosystem approach, that the MOE understood the intention of the legislation, that they are attempting to comply with it but there was an issue of implementation.

Mr. David Taylor, Chair of the Friends of the Tay Watershed, and called as a witness by the Dillons provided information about his organization and their work concerning the watershed. He outlined the Mission Statement and Goals of the Tay River Watershed Plan which follows:

Final Mission Statement

To develop co-operatively, by the watershed community - including government agencies, interest groups, landowners and other stakeholders - a plan to manage the water, land/water interactions, aquatic life and aquatic resources within the Tay River watershed, in order to protect the health of the ecosystem as land and water uses change.

Final Goals

- i. Create a watershed management strategy which will maintain or improve the environmental health of the Tay River watershed.
- ii. Involve the community so that it might achieve a better appreciation for, understanding of and involvement with the natural environment and the Tay River watershed.
- iii. Adopt the principles of “watershed” and “ecosystem-based” planning and assessment in the watershed planning process.
- iv. Integrate the past and present studies, policies, mandates of the resources management agencies and municipalities to ensure a co-ordinated and co-operative approach to watershed management for the Tay River watershed.
- v. Provide opportunities for education of all stakeholders in the functions, processes, and management of the Tay River watershed. (Ex. 41)

Mr. Ken Potter, a resident of Lanark Village since 1989, who was called as a witness by the Cassidys, provided evidence concerning the truck traffic between the Tatlock Quarry and the OMYA plant in Perth. Since the mid 1990's the truck traffic past his residence has increased and is now twenty four hours a day. He is concerned about the negative impacts on the quality of life in the neighbourhood as well as the effect of the increased truck traffic has on property value. The Cassidys believe that the location of the quarry

should be part of the ecosystem and therefore for this application the truck traffic and the other impacts of the quarry operation should be taken into consideration.

Mr. Jim Ronson, Chair of the Perth Community Association and a participant to the hearing, stated that he would have expected a scientific study by a hydrologist to create an underground map of underground strata for the area. (Final submissions, Nov. 12, 2001)

The Rideau Valley Conservation Authority in their report entitled “Existing Conditions and Trends in the Tay River Watershed” dated June 2000, defined the Tay River watershed thus:

The Tay River watershed is the most magnificent tributary in the entire Rideau Valley. The river flows in a northeasterly direction from the height of land on Carnahan, Scanlin and Leggat lakes through some of the best cottage country and headwaters areas in Ontario. Beautiful lakes such as Bobs, Christie, Crow, Davern, Eagle, Elbow, Farren and Long all form part of the Tay watershed. Grant’s Creek, the major tributary to the Tay with Crosby and Pike lakes, joins the main stem just above the Town of Perth. The river continues on through the provincially significant Tay Marsh eventually tumbling, after a journey through six municipalities, into Lower Rideau Lake at Port Elmsley. With a catchment area of about 865 square kilometres, it is the largest tributary of the Rideau. The Tay system has the most westerly point as well as the highest point in the Rideau Valley and is considered by some to be the true “source” for the entire lower Rideau system. (Ex. 39, Tab 47 p. iii)

Findings:

The SEV is an important document and it appears that it is not well understood in terms of its applicability. Most of the appellants, and the Environmental Commissioner of Ontario, indicated that the SEV should apply when decisions relating to “instruments” are made. The Director submitted that the SEV is not directly applicable to instruments. Instead the Director submitted that the SEV is relevant to the issuance of a PTW to the extent that it is incorporated within Acts, regulations and policies. Therefore the Director states that only those portions of the SEV that are incorporated within Regulation 285/99, *OWRA* and policies, such as the Manual, are applicable. While the SEV may on its face indicate that it does not apply to “instruments” issued by the Ministry it is my view that this narrow interpretation is inconsistent with the *EBR*. As I have indicated previously in *Kolodziejewski v. Director, Ministry of the Environment*, February 14, 2000, the SEV should be considered each time an application for a PTTW is considered. In my view this conclusion is supported by s. 11 of the *EBR* which requires a Minister to take every reasonable step to ensure that the SEV is considered whenever decisions that might significantly affect the environment are made in the ministry. It is also supported by the wording of clause 67(2)(a) of the *EBR* which requires the Minister to consider the SEV when deciding whether to grant a public request for the review of an “instrument”. If the SEV should be considered when the Minister decides whether to review

a PTTW, then surely the SEV should be considered by the Director at the time the application for the PTTW is considered.

I also find that Regulation 285/99 has incorporated the “ecosystem approach” described in the SEV. Unfortunately the MOE has provided little policy guidance on how the Director should implement this type of analysis in order to evaluate a PTTW in this respect.

The definitions of the ecosystem approach that were offered were defined, as expected, in conceptual terms. What was missing was the specific manner in which, in this case, a PTTW would be or should be evaluated ascribing to the ecosystem approach. Only considering the aquatic ecosystem, without other functions, is not sufficient. Obviously more work needs to be done, especially by the MOE in fulfilling their obligations to protect the natural functions of the ecosystem.

There was some consensus that the ecosystem could be confined or limited, in this case, to the Tay River watershed. The Cassidys firmly disagreed with this interpretation and believed that the area of the Tatlock quarry should also be included in order to include the economic component of the ecosystem. In this case, I have taken the ecosystem to be the Tay River watershed. The Tatlock quarry is not within the Tay River watershed and therefore the evidence and concerns expressed particularly by the Cassidys in respect to truck traffic and operations at the Tatlock quarry, to me, are not relevant to this application. The Tatlock Quarry is regulated under the provincial *Aggregate Resource Act*.

During the hearing, I learned of the other sixteen PTTW that are currently in force. (Ex. 126) Some of the permits have no expiry date. There was no evidence presented that indicated that the Director had taken into consideration the other 16 PTTWs in the evaluation of this permit. Further work within the watershed needs to be undertaken to take into consideration the impacts of these existing permits on subsequent PTTW applications.

Although OMYA submitted that the physical, chemical and biological studies concerning the Tay River should be acceptable and that the 1 m³/sec cut off in the conditions of the OMYA PTTW would preclude an adverse cumulative effect on the environment, I am not satisfied that there has been sufficient evaluation completed to be assured that the ecosystem, the Tay River watershed, would not be harmed with the taking of 4500 m³/day of water taken from the Tay River. More detailed and comprehensive work needs to be done in order to assess the impacts of the much larger taking of water. I agree with the Director in this respect that additional work is required. Given the amount of additional information that will be required (as well as the proposed size of the Phase 2 taking and to respect the public process contemplated by the *OWRA* for PTTWs) it is my view that OMYA should be required to submit a new application under the *OWRA* for a Phase 2 PTTW.

The Water Data

All the appellants, in their appeal documentation, were very concerned and cited the inadequacy of the water data. During the hearing there was considerable discussion of a need for a water budget of the Tay River watershed. The COC submitted that a “water budget” for the Tay River watershed is lacking and therefore it was impossible to accurately assess the impact of the taking on the ecosystem. The COC submitted that this “water budget” would have two components: a hydrologic component, which would involve stream flow gauging and modelling; and, a consumptive component, describing how much water is being taken by people from the watershed.

The OMYA PTTW proposes to take water from the Tay River. The Tay River conveys water from Bobs and Crow Lakes, approximately 27 km west of the Town of Perth, through Christie Lake to discharge in the Tay Canal and Lower Rideau Lake west of Smith Falls. The water flow from Bobs Lake into the Tay River is regulated at Bolingbroke Dam built in 1871 by the federal government. It is operated by Parks Canada.

Ms. Ann German, an appellant stated that:

Historically, the Bolingbroke Dam was built to raise the water level of a marsh with a stream through it to the point that it became a reservoir. This reservoir is Bobs Lake, the chief supplier of water for the Tay River, which in turn feeds the Rideau Canal system. Bobs Lake was designed to provide extra water to the Rideau Canal during the months between May and October. Prior to the building of the Bolingbroke Dam, the Tay River was a mere trickle. (Final submission, Nov. 14, 2001, p. 1)

The instrument holder provided water flow records and data of the Tay River obtained from Parks Canada, RVCA and Environment Canada. The following information was provided with the application (Ex.15, Tab 6) :

The Glen Tay Gauge

This historic data from a gauge, that is no longer in existence, provided water flow information of the Tay River at Glen Tay from July 10, 1915 to October 31, 1926 with missing data for the period being October 1, 1919 to September 30, 1920.

Bob’s Lake Gauge

This gauge is on the Tay River about 75 metres below the Bolingbroke Dam at Bob’s Lake. It provided intermittent flow data available during 1984, 1985, 1990, 1992 and 1995. The gauge is still in operation

but, according to the RVCA, data since 1995 is not available in a useable form. Parks Canada has provided a plot of lake levels and flow rate at Bob's Lake for 1999⁹.

Perth Gauge

This gauge is downstream from the proposed OMYA water intake structure. Data from this gauge is available for the period September 1994 to December 1998. Continuous data was available from this gauge for 1994 and 1995, however since 1996 the gauge is only operated during the spring and fall runoff periods.

Mr. Castro was the technical person in the MOE to review the proposed PTTW. From the existing data that the MOE had at the time of the review, he believed there was inadequate information to issue the permit for the maximum taking. He stated that:

Under Phase I of the permit (1,483m³/day) I calculated that the drawdown in water levels in Bob's and Crow Lakes would be in the order of 4 mm over a 100 day period, assuming no inputs of water to the lake from precipitation, upstream sources, or groundwater contributions. It is my opinion that such a small drop in water level would be imperceptible within the range of natural variability.

To assess the impacts on water level in the Tay River at the proposed intake site, the proponent's consultant determined theoretical water level changes during several critical seasonal spawning periods. The predicted change in water levels, based on the maximum taking of 4,500 m³/day and a conservative low flow figure of 0.5³/sec, was 0.3 cm to 0.6 cm.¹⁰ I undertook similar calculations for the Phase I taking (1,483 m³/day) only, and predicted the water level change would be even smaller, in the order of 0.09 cm to 0.19 cm. Based on this analysis, I concluded that the Phase I water taking would not have any significant impacts on water levels at the proposed intake site.

Based on the same water level calculations, it is my opinion that downstream of the intake site there will be no perceptible changes in water levels or flows. The phased approach ensures that under the worst-case scenario, there will always be a minimum of 98.3% of the river flows maintained immediately downstream of the intake site.(Ex. 71, Tab 3, pp. 19, 20 & 21)

⁹ The lake levels and flow rate for 2000 was provided at the hearing.

¹⁰ This was information provided by Simmering and Associates for OMYA

Mr. Castro stated that the MOE established the cut-off flow at 1 m³/sec (flow at which OMYA is no longer permitted to pump) by using the low flow statistic 7Q12¹¹ as calculated by using the historical data from the Glen Tay gauging station. “The 7Q/12 is defined as the minimum 7 day average flow with a recurrence period of once every 12 years - i.e. an 8% chance of there being inadequate streamflow in any given year” (Ex. 71, Tab 3, para 23) The MOE determined that Phase I taking would represent 1.7% of the river flow.

Mr. Castro stated that it was prudent and as a precautionary principle, he decided to recommend to “phase” the permit as the proponent did not require the water all at once and the MOE was confident that there would be no significant impacts to the water levels in the system. Before Phase 2 began, as set out in the conditions, there would be time to collect more data, conduct detailed studies and monitor river flow.

Mr. Kaye stated that as the Director, he had displayed caution in granting the phased or staged permit thereby having caution in requiring further information prior to the Phase 2 part of the permit to begin.

The Dillons disagreed with the phased approach and stated that making Phase 2 the subject of a new permit process has many advantages.

First it allows time to collect site-specific, empirical flow data from the new gauge station to support or refute the modelling predictions . It allows time to observe how the control of the water flow by Parks Canada and the permit condition for the threshold of 1 m³/s work and whether that regulated threshold actually affords protection for the environment. A new permit process for phase two allows time to assess the effects of recent drought conditions and the premise that water taken by OMYA will be replaced by precipitation. (Final Submission, Nov. 15, 2001)

Mr. Castro stated that he had reviewed for this hearing, the submission by Dr. Watt and the initial review submitted by the Department of Fisheries and Oceans (DFO). He also had examined the hydrographs (Ex. 39, Tab 5) and was satisfied that the flows from Bobs Lake fit into the “rule curve”.¹² As well, Mr. Castro believed that the environmental habitat would be safe with the inclusion of the 1 m³/sec cut-off of the water taking which was included in the conditions. With the additional analysis conducted by Dr. Watt, Mr. Castro stated that he now had a greater comfort level with the water taking proposed in Phase 2 but at the

¹¹ The 7Q/12 is defined as the minimum 7 day average flow with a recurrence period of once every 12 years - i.e. an 8% chance of there being inadequate streamflow in any given year (Ex. 71, Tab 3, para 23)

¹² On the hydrographs it shows the water levels at the Bolingbroke Dam {e.g. maximum drawdown the reading would be 161.38 metres above sea level} as well the hydrographs show the water flow rate taken 75 metres downstream from the Bolingbroke Dam. Also on the chart is shown the rule curve which are two lines (upper and lower lines) which represent the limits for guidance for the operation of the water level of the dam. In order for the water levels to be maintained within the rule curve a log(s) would be added or taken away from the dam

conclusion of the hearing the MOE witnesses still recommended a phased permit with more studies to be done for Phase 2.

Joe Slater, a civil engineer (retired) who worked in the environmental field with the Canadian Government and the United Nations as a specialist in water resource data collection and water management responsibilities amongst others, provided evidence. He was called as a witness by the Dillons. Mr. Slater has been actively involved with the Greater Bobs and Crow Lakes Association concerning water levels and represented this association on the Tay River Watershed Plan. Mr. Slater gave extensive information concerning how data is collected and an understanding of the data that was presented.

Mr. Slater stated that water data is required for three purposes: planning, design and operations. He said that OMYA asked a consulting firm, Simmering and Associates, to tell them if they could get the required water from the Tay River. With the data that existed from the Glen Tay gauging station, a calculation was carried out, it was decided that there was sufficient water and then made an application for a PTTW. He suggested that the application to MOE was insufficient because the planning information was not substantiated, and therefore going from the planning stage to the design stage was premature. He indicated that “such substantiation was not directly available within the Tay River watershed simply because there was no other gauges established in the eyes of the consultant or identified in the HYDAT¹³”. (Transcript, June 26, 2001, 21) Mr. Slater, with his interest and experience in the subject matter was able to get information from the Rideau Canal office. He also stated that it would be appropriate to examine data in the surrounding geographic area with a similar watershed.¹⁴

One area that Mr. Slater was particularly concerned with was what standards would be instituted for the continuous monitoring at the required new gauging station. He recommended that the appropriate manual to be used in this regard would be the Definition of National Standards which he submitted as Exhibit 47. He also stated that the gauging station should be capable of calibration in order that a staged discharge relation be established to determine when 1m³/s was flowing in the river. In order to develop a staged discharge curve, for operational purposes, a technician would divide the river into about 20 sections. For each section, a technician would then measure the depth and put a metre into the river that calculates the speed at which the water is flowing. This would provide a flow rate curve which would require a number of years of data to determine sufficiently the rate curve.

¹³ HYDAT stands for hydrometric data. Mr. Slater urged the MOE to encourage all holders of hydrometric records in the local area to contribute their data for inclusion in the HYDAT archives.

¹⁴ The Tay River is rather unique since it is a regulated river by Parks Canada for the purposes of navigation on the Rideau Canal. That is not the usual case for other rivers in the adjacent geographic area.

Mr. Slater also discussed the annual hydrographs showing the elevation of the water level (above sea level) at the Bolingbroke Dam and the daily flow from Bobs Lake (taken about 75 metres downstream from the Bolingbroke Dam. (Ex. 39, Tab 5) With these measurements on the hydrograph the “rule curve” is determined, which was shown on the graph. The winter elevation of the dam is determined at 161.38 metres above sea level and that elevation is maintained until Parks Canada begins drawing down the water for the navigation of the Rideau Canal system which begins in May. The sill in the dam is at 158.75, some 2.63 below the winter level. Mr. Slater extracted from the Bobs Lake water level/flow hydrographs for the years 1977 to 2000 (Ex. 39, Tab 5) the number of days when the discharge of water at the Bolingbroke Dam is $\# 1\text{m}^3/\text{s}$. The results are:

For the 24 year data set (1977-2000) 810 days were $\# 1\text{m}^3/\text{s}$
Average no. of days having flows $\# 1\text{m}^3/\text{s} = 33.75$ days/yr for 24 years
For the decade 1980-1989, average = 35.6 days/yr
For the decade 1990-1999, average = 25.6 days/yr.(Ex. 78b)

Although this was the flow at the Bolingbroke Dam, Mr. Slater stated that it may not be equivalent at the point of the proposed water taking since there are other sources of water (such as lakes and creeks from tributary system), that contribute to the Tay River below the Bolingbroke Dam.

In conclusion, Mr. Slater stated that although the hydrographs at Bolingbroke Dam from 1977 to 2000 were the most reliable information, he indicated that with the other PTTW on the Tay River, there would need to be some projection and consideration over the ten year period (the length of the proposed PTTW) of the impact on the lower Tay River.

Dr. W. Edgar Watt, a civil engineer with a Ph.D in fluid mechanics as well as being a professor at Queen’s University, was the principal witness on behalf of OMYA. He submitted three reports, namely:

- < An Analysis of Tay River Streamflows: Bobs Lake to Glen Tay (Ex.39, Tab 73)
- < Note On the Impact of Water Taking on Tay River Water Levels (Ex. 39, Tab 74)
- < Note On the Impact of Water Taking on Bobs Lake Water Levels (Ex. 39, Tab 75)

With respect to the analysis of the Tay River streamflows from Bobs Lake to Glen Tay, Dr. Watt used the following general approach:

- < Use the regional information to first establish a long-term average value of runoff for the region and minimum values of annual runoff.

- < Combine regional and site values to calculate long-term mean annual flow and expected minimum annual flow for the two sites
- < Simulate annual flows for the two sites using correlations with a long-term station in an adjacent drainage basin in the same region.
- < Demonstrate the effect of regulation.
- < Use regional and site specific information to calculate mean and minimum values of monthly flow for the Tay River near Glen Tay under conditions of current regulation practices.
- < Use the same information to calculate minimum daily flows for the Tay River near Glen Tay under conditions of current regulation practices.
- < Determine the ration of withdrawals to pertinent values of streamflow in the Tay River near Glen Tay.
- < Determine the need for additional information.(Ex. 39, Tab 73, pp. 5-6)

Dr. Watt submitted a number of calculations and compared the annual flows of the site specific locations (below Bobs Lake and near Glen Tay) to the annual flows for a number of locations within the same geologic-climatic region including the Mississippi River at Appelton (a location within the region with HYDAT database information for the period 1919-1999). The annual flows for the two Tay River stations were simulated using recorded flows from the Mississippi River at Appelton.

Dr. Watt presented the following findings:

1. The mean annual runoff for the region of Ontario in which the Tay River is located is 360 mm.
2. The mean annual flow for two sites of interest on the Tay River is as follows:
 - 4.07 m³/s for the Tay River below Bobs Lake
 - 6.02 m³/s for the Tay River near Glen Tay
3. The minimum recorded annual flow at long-term hydrometric stations in this region, on average, is 42% of the mean annual flow.
4. The minimum annual flow for two sites of interest is calculated from the regional minimum ratio to be:
 - 1.7m³/s for the Tay River below Bobs lake, and
 - 2.5m³/s for the Tay River near Glen Tay
5. The five lowest simulated annual flows for the Tay River below Bobs Lake (by correlation with annual flows recorded at a long-term station in an adjacent drainage basin) are in the range 1.7 - 2.1 m³/s and all occur after 1930.

6. The five lowest simulated annual flows for the Tay River near Glen Tay (by correlation with the Mississippi River at Appelton) are in the range of 2.9 - 3.7m³/s and all occur after 1930.
7. Within-year variations of flows on the Tay River (e.g. on a monthly basis) are not solely the result of natural phenomena as are, for example, those on a river classified as natural flow. Instead, they are the result of regulation at the outlet of Bobs Lake.
8. The effects of this regulation are dramatic. Comparison with an essentially “natural flow” river of similar size in an adjacent drainage basin for one overlap year (1984) indicates that spring flows are reduced to about one-third of their “natural value” by storing water in Bobs Lake and that summer and fall flows are increased from much below 1 m³/s to 2m³/s or greater as this stored water is released.
9. Simulations of recent minimum monthly flows for the Tay River near Glen Tay are in the range 1.2 - 1.4 m³/s.
10. Within-year variations of flows on the Tay River on a daily basis are largely the result of controlled outflows from Bobs Lake. Recent recorded minimum daily flows for the Tay River below Bobs Lake are 1.20 m³/s on June 11, 1984 and 0.438 m³/s on May 22, 1985.
11. On average daily flows near Glen Tay will be about 50% higher than daily flows below Bobs Lake. However, Tay River flows would be much higher proportionately during flood conditions if Bobs Lake outflows are reduced (e.g. spring freshet), and much lower proportionately during “dry” conditions when Bobs Lake storage is being released. Our best calculation of the minimum daily flow near Glen Tay in the period is in the range 0.6 - 0.8 m³/s. The amount of water taking is best understood when placed in perspective by expressing the withdrawals as a percentage of Glen streamflow values; the withdrawal rates are about
 - 1% of the mean annual flow,
 - 2% of the minimum annual flow,
 - 4% of the minimum monthly flow under current Bobs Lake regulation practices,
 - 5% of the minimum daily flow under current Bobs Lake regulation practices.
12. The regulation of Bobs Lake affects minimum monthly flows and minimum daily flows. (Ex. 39, Tab 73, pp. 18-19)

Dr. Watt then made calculations on the impact of the proposed water taking on Tay River water levels under the following headings:

< Assumptions

- flow classification - flow assumed to be steady
- hydraulic model - under the condition of friction control, the dependence of water level on discharge is described by using Manning’s equation
- roughness co-efficient - roughness of river bed

< Measured Data

- bed slope - relative change in depth
- cross section data of river
- < Relative Change in Depth of River
- < Absolute change in Depth - the absolute value of depth depends on the values of both slope and roughness co-efficient
- < Impact on Depth for Higher Flows

The summary of Dr. Watt's calculations in respect of the impact of the water taking on the Tay River water levels were:

1. The impact of water takings of up to 4500 m³/day from the Tay River at Glen Tay on water levels in the river has been determined in accordance with the principles of open channel flow.
2. Only the case with the most severe impact was considered. That is, the maximum withdrawal rate (4500m³/day = 0.52 m³/s) and minimum streamflow rate (1.0m³/s) were used in the analysis.
3. The impact on water levels for this case was determined to be minimal. The relative change in hydraulic depth (a decrease) would be 2.0% and the absolute change in hydraulic depth would be 3mm. (Ex. 39, Tab 74, p. 6)

Dr. Watt further made calculations on the impact of the water taking on Bobs Lake water levels based on a water taking of 4500 m³/day:

Assumptions

- outflows from Bobs Lake
 - scenario 1 : actual outflows for the summer to early fall, and
 - scenario 2 : actual flows for the same period plus 0.052 m³/s (i.e. an increase in outflow equal to the withdrawal rate at Glen Tay)
- inflows to Bobs Lake - same in both scenarios
- hydraulic model - the equation of continuity in integral form is assumed to apply for the control volume enclosing Bobs Lake and Crow Lake
- rate of change of elevation - the rate of change of water surface elevation is related to the - rate of change of storage volume

Measured Data

Surface area of Bobs and Crows Lake

Bobs Lake : 3147 ha, and

Crow Lake : 435 ha

Bobs Lake water levels - Parks Canada data for 1999 and 2000

Rate of Change in water Surface Elevation

Scenario 1 : Actual flows - The actual rate of change in water surface elevation over the period June - October, 1999 was approximately constant at 9.7 mm/day and 11.9 mm/day for 2000

Scenario 2 : Actual outflows plus increase of 4500 m³/day¹⁵ - the difference in the calculation of scenario 1 and scenario 2 is an increase of 0.13 mm/day. (Dr. Watt says this is about the width of a piece of paper).

Relative Rate of Change of Water Surface Elevation - The increase in the rate of change of water surface elevation relative to that which occurred in 1999 (i.e. 9.7 mm/day), expressed as a percentage is $0.13 \times 100/9.7 = 1.3\%$. The relative rate of change for 2000 is $0.13 \times 100/11.9 = 1.1\%$

Drawdown

Scenario 1 : the drawdown (i.e. reduction in water surface elevation)

For 1999 : over 118 days 1.15 m and

For 2000 : over 99 days 1.18 m.

Scenario 2 : (with the additional 4500m³/day withdrawn) the drawdown would be

For 1999 : $1.15 + [(0.13 \text{ mm/day}) \times 118] = 1.16 \text{ m}$, and

For 2000 : $1.18 \text{ m} + [(0.13 \text{ mm/day}) \times 99 \text{ days}] = 1.19 \text{ m}$

The summary of Dr. Watts calculations in respect of the impact of increased outflow from Bobs Lake are as follows:

1. The impact of an increased outflow from Bobs Lake of 4500m³/day on water surface elevations of Bobs lake has been determined in accordance with the principles of hydrology and hydraulics.

¹⁵ This calculation assumes that the 4500 m³/day would be taken directly from Bobs Lake.

2. The impact on water levels was determined to be minimal in terms of either rate of change (it was 0.13 mm/day) or drawdown over an extended period between June/July and October. The additional drawdown would have been
 - < 15 mm over a 118-day period in 1999 when the actual drawdown was 1.15 m, and
 - < 12 mm over a 99-day period in 2000 when the actual drawdown was 1.18 m.
3. The impact of an increased outflow of 4500m³/d would have been a 1.3% increase in both rate of change of water surface elevation and drawdown over a 118-day period between early June and early October in 1999 and a 1.1% increase in both variables over a 99-day period between early July and mid-October, 2000. (Ex. 39, Tab 75, p.6)

Mr. Bryant stated in his final submission (Nov. 15, 2001, p. 8) that:

Dr. Watt testified that there is no year to year cumulative effect (Bob's Lake has a one year memory) because Parks Canada replenishes the storage of water every spring and fall by raising the level of the dam. Dr. Watt concluded that there is an annual surplus of water for the reservoir.

Ms. Christine Elwell, a lawyer, provided evidence on behalf of the Council of Canadians, with respect to this issue. She provided the following general comment about permits to take water, in her report:

In practice, water-taking permits....are routinely issued with almost no public scrutiny of these decisions. The formulas adopted to determine minimum in stream flow rates and "use to resource" ratios are totally inaccessible and nontransparent. Little effort is made to keep track of the number and location of all the permits. There is no permanent base to track permits already granted. In practice the allocation of water is on a "first come-first served" basis that rarely considers the cumulative impacts of water takings in Ontario.(Ex. 76, Tab 3, p. 32)

Mr. Stewart, President of the Greater Bobs and Crow Lakes Association, represented the Association as a participant at the hearing. He stated that the fluctuations of the water levels of the lakes have significant impacts on wetlands, fisheries and lake related activities. He particularly quoted a portion of the DFO report which stated:

Since less water volume will be arriving at the Beveridge locks because of the proposed water taking at the OMYA (Canada) Inc. site, the outflows from Bob's Lake may be adjusted accordingly without modifying the existing operating policies of Parks Canada. Consequently, by default, the water levels in Bob's and Crow Lakes may potentially be influenced by the proposed water taking. (Ex. 39, Tab 48, p. 4)

Mr. Stewart stated that not only the effect of the current permit, but the potential overall impact of all water taking permits, must be considered in the decision of this application. Since Bobs and Crow Lakes act as a reservoir for the Rideau, he was concerned that with Parks Canada taking water for navigation purposes and with the number of permits to take water already on the Tay River, then the residents on Bobs and Crow Lakes could end up at the “short end” with this further water taking application.

Mr. Bruce Reid, the Water Management Coordinator with the Rideau Valley Conservation Authority (RVCA) was called as a witness by the MOE. The MOE had referred the application to the RVCA for comments. It was the RVCA who then referred the application to the federal DFO. In the March, 30, 2000 letter written to the MOE concerning the PTTW, the RVCA indicated many areas that were of concern. These included:

The prudent course for MOE is to reserve its decision on the PTTW application, until DFO-Burlington has made a decision with respect to the acceptability of the project under the *Fisheries Act*...

...the 12 years of flow data at Glen Tay....we question the reliability of streamflow data of that vintage...Significant changes to land use and drainage patterns throughout the watershed, and water management practices at Bob’s Lake will have occurred since 1927...

MOE should not approve the PTTW application without consulting first with the Rideau Canal Office to confirm that the Canal would be prepared to alter its water management policies....

To establish a fair and equitable system of sharing of the resource amongst these human needs while ensuring that the aquatic habitat needs of the river are met first, calls for a comprehensive and integrated watershed management system... does not exist at the present time. (Ex. 71, Tab 5, pp. 2-4)

In the June 20, 2000 letter to Victor Castro, MOE from the RVCA the following further comments were made:

It has been confirmed that the Rideau Canal will not change its operating practice at Bob’s Lake to accommodate the OMYA water taking...

It seems that one cannot say categorically that the water level situation on Bob’s Lake in any year will not be affected by additional water takings from the Rideau System...

...we are not opposed to making use of the historical data, since they are the only available data. We believe it is necessary, however to understand and recognize that there are limitations to the reliability of the data. (Ex.71, Tab 5, pp. 1-2)

In his witness statement, Mr. Reid stated that:

Eventually, RVCA came to a position where it was satisfied that the proposed permit to take water (if modified to address comments on the draft permit) would represent a balanced approach to accommodating the water needs of the proponent while protecting the integrity of the Tay River system. (Ex. 71, Tab 5)

In the final submission made by the Greater Bobs and Crow Lakes Association, it states that although the instrument holder's proposed PTTW would not have a major impact on the water levels or outflow from Bobs and Crow Lakes, the concerns of the members were brought to the attention of the Tribunal. They stated that :

...two significant questions still remain unanswered. They are firstly, the MOE does not know the minimum discharge required to maintain the natural functions of the river and secondly, the RCO (Rideau Canal Office) does not know how much of the Tay River water is surplus to its needs.

The Greater Bobs and Crow Lakes Association stated that they would intend to be active in the development of a water budget for the Tay River watershed.

A number of witnesses were questioned on the need for a water budget, that is an evaluation of the amount of water that is taken from the Tay River watershed compared to the water that is replenished or recharged into the system. Mr. Reid spoke to a question in this regard saying that a water budget can be a simple analysis (inputs and outputs of water in a watershed) or it can be a very comprehensive analysis. He said it would be the optimal way of managing water, in this case, especially the water from Bobs Lake. Further he indicated that the preparation of a water budget is a public policy issue that would be paid for by all the stakeholders.

Mr. Miller described the PTTW process as "first come first serve" meaning that when someone makes an application for a permit to take water the application is accepted or rejected. It was his opinion, in the permits that he has analysed, that there is no consideration of projections of future need of water. In the context of a water budget, there are two components: the hydrologic component and the other component is how we use water.

It's the human component, how much we're taking, how much we're using, how much we're changing the hydrologic regime which is often in effect. Many times both components are missing, but sometimes we have historic information... But we often miss the information relating to human usages, and one of the things pointed out in that regard specifically is the fact that we don't add up our Permits to Take Water... (Transcript, June 28, 2001 p. 170)

Mr. Castro, when questioned about a water budget stated that a water budget would provide upfront information to manage the system but in absence of a such a water budget, it was necessary to deal with the information that was available. It was his opinion that it would cost millions of dollars to prepare a water budget and it would take 1-2 years to complete. It would be necessary to have such work co-ordinated on a cost sharing basis with the stakeholders.

The Dillons indicated that:

There remain major areas where information is missing for wise management of the waters of the Tay River watershed....there is no inventory of water resources in the watershed. While a proposal is currently underway, Lanark is the only county in Eastern Ontario that does not have a groundwater study. A water budget would place this current water taking in perspective for present and future needs. Drought and its effect on recharge, discharge and replenishment of ground water and surface waters need to be addressed in any decision about water quantity. (Final Argument, Nov. 15, 2001)

Ms. Sulyn Cedar stated that without a water budget, a long term permit should not be issued.

Mr. Miller commented in his evidence concerning “phased” permits. Upon questioning by Mr. Shrybman whether approvals that are “phased” should be subsequently posted on the *EBR*, Mr. Miller responded:

Now if a decision is made to issue a permit or an authorization or an instrument, and it is clear to the public in that process that it is a final decision and all the consequences of that decision are going to be known, then one posting release would meet the requirement. But if we’re talking about a process in which there are subsequent decisions by the Director or by the person in authority, that the public had not been notified or participated in, terms of comment or potential appeal, then we would feel it would be on a posted decision and contrary to the intent and spirit of the legislation. (Transcript, June 28, 2001 pp. 76-77)

There was considerable discussion of the number of PTTW within the Tay River watershed that currently exist. Exhibit 126, introduced by the MOE, shows the amount of the watertakings, the quantity of water of the taking, the consumptive use of the water taken, and the duration of the permits (in some cases no expiry date). (Exhibit 126)

The Dillons stated that the effects of Parks Canada’s role in regulating the water in the Tay watershed and the recent drought conditions were insufficiently explored. Mr. Reid had mentioned the drought conditions and the new initiative by the Government of the Ontario Low Water Response to address concerns about the effects of drought. However, the Dillons maintained that a cautious approach to water taking permits is needed until more information about drought, its effects on watersheds and how to manage those effects is available. Ms. Ann German, and Ms. Eileen Naboznak, appellants who both have had cottages on Bobs

Lake for many years, provided information about recent and historical low water levels in Bobs Lake and surrounding bays. Their information corresponded to the available data and the hydrographs.

Findings:

Some of the data presented was historical data dating back to 1915 with a few missing years of data which made it difficult to assess the information over a consecutive period of time. The MOE and OMYA witnesses augmented the data with data that was relevant for the same geographic area. This was appropriate and helpful.

Dr. Watt, on behalf of OMYA, used the basic numbers from the original application submitted by Simmering and Associates as well as the data from the adjacent geographic area to carry out a detailed analysis of the streamflows in the Tay River as well as the impact of the proposed water taking to the Tay River and to Bobs Lake. Dr. Watt based his calculations on a water taking of 4500m³/day. I do not doubt the accuracy of his calculations but I find that the exercise has been too limiting in evaluating impacts on Bobs Lake and the Tay River. This PTTW cannot be reviewed in isolation. If this proposed water taking were the only water taking in the watershed, Dr. Watt's conclusions could be acceptable but because of the complexity of the regulated Tay River system by Parks Canada and the number of permits (sixteen at this time) to take water already in existence within the watershed a more comprehensive approach is recommended. There are many factors that need to be taken into consideration. It would be appropriate to make similar calculations and evaluations, as Dr. Watt did for this application, for all the existing water taking permits for the entire Tay River watershed to obtain a broader understanding of the functions of the ecosystem and the impacts to the Tay River and Bobs Lake. If this were done, it could be helpful for a subsequent application for proposed water taking from the Tay River.

I am not satisfied that there has been sufficient information gathered and tabulated for the approval of the permit for the full amount of water that has been requested by the instrument holder. Only the first phase of the permit is approved.

With respect to a water budget, there were many opinions expressed on the scope of a water budget, who would carry out the work, and on the necessity of a water budget for this PTTW. Mr. Miller and others commented on the appropriateness and usefulness of a water budget for the management of the water within the watershed. Mr. Watters stated that no comprehensive water budget had been completed in any watershed in Ontario.

Mr. Bryant indicated in his Reply Submission (Nov. 22, 2001) that “Dr. Watt’s water budget enables the Tribunal to compare the magnitude of the PTTW to the water flowing in the Tay River”. I do not accept that this characterization of Dr. Watt’s testimony comes near to what is considered a water budget.

Nevertheless, the various levels of government and agencies may wish to discuss this initiative of a water budget for the Tay River watershed in evaluating a future proposed water taking application. It is my opinion that a water budget, however rudimentary, would be helpful in determining the extent of the availability of water within the watershed and the consumptive uses that presently exist. Of course, a more comprehensive approach for a water budget is recommended.

The Impact on the Tay River Watershed

Opinions were expressed by some appellants that with water taken from the Tay River there could a higher level of concentration of pollutants in the river. Ms. Cedar expressed concern that with less water in the river, the Tay Marsh, downstream from the proposed intake location, could be affected.

Dr. Mosquin made three recommendations (Ex. 62, 12-13):

1. That rather than remove more clean water from the Tay, the Government of Ontario should develop policies, programs and budgets to reverse the incremental degradation of the waters and wildlife of the Tay so as to gradually bring back the healthy and clean waters of the recent past together with the wildlife, including the many species of fish, salamanders, water birds and invertebrates that used to be so abundant in the past and that, by their presence, define a healthy environment.
2. That the Provincial Government, in co-operation with the Federal agencies undertake a ‘Cumulative Effects Assessment’ of the waters of entire Tay ecosystem (from Bob’s Lake to Smith Falls) with respect to anticipated growth of population in the area so as to be able to understand and forecast the consequences of taking fresh water out of the Tay, and for other reasons.
3. That the Permit to take additional clean water from the Tay be denied either on the basis that scientific evidence on the causes of pollution already indicates that such taking of more clean water would not improve the health of the environment and that, most likely, it would significantly reduce the integrity of the aquatic ecosystem, particularly below the Perth area.

Mr. James Bishop, an environmental chemist and president of beak International, was called as a witness by OMYA. He countered Dr. Mosquin’s testimony by stating that the proposed maximum taking of water under the PTTW would not result in a decrease in concentration of dissolved oxygen in the Tay River.

Mr. Brent Valere, a biologist with the federal DFO, was called as a witness by MOE. Under the *Fisheries Act*, OMYA is required to have approval from the federal government, for the construction of the intake structure at the proposed water taking site. An ongoing assessment under the *Canadian Environmental Assessment Act* (CEAA) is being conducted. The initial assessment was presented, “Initial Review for the Proposed OMYA (Canada Inc. Water Taking from the Tay River Upstream from Perth, Ontario”¹⁶ (Ex. 39, Tab 48). The following are some of the conclusions from the report:

Our analyses indicate that the flow at which it is proposed that the water taking by OMYA (Canad) Inc. would cease (1m³/s) approximates the annual mean minimum flow minus one standard deviation at Glen Tay (1.08 m³/s). Therefore, it appears that this is a reasonable minimum flow criterion from the perspective of fish habitat. The significance of other summer water takings needs to be evaluated to determine cumulative effects.

It is recommended that if the water taking proceeds, new flow data be collected near the proposed intake site to help verify the low flow characteristics cited in this document, but also that attempts should be made to use as much historical information on flows for the Tay River as possible.... A periodic review of the flow data and possible impacts of the water taking should be undertaken, with the potential to revise the pumping volumes and flow cut-off if the data indicate this is necessary.

We believe that the analyses that we have carried out indicate that the effects on Bob’s and Crow Lakes are not of sufficient magnitude to be of concern from a fish habitat perspective.

Mr. Valere also stated that federal *CEAA* review is continuing and outlined in Exhibit 91 the process. He indicated that it may take until June, 2002 for the DFO to decide after further consultations with the public and other federal departments, whether the project will require a public hearing under the *CEAA*.

Mr. Jim Ronson, President of the Perth Community Association and a participant to the hearing, stated that:

Even if we were to accept the estimates of decreased flows of 1.7% in Phase 1 or 5% in Phase 2, these represent a significant risk which requires that aquatic and shoreline studies must be conducted before water taking is allowed. Neither should the permit have been issued until the federal department of Fisheries and Oceans completed its responsibilities for enforcing the fish habitat protection provisions of the federal Fisheries Act. The Director did not take a precautionary approach. (Ex.83, p. 7)

¹⁶ This report was prepared by Bill Blackport, Blackport & Associates; Harold Schroeter, Schroeter & Associates; and Cam Portt, C. Portt & Associates, for DFO but within this Decision the report is referred to as the DFO Report.

Mr. Ballinger, Director of Rideau Canal operations with Parks Canada, was called as a witness by the Dillons. He stated that the prime responsibility for his department is to provide sufficient water for navigation in the Rideau Canal. Parks Canada has jurisdiction over the Bolingbroke Dam and jurisdiction to take water from of Bob's Lake. In respect to this application and permit, Mr. Ballinger stated upon questioning that it was his opinion that a permit should not be issued before all the information is available. (Transcript, June 25, 2001 p. 210)

Mr. Bernie Muncaster, a biologist with ESG International, was called as witness by OMYA. His evidence consisted of reviewing the information collected by the RVCA (Ex. 141) and others concerning the aquatic habitat of the Tay River, particularly at the site of the proposed intake structure. (Ex. 39, Tab 62) Mr. Muncaster, as well, made nine site visits to the Tay River within 2000 and 2001. (No studies were conducted on Bobs Lake.) As a conclusion of his work, he stated that the water taking would have no impact on spawning, species of fish or fish habitat and therefore it was not necessary to conduct any further studies.

Mr. Karl Schiefer, a fishery biologist and an aquatic ecologist, presented evidence on behalf of OMYA. He had reviewed all the reports including the "Initial Review for the Proposed OMYA (Canada Inc.) Water Taking from the Tay River Upstream from Perth, Ontario", dated June 4, 2001. Mr. Schiefer also made site investigations on June 7 & 8, 2001 at several locations upstream and downstream of the proposed intake site including the Tay Marsh, Christie Lake and at the Bolingbroke Dam control dam at Bobs Lake. In his conclusions he stated that with the water flow at 1m³/sec maintained, it was his opinion that:

Based on the our examination of fish habitats in the Tay River at and below the proposed intake site, this small magnitude for change in water levels during worst-case low flow will have an insignificant and scientifically unmeasurable effect on fish habitats or fish productive capacity in the Tay River. Given the small magnitude of change, there would be no significant or scientifically measurable effect on other aquatic biota, including benthic invertebrate fauna and aquatic plant communities. (Ex. 39 Tab 70, p. 9)

Ms. Cedar stated in her final submission state that:

During cross examination, Dr. Schiefer said that as regards to science and predictability, we make our decisions and wait 20 to 30 years to see what happens. On the other hand, First Nation's elder advise us to consider seven generations in decisions made today.

Mr. Kaye stated in his witness statement (Ex. 71, Tab 4, p. 15) that although there was not sufficient information available to confidently allow the taking of the full amount of 4500m³/day, it was his opinion

“that allowing the withdrawal of 1,483 m³/day of water from the Tay River, subject to the terms and conditions imposed on the permit, does not represent a ...risk of harm to the environment”.

Mr. Thomas McElwain, a hydrologist and a principal with Golder Associates, was called as a witness by OMYA. He had reviewed the documentation that had been submitted for the application including the material from Simmering and Associates, the DFO Report as well as Dr. Watt’s calculations. He provided his summary and opinion on the assessment of those documents. He was asked to comment on the impact of the proposed surface water taking on groundwater resources. In his opinion, he assumed for the previous reports that the proposed taking of water from the Tay River with the proposed application would cause a negligible lowering of the Tay River water level on the order of millimetres. He stated that:

By lowering the elevation of the surface of the water in the river by several millimetres, the hydraulic gradient that governs the discharge of groundwater into the river as base flow cannot be affected in any scientifically significant way. By lowering the river level, the magnitude of the increase in the hydraulic gradient will be, in Golder’s opinion, undetectable, resulting in no measurable change in the groundwater flux to the river as base flow. For the same reason, it is Golder’s opinion that there will be no measurable change in the elevation of the groundwater table in the Tay River, or elsewhere within the watershed arising from the proposed water taking. Thus, the predicted negligible lowering of the river level will have no material effect on the ground water regime. (Ex. 39, Tab 78, p. 3)

Mr. Kaye, the Director, agreed with Mr. McElwain’s conclusions.

Ms. Eileen Naboznak stated that “knowing that fresh water levels are decreasing and demand for fresh water increasing, there is no guarantee that there will be enough water available in Bobs Lake. To issue a permit for 10 years would put the environment at risk.” (Final Submission, Nov. 15, 2001. P.1)

The Director stated that it was the intention of the Director to have the wells that OMYA presently use, for which they have a PTTW, only be used as contingency if water were not available from the Tay River. The Dillons were concerned that the permit does not state that surface and groundwater are not to be taken concurrently although that was the understanding in the OMYA application. With respect to the well water being used as a contingency, the Dillons stated:

Contingency use of ground water could interfere with other users, especially since contingency use is expected to be infrequent use of ground water and other demands on the aquifers may develop during long periods of surface water taking. Further, surface water usage has an impact on groundwater - the extent of which has yet to be studied in this watershed. (Ex. 145, p. 2)

Findings:

I was somewhat surprised to learn at the hearing, that a federal *CEAA* review was in the process of being conducted. I contemplated, at that time, of adjourning the hearing until all the information, including the *CEAA* review material was available. It would be beneficial if the work by the levels of government could be harmonized with more co-operation in dealing with issues of mutual concern, such as this proposed application. It would have been helpful to have all the information including the complete investigations and findings of the federal government concerning this issue prior to making a determination at this level. OMYA is not able to take water from the Tay River regardless of this decision until there is approval from the federal government concerning the water intake structure. Notwithstanding those circumstances of not having the benefit of the *CEAA* final conclusions, I decided to continue with the evidence and make findings on the material available.

With respect to the information provided by Mr. McIeLwain, I have no reason to doubt the information that he provided, but again, I am concerned that the broad scope of the water takings in the watershed, including groundwater, has not been taken into consideration. The Director was very clear that the existing PTTW to OMYA from the various wells would be replaced when a permit to take water from the Tay River is approved. I expect that this would be the case even with only Phase I being permitted. The Dillons were concerned about impacts of surface and groundwater taking within the Tay River watershed and I agree that further study would be appropriate in this respect. However I have not found it necessary to revise the conditions regarding groundwater and contingency plans with the granting of the Phase 1 portion of the PTTW.

As far as the supposition made by Dr. Mosquin that the concentration of chemicals would be increased downstream from the intake structure, seemed to be based on common sense without any scientific testing or complete analysis. This issue could be explored if a further application for a PTTW is submitted.

It is not possible for me to determine from the evidence that there will be harm or significant harm to the environment without further evaluation of the ecosystem and the cumulative effects. Mr. Kaye was only able to give assurances of no risk to the environment with the granting of the Phase I portion of the permit. I have taken the advice of the MOE and therefore agree with his position.

The Impact on the Great Lakes Basin - The Great Lakes Charter

The COC submitted that the Director had failed to consider the requirements of the Great Lakes Charter (“Charter”) as required by Regulation 285/99.

Subsection 2(4) of Regulation 285/99 states that a Director shall ensure that Ontario’s obligations under the Charter with respect to the application are complied with.

The Charter signed in 1985 by the Premiers of Ontario and Quebec and the Governors of the eight Great Lake states, was updated with the Great Lakes Charter Annex , dated June 18, 2001.(Great Lakes Charter and the Annex are found at Ex. 71, Tab 10) The purposes of the Charter are:

The purposes of this Charter are to conserve the levels and flows of the Great Lakes and their tributary and connecting waters; to protect and conserve the environmental balance of the Great Lakes Basin ecosystem; to provide for co-operative programs and management of the water resources of the Great lakes Basin by the signatory States and Provinces; to make secure and protect present developments within the region; and to provide a secure foundation for future investment and development within the region. (Ex. 71, Tab 10)

The Charter outlines the following five principles for the management of the water resources of the Great Lakes:

- < Integrity of the Great Lakes Basin
- < Cooperation Among Jurisdictions
- < Protection of the Water resources of the Great Lakes
- < Prior Notice and Consultation
- < Cooperative Programs and Practices

The Charter states, in part, that:

Principle I: Integrity of the Great Lakes Basin

The planning and management of the water resources of the Great Lakes Basin should recognize and be founded upon the integrity of the natural resources and ecosystem of the Great Lakes Basin. The water resources of the Basin transcend political boundaries within the Basin, and should be recognized and treated as a single hydrologic system. In managing the Great Lakes Basin waters, the natural resources and ecosystems of the Basin should be considered as a unified whole.

Principle III: Protection of the Water Resources of the Great Lakes

The signatory States and Provinces agree that new or increased diversions and consumptive uses of Great Lakes Basin water resources are of serious concern. In recognition of their shared responsibility to conserve and protect the water resources of the Great Lakes Basin for the use, benefit, and enjoyment of all their citizens, the States and Provinces agree to seek (where necessary) and to implement legislation establishing programs to manage and regulate the diversion and consumptive use of Basin water

resources. It is the intent of the signatory states and provinces that diversions of Basin water resources will not be allowed if individually or cumulatively they would have any significant adverse impacts on lake levels, in-basin uses, and the Great Lakes Ecosystem.

Principle IV: Prior Notice and Consultation

It is the intent of the signatory States and Provinces that no Great Lakes State or province will approve or permit any major new or increased diversion or consumptive use of the water resources of the Great Lakes basin without notifying and consulting with and seeking the consent and concurrence of all affected Great Lakes States and Provinces.

Mr. David deLaunay, Director of Lands and Water Branch of the Ontario Ministry of Natural Resources, with responsibility for the Charter in Ontario, was called as witness by the MOE.

Mr. deLaunay stated that the obligations of an MOE Director in issuing a PTTW only relate to the consultation procedures under Principle IV - Prior Notice and Consultation. He explained that the "Implementation of Principles" section of the Charter states that: "The principle of prior notice and consultation will apply to any new or increased diversion or consumptive use of the water resources of the Great Lakes Basin which exceeds 5,000,000 gallons (19 million litres) per day average in any 30-day period." (Great Lakes Charter, Consultation Procedures - Ex. 71, Tab 10) Mr. deLaunay stated that the OMYA application for PTTW does not meet the criteria of the Charter in the amount of water proposed for the taking is much less and therefore the Charter does not apply in this case.

Mr. Kaye, the Director who issued the PTTW, stated that his interpretation of the Great Lakes Charter was similar to Mr. DeLaunay, in that this application for a PTTW did not qualify since the amount of water requested did not exceed the amount outlined in the Charter.

The COC submitted that the Director failed to ensure that Ontario had complied with its obligations under the Charter. In particular the COC submitted that there was no evidence before the Director that would allow an assessment of the PTTW on the Great Lakes Basin as a Director had failed to noted that Principle I - Integrity of the Great Lakes Basin states that "... in managing the Great Lakes basin waters, the natural resources and ecosystem of the Basin should be considered as a unified whole". The COC stated that, "in considering a permit to take water, you must, according to the Charter, consider the permit in the context of the Tay River as part of a single hydrologic system - the Great Lakes Basin". (Final Argument of Council of Canadians, Nov. 15, 2001, p. 6)

The Director admitted that the PTTW was a consumptive use of water. However the Director submitted that the Charter should only apply if a permit to take water exceeds 19 million litres per day.

Findings:

The Great Lakes Charter, an important document, is only in its infancy in its interpretation and utilization. It was included as part of the regulations of the *OWRA* in 1999. Therefore it is recommended that further detailed consideration needs to be given to the Great Lakes Charter in evaluating the obligations of Ontario in subsequent applications for water taking. The Charter, in my opinion, is more than just about quantity of water in a permit but having said that, it is not clear to me what mechanism would be instituted to protect the “Integrity of the Great Lakes Basin” and “Protection of the Water Resources of the Great Lakes” within the Great Lakes Charter without evaluating the cumulative effects and considering a comprehensive ecosystem approach.

In view of my earlier finding that the Phase 1 taking would not have adverse impacts within the Tay River watershed, it follows that the Phase 1 taking will not have an adverse impact on the much larger Great Lakes water basin of which it is a part.

Bulk Water Transfer Restrictions

Subsection 3(2) of Regulation 285/99 states that no person shall use water by transferring it out of a water basin. This restriction applies to the Great Lakes - St. Lawrence Basin. However, the Director and OMYA submit that this restriction does not apply as subsection 3(3) of Regulation 285/99 states that this restriction “... does not apply to water that is used in the water basin to manufacture or produce a product that is then transferred out of the water basin”.

The COC state that there is insufficient evidence before the Tribunal to establish that the OMYA PTTW would be used for the purposes described in subsection 3(3) of Regulation 285/99.

Mr. Brian Kaye, Director for s. 34 of the *OWRA*, stated that:

Section 34 of the *OWRA* regulates the removal of water from its natural state be it as surface or groundwater. The intent of the program is to protect that “natural state”. Apart from prohibiting that taking of water for the use of transferring it out of a water basin (as defined by O. Reg 285/99), the Act and the regulation do regulate the use made of that water.

The Director was aware that *OMYA* would be using the water in a manufacturing process and that the water would be consumed by that process. The only relevance of *OMYA*’s use of the water is with regard to the fact that it is a consumptive use. This fact triggers consideration of the Great Lake Charter and whether there is a need for notice and

consultation... The use of the water in the manufacture of a product is not restricted in any way by the regulation, the *OWRA* or the Accord. Regulating the subsequent trade of that product is beyond the control of the Director. (Ex. 71, Tab 4, p. 20)

Findings:

Although OMYA did not call a witness¹⁷ to discuss the processing operations of the company, I have discerned from the evidence, that the company produces a product with water as one of the components. A processing procedure consumes water and is mixed with calcium carbonate to form a product slurry, which is the end product that is produced. Water, in this case, is not in its natural state when the product is in its finished state and is sold. I am satisfied on the evidence that has been presented that the water that is the subject of the OMYA PTTW will be "... used to manufacture or produce a product that is then transferred out of the water basin". Accordingly the OMYA PTTW does not violate subsection 3(2) of Regulation 285/99.

Trade Agreement Implications

This issue was one of the prime concerns in the appeal submitted by the Council of Canadians. The COC acknowledged that this was a difficult and complex issue. The COC claims that the issuance of this PTTW could potentially bind the Director to provide the same "favourable" treatment to foreign investors. The issuance of this PTTW establishes a precedent and will require the Director to issue similar PTTWs to foreign businesses or face the prospect of claims of compensation arising from the violation of international trade agreements.

The COC relies upon Chapter 11 of the North American Free Trade Agreement ("NAFTA") which obliges Canada to treat investors from other NAFTA countries as favourably as it treats its own Canadian investors in like circumstances. NAFTA provides that a foreign investor can enforce this obligation by commencing a claim for compensation against Canada through binding international arbitration. Although the COC raised the same issue in respect of the WTO agreement most of the evidence presented by the COC related to NAFTA rather than the WTO agreement.

Ms. Christine Elwell, a lawyer, provided evidence on behalf of the Council of Canadians. Ms. Elwell serves as one of the ten experts on a trilateral Advisory Group to the North American Commission for

¹⁷ A witness statement was submitted, at the beginning of the hearing, for Mr. Oliver Chatillon, Vice President and General Manager of OMYA, but OMYA did not call him as a witness.

Environmental Cooperation (CEC)¹⁸. Ms. Elwell wrote a paper for the Sierra Club of Canada entitled “*NAFTA Effects on Water: Testing for NAFTA Effects in the Great Lakes Basin*”¹⁹ (Ex. 76, Tab 3) In her paper she states:

....the status of water under the terms of North American Free Trade Agreement are at best ambiguous. Water is included in the definition of a “good” under the General Agreement on Tariffs and Trade, which in turn has been incorporated into the North American Free Trade Agreement. But it is not clear at what point on the continuum from natural state through human economic process that water becomes a good.....

Following the signing of NAFTA, the three parties issued a joint declaration that NAFTA creates no rights to the natural water resources of any party; that unless water, in any form, has entered into commerce and had become a good or product, it is not covered by the provisions of any trade agreement, including NAFTA. (Ex. 76, Tab 3 pp. 22 & 24)

Ms. Elwell also cites a report from the West Coast Environmental Law Association who considers NAFTA a more powerful restriction on government action due to its investment and services sections. The Association considered the joint statement by the NAFTA signatories on water unlikely to be legally enforceable. She states that the Association recommends that the Canadian Government invoke legislation to ban water exports and suggests that the NAFTA be amended to clearly carve out water from its scope.

The report states that ambiguities about water in trade agreements have concerned citizens and non-governmental organizations in the Great Lakes and St. Lawrence Basin for many years.

Ambiguities about water in trade agreements threatened to make diversions, in the form of tanker, pipeline, bulk export, and multiple small scale removals and consumptive uses impossible to prevent. As a result they have called upon the NAFTA signatories to resolve the ambiguities surrounding trade in water. In addition, work has begun on a proposal for non-discriminatory, ecosystem-based management of human water use in the Great Lakes and St. Lawrence River basin that could serve as a model for ecosystem conservation and protection in North American regions. (Ex. 76, Tab.3, p. 23)

Stephen de Boer, a senior policy advisor with the Trade and International Policy Branch of the Ministry of Economic Development and Trade was called as a witness by the MOE. Mr. de Boer stated that:

¹⁸ The CEC is based in Montreal and is a tri-national organization (Canada, United States of America and Mexico) to deal with environmental aspects of the NAFTA.

¹⁹ This report was presented at the North American Symposium on Understanding the Linkages between Trade and Environment, Washington, D.C., October 11, 2000

The decision by the Director to issue a permit to OMYA to take water from the Tay River poses little risk of implicating the provisions of the NAFTA and WTO. The NAFTA and WTO cover both trade in goods and services. Neither goods or services provisions of either of these agreements are particularly relevant to the present situation since the good produced and exported by OMYA is a slurry product, and not water, which is the subject of the hearing, and there are no services, as defined by NAFTA or General Agreement on Trade and Services (GATS) implicated by the issuance of a water taking permit.

The definition of “goods of a Party” in the NAFTA delineates the scope of the NAFTA with respect to trade in goods. Goods of a party are defined in Article 201(1) of the NAFTA and are defined as “domestic products as these are understood in the *General Agreement on Tariffs and Trade* or such goods as the Parties may agree, and includes originating goods of that Party”. The ordinary meaning of the term is “something that is produced” meaning that something must be done to it such as extraction, collection, refinement, processing, assembling or packaging or it is somehow transformed into an article of commerce. (Ex. 71, Tab 8, pp. 2-3)

Findings:

Ms. Elwell stated that there were some ambiguities concerning the status of water under the terms of NAFTA. I do not agree with her position, that in this case, there are any ambiguities.

I accept Mr. de Boer’s evidence on the relevance of NAFTA and WTO in these circumstances. It is clear that a product is produced, which includes water, but it is not only water. Water is not the “good” but the “good” is the manufactured product containing water. Therefore, it is my opinion that the NAFTA and the WTO do not apply in so far that water, in this case, is not in its natural state but is included within a product.

OMYA’s Environmental Track Record

Sam Kingdom, a member of the Industrial Advisory Committee of the Township of Bathurst, Burgess and Sherbrooke was called as a witness by the Dillons. He stated that the committee had been formed in 1997 with respect to issues of non-compliance or perceived perception of non-compliance by OMYA with regards to items but in particular to conditions set out in an OMB Order relating to berms and tree planting. Mr. Kingdom stated that he had been concerned about spills by OMYA but later learned that the spills had been an accident and that he was satisfied that no further spills had occurred. Upon questioning by Mr. Bryant, Mr. Kingdom stated he was concerned about a required berm which was constructed by OMYA but the berm had collapsed. It was later learned that the berm failed because of work being done by Consumers Gas Company. On a further point, Mr. Kingdom also conceded that many trees had been planted by OMYA as required.

Mrs. Lorraine Dore was called as a witness by the Cassidys. She and her husband are residents and owners of property which surrounds Murray Lake. The lake is near to the OMYA Tatlock quarry some 40 km north of the OMYA plant. Mrs. Dore maintained that Murray Lake had been adversely affected by a stream that had been diverted by OMYA that emptied into Murray Lake²⁰.

Mr. James Bishop refuted the conclusions drawn by Mrs. Dore that OMYA operations had an effect on Murray Lake. (Ex. 93) Mr. Bishop referred to the assessment of reports and data of the Lake Survey Summary Sheet produced by the Ontario Department Lands and Forests (Ex. 94). The report made recommendations in 1970s that although the Murray Lake had been previously stocked with lake trout, the conditions were “poor” and stated that the stocking should be discontinued.

The Director stated in respect to environmental performance of the company that:

Prior to issuing the permit, discussions were held with Mr. Paul Kehoe of the Ministry’s Ottawa District Office regarding the environmental record associated with OMYA’s plant at Perth. Mr. Kehoe...gave no reason as to make the Director feel that terms and conditions imposed on the permit would not be respected by OMYA or that its environmental record at the plant would warrant or support the refusal to grant the permit. (Ex. 71, Tab 4, p. 21, para 124)

Findings:

The evidence presented concerning environmental performance of OMYA did not indicate to me that there was any particular matter that the company had participated knowingly in to cause degradation to the environment. In fact, there was photographic evidence that the premises and the grounds of the company had improved under the present ownership.

I do not see any connection between the circumstances and conditions of Murray Lake and the PTTW application. Further, I did not hear any evidence to convince me that OMYA had contributed to the deteriorated conditions of the quality of the water in Murray Lake.

General Findings:

²⁰ Murray Lake is not in the same watershed as the Tay River.

I have reviewed the documentation submitted and the evidence presented at the hearing. For each issue listed above, I have stated my findings. I wish to thank the parties, the participants, the presenters and the witnesses for the information that they provided.

In conclusion, there was much evidence offered in the seven week hearing with a great deal of technical analysis being given by the instrument holder's witnesses confined specifically to this application. Within the regulation of *OWRA* there are broader and comprehensive aspects that need to be evaluated and quantified. OMYA is not the only player in the Tay River watershed and the ecosystem analysis and evaluation extends beyond the technical reports provided by OMYA. Although the technical reports submitted by OMYA were helpful and will be great assistance for a further application, this permit cannot be taken in isolation and therefore a more comprehensive evaluation needs to be undertaken.

The PTTW was issued by the MOE indicating two phases with a number of Conditions and Special Conditions. There were a number of very important Special Conditions that the Director included in the Permit for assurances of the protection of the Tay River. I agree with the Director that additional assessment needs to be completed before the full amount of water can be taken. However, it is my opinion that any taking in excess of that permitted by this decision must be the subject of a new PTTW application.

During the final days of the hearing the parties along with some of the witnesses met informally to discuss revisions to the conditions for the PTTW. The discussions failed to come to any consensus. Subsequently several of the parties submitted revised draft conditions for consideration. Revised conditions were submitted by the MOE (Ex. 120, 129 & 156), the Dillons (Ex.121 & 145), the Cassidys (Ex.130), Ann German (Ex.122) and OMYA (Ex. 157A & 157B). All of these revisions and recommendations were reviewed and some of the proposals that were appropriate have been included, others I have not accepted as they were not appropriate or not necessary for clarification.

It was surprising to me that the instrument holder did not call as a witness, Mr. Stephen Simmering, Simmering & Associates, who conducted the initial work for the application provided to the Director for the PTTW, although a witness statement had been submitted for him by OMYA.

I was particularly pleased to welcome the students of a class from the Perth High School to the public hearing one morning, in order that they may learn first hand something of the administrative justice process in the Province of Ontario.

I also wish to thank the Dillons for their assistance in co-ordinating the many exhibits of the hearing in order that the exhibits were available at the Perth Library for the public to review.

Since there were many members of the public attending the hearing and I was without any administrative assistance from the Tribunal with me, it was often difficult to have individuals refrain from speaking to me personally during breaks and at the conclusion of the days hearing. But I took many opportunities to announce at the hearing the inappropriateness of such exchanges and to share information with all the parties that had been incidentally been given to me.

There was considerable discussion concerning the need for the public to participate in a meaningful way with the PTTW. Friends of the Tay River Watershed is an obvious player in this discussion. Other groups were suggested as players including local municipalities within the Tay River Watershed. With the number of persons responding to the *EBR* registry and the number of persons attending the sessions for this hearing, I believe the community has demonstrated a high degree of interest and concern with this process.

It is very important to involve the public in the consultation, monitoring results, progress reports and operational aspects of this permit. During the course of this hearing, I referred the parties to other Decisions of the Tribunal where public participation had been included. I informed the parties that if the permit were to be approved that I was interested in including conditions that would provide an opportunity for the public to be involved in the ongoing process of the life of the permit. Therefore I have set out the following conditions, that I believe to be reasonable, that would provide that opportunity. I have added to “Schedule A” :

- < **The six municipalities within the Tay River watershed:**
 - Corporation of the Town of Perth**
 - Corporation of the Township of Bathurst Burgess Sherbrook**
 - Corporation of the Township of Central Frontenac**
 - Corporation of the Township of Drummond-North Elmsley**
 - Corporation of the Township of South Frontenac**
 - Corporation of the Township of Rideau Lakes**
- < **Friends of the Tay River Watershed**
- < **The Greater Bobs and Crow Lakes Association**
- < **The Perth Community Association and**
- < **The Lanark County Citizen’s Action Group**

A condition for the Permit Holder to engage an environmental auditor was included in the revised conditions presented by the MOE. The condition has been further revised and included which states:

The Permit Holder shall engage the services of an independent and appropriately qualified environmental auditor, satisfactory to the Director. The auditor shall detail and certify in writing to the Director and those listed on “Schedule A” on January 31 of each year, a report on water taking. The environmental auditor, at a minimum, will receive and analyse water-taking data, confirm compliance or non-compliance with the terms and conditions of the permit, all of which shall be included in the report. The auditor can further provide recommendations for conservation, protection and wise use and management of the water for this water taking.²¹ A copy of the environmental auditor’s report shall be placed in the Perth Union Public Library by the Permit Holder. The Permit Holder shall place an advertisement in a newspaper or newspapers circulating in Perth and Lanark County indicating the availability of the report and the means by which a copy can be obtained. The auditor’s report shall be made available by the Permit Holder to the public on request.

In order to involve the public in an ongoing process, I have included the two following conditions:

The Permit Holder shall convene at least two meetings in a calendar a year, at a convenient time that the Director can attend the meeting, with the representatives listed on “Schedule A”. Representatives on “Schedule A” shall be limited to not more than two persons each to attend meetings. One of the meetings, which the Permit Holder shall convene, with the environmental auditor in attendance, shall be held within thirty days of the environmental auditor’s report becoming available to the Director and the “Schedule A” representatives. The meetings will provide an opportunity for the Permit Holder to inform the representatives on the environmental auditor’s report, to hear submissions from the representatives and to answer questions concerning the water taking. The Permit Holder shall make all records of water takings and all discharge and stage data available to the representatives at all these meetings. The Permit Holder shall have minutes of these meetings prepared and circulated to the Director and representatives on “Schedule A”. A copy of the minutes of the meetings shall be placed in the Perth Union Public Library by the Permit Holder.

The Permit Holder shall, in consultation with the representatives on “Schedule A”, convene at least one public meeting in a calendar year in Perth, Ontario, at a convenient time that the Director can attend the meeting, in order that the public can be informed of the Permit by the Permit Holder, the public can make submissions to the Permit Holder, the public can ask questions and receive answers from the Permit Holder, concerning the water taking. The Permit Holder shall place an advertisement for the meeting in a newspaper circulating in Perth and Lanark County, at least one week prior to the meeting, indicating the date, location and time of the public meeting.

²¹ This captures the essence of the purpose outlined in Regulation 285/99 of the *OWRA*.

The MOE agreed with the suggestions from Mr. Slater that Environment Canada's Standard Operating Manuals be applicable and that there be calibration of the new gauging station. These were included in the revised draft conditions submitted by the MOE and which have also been included in this Decision.

Since I am only allowing the Phase 1 portion of the PTTW, I have extended the permit for six years. I had contemplated a five year period, but to be fair, I extended it a further year since it may take some time before the *CEAA* process is completed. The life of this PTTW will give an opportunity for the Permit Holder to gather specific information concerning the waterflow at the new proposed gauge station. The time also offers the opportunity for analysis of cumulative effects within the watershed, ecosystem approach analysis and an opportunity to expand on the present information prepared for this Tribunal hearing before a further application could be submitted by OMYA to the Director for a Phase 2 portion of the permit to take water.

Recommendations:

In respect to the improvements to the Permit to Take Water program, Brian Kayes offered some further comments during the hearing contained in Exhibit 127. To summarize, he stated that:

- < Ministry staff is working to develop a guideline specific to the application of the ecosystem approach to the Permit to Take Water program .
- < Further work is continuing to revise the Permit to Take Water manual and those revisions could be guided by recommendations from the O'Connor Inquiry.
- < Regional staff continue to make recommendations towards improving the database particularly in terms of query capabilities. As the Ministry continues to develop and implement its Integrated Divisional Support (IDS) system, the permit database will be rolled over into that system which will improve access to PTTW information for all staff.
- < In order to improve that capability of staff to assess the cumulative nature of takings, in 2000, the ministry retained the services of a consultant to go through the PTTW database and all permit files (paper files) within each region in order to define coordinates on maps for each permit. These coordinates have been collected in a new database maintained within each region. The existing database was not modified to accept these data, as both databases will be rolled over into the IDS
- < To make use of geo-referenced permit information, each region of the ministry is developing in house Geographical Information Systems (GIS) capabilities. Hardware such as a map plotter and a graphics work station, have been purchased by the Eastern Region. Improvements to the regional computer have allowed all staff access to the various GIS databases, giving all staff the capability to undertake GIS projects from their work stations.

These changes will no doubt assist the MOE staff to better co-ordinate their work and provide complete analysis in their review of applications for PTTW.

The Director further offered the following remarks about the manual:

The 1999 version of the manual includes copies of the Great Lakes Charter and the O. Reg. 285/99, but clarification as to the application of these two documents is not expressly provided. While the manual does provide direction on several of the considerations set out in the new regulation, there are some issues which should be addressed in the next version....

For instance, a consistent definition of the “natural functions of the ecosystem” and clarification and documentation with regard to the definition of the ecosystem to be protected are required....

Also, while the manual currently provides guidance to the Director with regard to the interpretation of “public or private interest in water” (as stated in S. 34, *OWRA*), it does not provide guidance with regard to interpreting “interests in the taking” as stated in the regulation.

The regulation requires the Director to “ensure that Ontario’s obligations under the Great Lakes Charter with respect to the application are complied with.” While the Director and the MNR understand what the Director’s obligations are....the manual needs to accurately clarify the Director’s role with regard to prior notice and consultation. (Ex. 71, Tab 4, pp. 43-46)

Mr. Kaye was certainly thoughtful and instructive in making the above mentioned suggestions and recommendations that would improve the processing of Permits to Take Water. In doubt these observations and proposals will be taken into consideration for future analysis and evaluation within the PTTW program.

In review of Reg. 285 /99 Sect 2(3), I recognize that the Director has wide discretionary powers with the inclusion of the words “may consider” for certain items. It would be helpful if a more detailed analysis could be outlined by the Director in future applications, in order that the public can be completely satisfied that all sections of the regulation have been complied with. Notwithstanding, Mr. Kaye indicated in his testimony, that all items in Reg, 285/99 2(3) had been considered by the Director.

Joe Slater, made the following recommendation within his final submission that I quote for further consideration also by others:

Although beyond the scope of this hearing, another pressing concern which our society must soon address relates to the proper valuing of water as a natural resource. Several times during the Tribunal Hearing it was stated “raw” water should no longer be treated as a free good. The only ‘free’ water should be restricted to essential human life and health requirements and that water necessary for basic ecological functions. All other needs should be paid ones. For example, the hydro companies in this province are charged a water rental fee to have the river and reservoir water pass through their turbines to generate electricity. Other users should also have to pay something to help in the conservation of this vital resource.

Ms. German also suggested that permit holders that who take large amounts of water should be required to pay for the water. (Ex. 122) I have included these remarks of Mr. Slater and Ms. German, to provide MOE with the sentiments expressed, but it is well beyond the jurisdiction of the Tribunal.

Decision

The appeals have, in part, been allowed. By this Decision approval is given to OMYA (Canada) Inc. for a Permit to Take Water with revised and additional conditions (Appendix A).

Approved with Revised Conditions

Pauline Browes
Panel Chair

- Appendix A - Terms and Conditions
- Appendix B - Regulation 285/99
- Appendix C - Exhibit List
- Appendix D - List of Witnesses
- Appendix E - List of Presenters
- Appendix F - Diagram of Tay River Watershed

Appendix A

Terms & Conditions

PERMIT TO TAKE WATER

Number 00-P-4096

Notice of Terms and Conditions

Section 100, *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40

Pursuant to Section 34 of the *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40 permission is hereby granted

TO: OMYA (Canada) Inc.
P.O. Box 345
Highway 7 West
Perth, ON K7A 4S9

for the taking of water from the Tay River located on Lot 17, Concession 2, Former Township of Bathurst, now part of the Township of Bathurst, Burgess and Sherbrooke, County of Lanark for water, for industrial processes and products, at a rate not greater than 1,030 litres per minute (1,483 cubic meters per day), for a period ending January 1, 2008.

Except where modified by this Permit the water taking shall be in accordance with the application dated February 29, 2000, and signed by Ray McCarthy.

You are hereby notified that this Permit is issued to you subject to the following Definitions, General Conditions and Special Conditions.

DEFINITIONS

1. (a) “Director” means a Director, Section 34, *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40.
- (b) “District Office” means Ottawa District Office, Eastern Region, Ontario Ministry of the Environment.
- (c) “District Manager” means District Manager, Ottawa District Office, Eastern Region, Ontario Ministry of the Environment.
- (d) “Environment Canada’s Standard Operating Manuals” means Environment Canada’s Hydrometric Field Manuals and hydrometric Data Computation Procedures Manuals, for Hydrometric Stations, as amended from time to time.
- (e) “Ministry” means Ontario Ministry of the Environment.
- (f) “Permit” means this entire Permit to Take Water including its schedules, if any, issued in accordance with Section 34 of the *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40.
- (g) “Permit Holder” means OMYA (Canada) Inc.

GENERAL CONDITIONS

2. This Permit shall be kept available at the offices of OMYA (Canada) Inc., Highway 7 West, Perth, ON, for inspection by staff of the Ministry of the Environment at all times.
3. The Director may, from time to time, where a situation of interference or anticipated interference with water supplies exists, or in a situation requiring information on water takings for purposes of water resource inventory and planning, give written notice to the Permit Holder to undertake any of the following actions. The Permit Holder shall comply with any such notice:
 - (a) to establish and maintain a system for the measurement of the quantities of water taken;

- (b) to operate such a system and to record measurements of the quantities of water taken on forms provided by the Director, with such frequency or for such time periods as the Director may specify;
 - (c) to return to the Director records made pursuant to clause 3(b) at such times or with such frequency as the Director may specify; and
 - (d) to keep records made pursuant to clause 3(b) available for inspection until such time as they are returned to the Director pursuant to clause 3(c).
4. The Permit Holder shall immediately notify the District Manager of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint.
5. For surface water takings, the taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.
6. For groundwater (or ground water) takings, if the taking of water is forecast to cause any negative impact, or is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of a Permit for this water taking, the Permit Holder shall take such action necessary to make available to those affected a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent the forecast negative impact or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Permit Holder shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of so doing.
7. The Permit Holder shall report to the Director any changes of address or telephone number, or change of ownership of the property for which this Permit is issued and shall report to the Director any changes in the general conditions of water taking from those described in the Permit application within thirty days of any such change. The Permit Holder shall not assign his rights under this Permit to another person without the written consent of the Director.

8. No water may be taken under authority of this permit after the expiry date of this Permit, unless the Permit is renewed, or after the expiry date shown on any subsequent renewal of this permit, unless it is likewise renewed.
9. This Permit does not release the Permit Holder from any legal liability or obligation and remains in force subject to all limitations, requirements, and liabilities imposed by law and this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.
10. The Permit Holder must forthwith, upon presentation of credentials, permit Ministry personnel, or a Ministry authorized representative(s) to carry out any and all inspections authorized by Sections 15, 16 or 17 or the *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40, sections 156, 157 or 158 of the *Environmental Protection Act*, R.S.O., 1990, Chapter E. 19 and Sections 19 or 20 of the *Pesticides Act*, R.S.O., 1990, Chapter 11.
11. The Director may, at times of drought or water shortage in the locality of the taking, give notice to the Permit Holder to suspend or reduce the taking to an amount or threshold specified by the Director. The suspension or reduction in the taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition shall not be read to affect the right to appeal the notice to the Environmental Review Tribunal under Subsection 100(4) of the *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40.
12. This permit does not abrogate the Permit Holder's responsibility to comply with all applicable legislation and regulations, including Water Taking and Transfer Ontario Regulation 285/99 made under the *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40 which provides, among other things, that no person shall use water by transferring it out of a water basin as defined in Regulation 285/99 in a container having a volume greater than 20 litres. The Water Taking and Transfer Ontario Regulation 285/99 made under the *Ontario Water Resources Act*, R.S.O., 1990, Chapter O. 40 divides Ontario into the Great Lakes - St. Lawrence, the Nelson and Hudson Bay water basins.

SPECIAL CONDITIONS

13. The maximum amount of water to be taken under authority of this Permit shall not exceed 1,483 cubic metres per day.

14. Prior to the taking of water under authority of this Permit, the Permit Holder shall install and calibrate a flow meter and totalizer to the manufacturer's recommendations on the pumping system that takes water from the Tay River. The amount of water taken shall be measured and recorded from the flow meter and totalizer daily by a properly trained director, employee or agent of the Permit Holder.
15. Prior to commencing the taking of water under this Permit, the Permit Holder shall:
 - (a) install a hydrometric station, which includes a staff gauge, at a technically suitable location within the portion of the Tay River between the Bowes Road bridge and the intake facility in accordance with Environment Canada's Standard Operating Manuals and to the satisfaction of the Director; and
 - (b) develop a stage-discharge curve for discharges in the range of 0.8 to 2.0 cubic metres per second for the purposes of obtaining reliable discharge data.
16. The hydrometric station, flow meter and totalizer shall be capable of generating real-time digital data.
17. The Permit Holder shall operate, monitor and maintain the hydrometric station at all times during the term of this Permit in accordance with Environment Canada's Standard Operating Manuals and to the satisfaction of the Director.
18. In the event the continuous recording equipment within the hydrometric station ceases to operate for any reason, the Permit Holder shall cease the taking of water.
19. Despite Special Condition 18, the Permit Holder may continue to take water if the discharge at the location of the hydrometric station is otherwise obtained from water levels read from the staff gauge operated and maintained in accordance with Environment Canada's Standard Operating Manuals and to the satisfaction of the Director.
20. Where water is taken in accordance with Special Condition 19, the Permit Holder shall cause the staff gauge to be read and the discharge to be calculated at least:
 - (a) once every 24 hours when the discharge is greater than 2.0 cubic metres per second; and
 - (b) once every 12 hours when the discharge is less than or equal to 2.0 cubic metres per second.

21. The Permit Holder shall not take water in accordance with Special Condition 19 for a period exceeding 14 continuous days, without pre-authorized written notice from the Director.
22. The Permit Holder shall not take water in accordance with Special Condition 19 if the Permit Holder has taken water in accordance with that Condition on more than 30 days in any 365 day period, without pre-authorized written notice from the Director.
23. The Permit Holder shall keep all records of water takings and all discharge and stage data at the Permit Holder's office located at OMYA (Canada) Inc. Highway 7 West, Perth, Ontario, and the records shall be made available to representatives of the Ministry of the Environment, the Rideau Valley Conservation authority and other agencies authorized by the Ministry of the Environment upon request.
24. The Permit Holder shall provide the Rideau Valley Conservation Authority, without cost, remote access to the digital data produced by the hydrometric station, flow meter and totalizer.
25. The Permit Holder shall immediately cease the taking of water authorized by this Permit if the discharge measured by the hydrometric station, including the staff gauge, is equal to or less than 1 cubic metre per second.
26. The Permit Holder may resume the taking of water authorized by this Permit if the discharge measured by the hydrometric station, including the staff gauge, is greater than 1 cubic metre per second.
27. The Permit Holder shall notify the District Manager when any one or more of the following events occur:
 - (a) the Permit Holder ceases the taking of water in accordance with Special Conditions 18, 21, 22 or 25;
 - (b) the Permit Holder commences or resumes the taking of water in accordance with Special Conditions 19 or 26; and
 - (c) any cessation or commencement in the operation of the continuous recording equipment within the hydrometric station.

28. The notice required by Special Condition 27 shall be provided by way of facsimile transmission to the District Manager at (613) 521-5473, or in such other manner and to such MOE officials as directed in writing by the District Manager.
29. Any notice required by Special Condition 27 shall be provided no later than 1:00 p.m. on the next business day from the event requiring the notice and shall reference the subsection in 27 requiring the notice.
30. The Permit Holder shall engage the services of an independent and appropriately qualified environmental auditor, satisfactory to the Director. The auditor shall detail and certify in writing to the Director and those listed on “Schedule A” on January 31 of each year, a report on water taking. The environmental auditor, at a minimum, will receive and analyse water-taking data, confirm compliance or non-compliance with the terms and conditions of the permit, all of which shall be included in the report. The auditor can further provide recommendations for conservation, protection and wise use and management of the water for this water taking. A copy of the environmental auditor’s report shall be placed in the Perth Union Public Library by the Permit Holder. The Permit Holder shall place an advertisement in a newspaper or newspapers circulating in Perth and Lanark County indicating the availability of the auditor’s report and the means by which a copy can be obtained. The auditor’s report shall be made available by the Permit Holder to the public on request.
31. The Permit Holder shall convene at least two meetings in a calendar a year, at a convenient time that the Director can attend the meeting, with the representatives listed on “Schedule A”. Representatives on “Schedule A” shall be limited to not more than two persons each to attend meetings. One of the meetings, which the Permit Holder shall convene, with the environmental auditor in attendance, shall be held within thirty days of the environmental auditor’s report becoming available to the Director and the “Schedule A” representatives. The meetings will provide an opportunity for the Permit Holder to inform the representatives on the environmental auditor’s report, to hear submissions from the representatives and to answer questions concerning the water taking. The Permit Holder shall make all records of water takings and all discharge and stage data available to the representatives at all these meetings. The Permit Holder shall have minutes of these meetings prepared and circulated to the Director and representatives on “Schedule A”. A copy of the minutes of the meetings shall be placed in the Perth Union Public Library by the Permit Holder.
32. The Permit Holder shall, in consultation with the representatives on “Schedule A”, convene at least one public meeting in a calendar year in Perth, Ontario, at a convenient time that the Director can attend the meeting, in order that the public can be informed of the Permit by the Permit Holder, the public can make submissions to the Permit Holder, the public can ask questions and receive answers from the Permit Holder, concerning the water taking. The Permit Holder shall place an advertisement

for the meeting in a newspaper circulating in Perth and Lanark County, at least one week prior to the meeting, indicating the date, location and time of the public meeting.

33. All data collected in accordance with paragraphs 17, 19 and 20 shall be collected and refined in a manner acceptable for inclusion in Environment Canada's Water Survey (HYDAT) database and shall be submitted, annually, for inclusion in that database.
34. No water shall be taken under authority of this permit after January 1, 2008.
35. Nothing in the Permit shall be read to limit the discretion, authority or statutory powers of the Ministry of Director in any way.

The reason for the imposition of Special Condition 13 is to ensure that the water taking is limited to a set volume.

The reason for the imposition of Special Condition 14 is to ensure that the Permit Holder's qualified representative(s) can properly measure and record the water taking authorized under this Permit by a tamper proof and scientific device.

The reason for the imposition of Special Condition 15, 16, 17 and 18 are to ensure that the Permit Holder installs, maintains and operates a proper hydrometric station to the Water Survey of Canada's national standards as described in Environment Canada's Standard Operations Manuals.

The reason for the imposition of Special Condition 19, 20, 21 and 22 is to allow the Permit Holder to continue taking water in the event of routine maintenance, or disruption in the operation of the hydrometric station, subject to reasonable limits.

The reason for the imposition of Special Condition 23 and 24 is to establish and accurate record of water taking and discharge, and to provide access of this data to various interested agencies.

The reason for the imposition of Special Condition 25, 26, 27, 28 and 29 is to ensure that the Permit Holder suspends the water taking when the discharge in the Tay River reaches a specified level to prevent or minimize the possible impacts on the Tay River Watershed.

SCHEDULE A

DOCUMENT CIRCULATION LIST
PERMIT TO TAKE WATER

- 1 Department of Fisheries and Oceans Canada
- 2 Friends of the Tay Watershed Association
- 3 Ontario Ministry of Natural Resources
- 4 Parks Canada
- 5 Rideau Valley Conservation Authority
- 6 Corporation of the Town of Perth
- 7 Corporation of the Township of Bathurst Burgess Sherbrook
- 8 Corporation of the Township of Central Frontenac
- 9 Corporation of the Township of Drummond-North Elmsley
- 10 Corporation of the Township of South Frontenac
- 11 Corporation of the Township of Rideau Lakes
- 12 The Greater Bobs and Crow Lakes Association
- 13 The Perth Community Association
- 14 The Lanark County Citizen's Action Group

Appendix B

Regulation 285/99 of OWRA

General

1. The purpose of this Regulation is to provide for the conservation, protection and wise use and management of Ontario's water, because Ontario's water resources are essential to the long-term environmental, social and economic well-being of Ontario.

Permits for Taking Water

2. (1) A Director who is considering an application under section 34 of the Act for a permit to take water shall consider the following matters, to the extent that each is relevant, in accordance with the procedures set out in the Ministry of the Environment publication entitled "Permits to take Water, Guidelines and Procedures Manual, 1999", as amended from time to time:
 1. Protection of the natural functions of the ecosystem.
 2. Ground water that may affect or be affected by the proposed surface water taking, if the application is for a permit to take surface water.
 3. Surface water that may affect for be affected by the proposed ground water taking, if the application is for a permit to take ground water.
- (2) A Director who is considering an application under section 34 of the Act for a permit to take water shall consider the interests of persons who have an interest in the taking, to the extent that those interests are relevant.
- (3) A Director who is considering an application under section 34 of the Act for a permit to take water may consider the following matters in accordance with the procedures set out in the Ministry of the Environment publication entitled "Permits to Take Water, Guidelines and Procedures Manual, 1999", as amended from time to time:
 1. Existing and planned livestock uses of the water.
 2. Existing and planned municipal water supply and sewage disposal uses of the water.
 3. Existing and planned agricultural uses of the water, other than livestock uses.
 4. Existing and planned private domestic uses of the water.
 5. Other existing and planned uses of the water.
 6. Whether it is in the public interest to grant the permit.

7. Such other matters as the Director considers relevant.
- (4) A Director who is considering an application under section 34 of the Act for a permit to take water shall ensure that Ontario's obligations under the Great Lakes Charter with respect to the application are complied with.
- (5) Subject to subsection (4), a Director who is considering an application under section 34 of the Act for a permit to take water may ensure that governmental authorities for other jurisdictions are notified of the application and consulted, even if notification and consultation are not required under the Great Lakes Charter.
- (6) A Director who is considering an application under section 34 of the Act for a permit to take water may require the applicant to,
- (a) consult with other persons who have an interest in the taking, including governmental authorities for other jurisdictions;
 - (b) provide the Director with information on the interests of and responses of the persons consulted under clause (a); and
 - (c) provide the Director with such other information as is specified by the Director.
- (7) In this section,

“Great Lakes Charter” means the Great Lakes Charter signed by the premiers of Ontario and Quebec and the governors of Illinois, Indiana, Michigan, Minnesota, New York, Pennsylvania and Wisconsin on February 11, 1985.

Water Transfer

3. (1) For the purposes of this section, Ontario is divided into the following three water basins:
- 1. The Great Lakes-St. Lawrence Basin, which consists of Lake Ontario, Lake Erie, Lake Huron, Lake Superior, the St. Lawrence River and the part of Ontario the water of which drains into any of them, including the Ottawa River and the part of Ontario of which drains the Ottawa River.
 - 2. The Nelson Basin, which consists of the part of Ontario the water of which drains into the Nelson River.
 - 3. The Hudson Bay Basin, which consists of the part of Ontario, not included in the Nelson Basin, the water of which drains into Hudson Bay or James Bay.
- (2) No person shall use water by transferring it out of a water basin.

- (3) Subsection (2) does not apply to water that is used in the water basin to manufacture or produce a product that is then transferred out of the water basin.
- (4) For the purposes of subsection (3), potable or other water is not a manufactured or produced product. (Exhibit 39, Tab 34)

There are four other subsections to Regulation 285/99 which are 3. (5), (6), (7) and (8) but they have no application to this case.

Appendix C

Exhibit List

NB: A double asterisk (**) after an entry indicates that it is oversized

1. Decision of the Environmental Appeal Board (granting Leave to Appeal), dated November 6, 2000.
2. Permit to Take Water (PTTW) issued to OMYA (Canada) Inc. by the Ministry of the Environment (MOE), dated August 24, 2000.
- 3A. Appeal of the PTTW by Carol and Melvyn Dillon, dated November 17, 2000.
- 3B. Appeal of the PTTW by Michael and Maureen Cassidy, dated November 21, 2000.
- 3C. Appeal of the PTTW by the Council of Canadians, dated November 21, 2000.
- 3D. Appeal of the PTTW by Kathleen Corrigan, Ann German, Eileen Naboznak, and Barbara and Ray Zents, dated November 21, 2000.
- 3E. Appeal of the PTTW by Ken McRae, dated November 21, 2000.
4. Notice of Hearing, dated December 1, 2000.
5. Order of the Environmental Review Tribunal (setting out procedures), dated February 9, 2001.
6. List of Issues submitted by Appellants, received February 12, 2001.
7. Motion by OMYA (Canada) Inc., received February 23, 2001.

8. Motion by MOE, received February 23, 2001.
9. Withdrawal of Appeal of Barbara and Ray Zents, received February 28, 2001.
- 10A. List of individuals of the Greater Bobs and Crow Lakes Association, dated February 27, 2001.
- 10B. List of individuals of the Perth Community Association, dated February 28, 2001.
- 10C. List of individuals of the Lanark County Citizens Action Group (LCCAG), dated February 28, 2001.
- 11A. Response to the OMYA and MOE motions by Carol and Melvyn Dillon, dated March 1, 2001.
- 11B. Response to the OMYA and MOE motions by Michael and Maureen Cassidy, dated March 1, 2001.
- 11C. Response to the OMYA and MOE motions by Council of Canadians, dated February 27, 2001.
- 11D. Response to the OMYA and MOE motions by Kathleen Corrigan, Ann German and Eileen Naboznak, received March 1, 2001.
- 11E. Response to the OMYA and MOE motions by Ken McRae, dated March 1, 2001.
12. Motion by Ken McRae dated March 5, 2001.
13. Book of Authorities of OMYA.
14. OMYA Submissions on Exhibit 7 motions, dated March 5, 2001.

15. Brief of Documents of the Director, Volume I.
16. Brief of Documents of the Director, Volume II.
- 17A. Director's Submissions on Exhibit 8 Motion, dated March 2, 2001.
- 17B. Director's Submissions on the Motions by OMYA, dated March 2, 2001.
18. Director's Book of Authorities, Volume I.
19. Director's Book of Authorities, Volume II.
20. Notice of Motion on Submissions by the Director.
21. Sulyn Cedar's written submission concerning OMYA's motion, dated March 6, 2001.
22. Written Submission by Council of Canadians re motions
23. Oral/Written Response by Carol & Melvyn Dillon re motions, April 2, 2001
24. Material Submitted for Leave to Appeal Hearing by Carol and Melvyn Dillon
25. Oral/Written Response by Michael and Maureen Cassidy re motions, April 2, 2001
26. Supplementary documents submitted by Maureen and Michael Cassidy, April 2, 2001
27. Order of the Environmental Review Tribunal re Party Status for Ms S. Cedar, April 6, 2001
28. Order of the Environmental Review Tribunal re Motions, May 2, 2001

29. Procedural Order # 2 of the Environmental Review Tribunal, May 3, 2001
30. Letter from Ken McRae to Tribunal, received June 5, 2001 requesting a withdrawal of party status to presenter status
31. Letter from Tribunal to Ken McRae accepting his withdrawal as a party, dated June 6, 2001
32. Letter to the Attorneys General of Canada & Ontario signed by Mr. S. Shrybman dated May 30, 2001
33. Letter from Robert Lovelace to the Tribunal, dated June 20, 2001 requesting to withdraw as a party to the hearing
34. Letter from the Tribunal to Robert Lovelace, dated June 20, 2001 accepting his withdrawal as a party to the hearing.
35. Letter from Ministry of the Attorney General of Ontario, signed by Counsel, Sarah Kraicer, dated June 15, 2001 to Steven Shrybman
36. Letter from Steven Shrybman, dated June 21, 2001, to Counsel, Ministry of the Attorney General of Ontario
37. Photographs presented by Mrs. German, 2 booklets.
38. Documents submitted by A. German, K. Corrigan and E. Naboznak
39. 3 Volumes of Document Books by OMYA
40. Document Book of Carol and Mel Dillon
41. Submission by D. Taylor - 5 pages: map of Tay River watershed, interim report, members, press release, vision statement and goals.

42. Tay River Action Priorities - of Tay River Watershed Roundtable
43. Excerpts of Documents re: Witness - David Taylor
44. Excerpts of Documents re: Witness - David Ballinger
45. Excerpts of Documents re: Witness - Sam Kingdon
46. Excerpts of Documents re: Witness - Joe Slater
47. Definition of National Standards - submitted by Joe Slater
48. Oral Submission of Charles Stewart
49. Wetland Evaluation - Micheal's Creek Marsh, Bob's Lake - Sept 1999
50. Letter to Shrybman from the Federal Department of Justice - June 25, 2001
51. Submission by Dan Roberts, Glen Tay Transportation
52. Submission by Cindy Keon, R.W. Tomlinson
53. Submission by Orion Clark
54. Submission by Rod Henderson
55. Submission by Art Bowes
56. Submission by Ed Hawrysh - Teamsters Local 91
57. Submission by Wilburt Crain, Crains Construction Limited

58. Submission by Barbara Mossop, Ontario Mining Association
59. Submission by Chris Bain, Chamber of Commerce
60. Submission by Mel Flemming
61. Submission by Cameron McLeod
62. Submission by Phil Petch
63. Submission by Bryce Bell
64. Submission by Margo Bell
65. Submission by George Green
66. Submission by Susan Brown
67. Submission by Judith Fox Lee
68. Document submitted by Sulyn Cedar
69. Written submission by Eric Scheuneman
70. a) Flyer entitled **AProtect Pert Jobs - Did you know?@**
b) Insert in Newspaper **AProtect Perth Jobs@**
71. Document Books of MOE - witness statements

72. Document Books of the Cassidy-s
73. Ecological Planning & Design - in Ottawa-Carleton
74. The Aquatic Ecosystem - Canadian Museum June 1999
75. Ottawa-Carleton Regional Plan Review - November 1999
76. Document Brief of the Council of Canadians
77. Witness Statements and Supporting Documents, Council of Canadians
78. a) Bob-s Lake - Number of days where discharge amount is less than 1 cms - daily basis for 24 years (1977-2000)
b) Revised number of days
79. Letter to Mr. Faieta from Jeff Anderson, Federal Department of Justice, dated June 20, 2001, with two attachments
80. Letter to Mr. Faieta from Alain Prefontaine, dated June 23, 2001, with three attachments:
 - 1) Letter from IJC to the Hon. J. Manley, dated June 15, 2001
 - 2) Certificate from Foreign Affairs
 - 3) Biographical Summary of Frank Quinn
81. Biography of Frank S. Ruddock
82. Submission of Louise McDiarmid
83. Statement by Jim Ronson - Perth Community Association
84. Presentation by Chief Robert Lovelace on behalf of Ardoch Algonquin First Nation

85. Documents submitted by Ken McRae
86. a) Map - Topographical map of the Tay River Watershed (recent maps - after 1989)**
b) Map - Topographical map of the Tay River Watershed (prior to 1949)**
87. Map of the Tay River Watershed showing the location of the PTTW**
88. Document - Water Resources Management Decision Support System for the Great Lake
89. Statement by Government of Canada, Mexico and U.S. - December 1993
90. 2 Letters:
 - 1) To Peter Hockstra - U.S. - from Micheal Kantor - U.S.
 - 2) To Tom Daschle - from Micheal Kantor
91. Overview of Fisheries Act / CEAA submitted by Brent Valere July 6, 2001
92. Letter from S.G. Simmering to Brent Valere May 25, 2001
93. Assessment of Report and Data re: Murray Lake - by James Bishop
94. 2 Lake Survey Summary Sheets - Dept of Lakes and Forests (Murray Lake)
 - 1) June 22, 1965 - July 25-1968
 - 2) August 13, 1975
95. Jurisdictional Framework related to Great Lakes Water Management - June 2001
96. Resume of David de Launay - witness
97. Map of Watersheds of Ontario - June 13, 2000

98. Document of Canadian Hydrographic Service - submitted by D. de Launay
99. Map of Total Water Use by tertiary Watershed in Great Lake Watershed, 1996**
100. Map of Digital Elevation of Tay River Watershed - July 2001**
101. Map of Weather and Streamflow monitoring stations of Southern Ontario, July 2001**
102. Letter from Mr. Prefontaine, Counsel for Federal Government, clarifying evidence of witness, David Ballinger
103. Technical information of assessment of PTTW (before and after PTTW was issued)
104. Historic Data 1915-1926 for precipitation plus climate data 1938-1990 and 1951-1984
105. Flow data from Rideau River Watershed including Tay River - 2 pages - August and September, 2001
106. Bowes Road flow metering done by RVCA August 23, 2001
107. Advertisement in Ottawa Citizen Oct. 3, 2001 re OMYA application
108. Written comments made by Don Boyle at public evening session
109. C.V. of Ross Cholmondeley
110. Map of downstream wetlands for Tay River Watershed
111. The Fish Habitat Referral Process in Ontario - dated June, 2001
112. Letter from RVCA, (signed by Bruce Reid) to OMYA dated Sept. 1, 2000

113. Tay River Watershed Plan - dated March 10, 1998
114. Evolution of Tay River Watershed Plan dated July 11, 2001

115. RVCA Report 1968 - Excerpt p.162 - Gradient of Tay River Watershed

116. Technical note concerning PTTW written by Bruce Reid, October 9, 2001

- 116A. Revised Technical note of Exhibit 116

117. Environmental Bill of Rights - MOE delegation of Minister's Powers and Duties

118. Business Plan, MOE 1999-2000

119. Interrogatory #9 from Cassidys to MOE

120. Revised Draft conditions to the PTTW submitted by the MOE, dated October 17, 2001

121. Input to revised conditions to the PTTW by the Dillons, dated October 8, 2001

122. Input to revised conditions to the PTTW by Ann German dated October 10, 2001

123. PTTW 99-P-4041 for Club Link Capital Corporation, Township of Cumberland, Regional Municipality of Ottawa, dated Nov. 26, 1999

124. PTTW 00-P-4122 for Manderley Sod, North Grenville, dated Sept. 12, 2000
125. Notice of Third Party Appeal - Extract from EBR Registry regarding PTTW

126. Document outlining details of all the Permits to Take Water in the Tay River Watershed

127. Ongoing improvements to the PTTW Program, submitted by Brian Kaye, October 19, 2001

128. Community Profile 2001 by the Perth Chamber of Commerce
129. Further revised draft conditions to the PTTW submitted by the MOE dated October 22, 2001
130. Input to revised conditions to the PTTW by Cassidys

131. Calculations of Water Quantity for Phase 1 and Phase 2

132. Letter from S.G. Simmering to Brian Kaye dated July 32, 2000

133. Canadian Hydrological Data - Glen Tay Station showing the Mean Report 1915-1926

134. Water Resources Branch documentation - 4 charts of measurements of Tay River at Glen Tay

135. HYDAT - Mean report 1918-1999 for Mississippi River at Appleton

136. Time Series of Recorded Annual Flows 1919-1999 for Mississippi at Appleton

137. Worse case hypothesis: Water level drawdown on Bobs and Crow Lakes associated with OMYA water taking permit (provided by MOE)

138. Water levels of Bobs and Crow Lakes - 1961 (provided by Ann German)

139. Documentation (internet printouts) submitted by Cassidys

140. 4 illustrations drawn by Dr. E. Watt during his presentation of evidence **

141. Stream Survey Overview: 100 metre interval which included the proposed intact site on the Tay River - dated July 21, 1999 (survey done by RVCA)

142. Site Identification Form showing results of electrofishing and benthic macroinvertebrates, 1999 (survey done by RVCA)
143. 3 summaries of results of trap net catch record, dated July 26 & July 29, 1999 (survey done by RVCA)
144. Index list of threatened fish species in Ontario - prepared by OMNR, dated May 8, 2001
145. Further input for revised conditions to PTTW by the Dillons, dated October 26, 2001
146. Excerpts from application of OMYA Quarry Inc. dated April 24, 1997
147. Photographs taken by Dr. Karl Schiefer - June 7-8, 2001
148. 2 illustrations drawn by Thomas McIelwain during his presentation of evidence **
149. Selected Water Management Mathematical models - Environment Canada (4 pages) submitted by Ann German
150. Form letter addressed to "Respondent" from the University of Ottawa
151. Excerpt from web site of Atlantic Salmon Federation
152. 1999 & 2001 Walleye spawning survey of Bobs and Crow Lakes
153. Message from the Environment Commissioner of Ontario entitled "Having Regard", September, 2001
154. Summary of Dr. Watt's evidence re: Glen Tay water flows
155. 3 photos taken by Mel Fleming concerning lake trout spawning areas submitted by Ms, Cedar
156. Further revised draft conditions submitted by MOE dated October 30, 2001

- 157A. Revised draft conditions (with PTTW not phased), dated October 30, 2001 submitted by OMYA
- 157B. Revised draft conditions (with PTTW phased), dated October 30, 2001, submitted by OMYA
- 158. Written comments made by Mike Nickerson at public evening session

Appendix D

List of Witnesses

On behalf of the Director, Ministry of the Environment

Brian Kaye - Director for s. 34, Ontario Water resources Act

Stephen de Boer - Trade and International Policy Branch

David de Launay - Director, Lands and water Branch, Ministry of Natural Resources

Catherine Clarke - Manager, Environmental Bill of Rights Office, MOE

Bruce Reid - P. Eng., Water Management Co-ordinator, Rideau Valley Conservation Authority

Ross Cholmondeley - Biologist, Ministry of Natural Resources

Victor Castro - Surface Water Scientist, Water resources Unit, MOE

Brent Valere - Habitat Impact Assessment Biologist, Federal Department of Fisheries & Oceans

On Behalf of the instrument holder, OMYA (Canada) Inc.

James Bishop - Beak International

W. Edgar Watt - Civil Engineer

Thomas McElwain, Hydrogeologist, Golder Associates

Bernie Muncaster - ESG International

Karl Schiefer - Fisheries Biologist, Beak International

On Behalf of the Council of Canadians

Gordon Miller - Environmental Commissioner for Ontario

Dr. Frank Quinn - Water Policy, Environment Canada

Dr. Frank Ruddock - U.S. Transboundary Division, Foreign Affairs Canada

Christine Elwell - Law Professor, Queen's University

On Behalf of Michael and Maureen Cassidy

Nancy Doubleday - Environmental Studies Professor, Carleton University

Ken Potter - Property Owner

Lorraine Dore - Property Owner

On Behalf of Carol and Melvyn Dillon

David Taylor - Chair, Tay River Watershed

David Ballinger - Superintendent, Rideau Canal Office, Parks Canada

Sam Kingdom - Member of the Industrial Advisory Committee, Perth

Joe Slater - Civil Engineer

On behalf of Sulyn Cedar

Dr. Ted Mosquin - Environmental Biologist, retired

List of Presenters

Ken McRae

Chief Robert Lovelace
Ardoch Algonquin First Nations

Curtis Bain
Chamber of Commerce

Rod Henderson
Rideau Pipe and Drilling Supplies

Daniel Roberts
R.W. Tomlinson

Cindy Keon
Glen Tay Transportation

Orion Clark

Bill Johnson

Art Bowes

Ed Harorysh

Wilburt Crain

Barbara Mossop

Dr. Cameron MacLeod

Mark Fielding

Phil Petch

Bryce Bell

Margo Bell

John Fanning

Mike Nickerson

William Perkins

Don Boyle

George Greene

Terry Stewart

Susan Brown

William Nelson

John Smith

Judith Fox Lee

Paul Smith

Betty-Anne Davis
Midwives Mothers Watching Globally

Tay River Watershed



