

**A CRITICAL EVALUATION
OF
ONTARIO'S ENVIRONMENTAL ASSESSMENT
APPROVAL PROCESS**

BY

PIERO CARMINE AMODEO

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ABSTRACT

This paper is a critical evaluation of the Environmental Assessment Approval Process in Ontario. More specifically, this paper identifies the issues and overall trends emerging from three waste management undertakings that have been subject to Joint Board Hearings, under the Environmental Assessment (EA) Act.

With respect to the Government Review and Joint Board Decision in the approval process, it was recognized that the identification of issues were consistent between the two documents. The only exception was the issue of hydrogeology which received much more attention by the Boards compared to the Reviews. This also suggests that hydrogeological suitability of a landfill site is a necessary, but insufficient, condition in order to obtain EA approval.

Over the three recent waste management undertakings, subject to the Joint Board, under the EA Act, site selection and public consultation issues were predominant. The site selection issue defies traceability and replicability in the proponent's planning process. Meanwhile, the public was too little, too late, and insufficient by Pre-Submission Consultation Guidelines of the Ministry of the Environment.

In retrospect, two of the three waste management undertakings were denied approval by the Joint Board, implying that the Government Review did not apply enough judgement and guidance to resolve inconsistencies found in the EA.

The result of numerous inconsistencies in relation to evaluation criteria, in all three cases, strongly suggests that the proper choice and use of an evaluation methodology is critical in identifying the suitable site among alternatives.

The most troubling concern identified in this study is that a "tremendous expenditure of time, money and human resources" can be involved in gaining approvals for a landfill in Ontario today.

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INTRODUCTION

In recent years, as we have learned more about the consequences of environmental abuse, it has become clear that wise environmental planning is essential to our survival and to the health of the environment on which we all depend.

Proposals for developments that affect the environment tend to create controversy. Industry, government, conservationists and private citizens often have widely differing priorities. More recently, careful environmental planning and public consultation have become a necessity in order to address increased regulatory requirements and focused public awareness that have placed a growing number of waste management proposals under intense scrutiny.

The Environmental Assessment Act has continuously evolved in answer to these needs, especially as it pertains to waste management Planning. The Act is intended to promote good environmental planning and ensure that the public has the opportunity to comment on projects which may affect them. All aspects of the environment are considered in the Environment Assessment Act planning process: natural, social, cultural, economic and technical. As a result, the Government of Canada's "Green Plan" concept of sustainable development blended with environmental assessment for large and small scale projects is becoming the norm (Ministry of the Environment [MOE], Fall 1990).

The purpose of this research is to critically evaluate the Environmental Assessment Approval Process, in Ontario. More specifically the paper will identify the issues and overall trends emerging from the first three waste management undertakings that have been subject to Joint Board Hearings, under the Environmental Assessment Act.

Under the Environmental Assessment Act, the "Approval Process" begins with the receipt of an environmental assessment describing the project in detail where the Minister arranges for a review of the submission to be prepared. The review is coordinated by the Environmental Assessment Branch of the Ministry of the Environment. The review

document will indicate the significance of any strengths or weaknesses identified; and if the weaknesses are significant, to indicate what changes and/or research is required to obtain a satisfactory EA document. Once the EA document is accepted as a basis for making a decision on the undertaking, the actual decision on approval as in the cases presented in this paper is made by the Environmental Assessment Board (EAB), an independent decision-making body appointed by the Cabinet. The EAB's reasons for a decision and decision document are also available. Chapter three will describe the Approval process more extensively.

Review and decision documents will be retrieved for each case. The three recent Ontario waste management cases include: the Regional Municipality of Halton Landfill Component of Halton's Solid Waste Management System, the North Simcoe Waste Management Association Waste Management Program, and the Establishment, Operation and Closure of a Landfilling Site in The Township of St. Vincent.

Therefore, a total of six documents exist. Furthermore, in addition to the review and decision documents, Joint Board Issues Analysis documents are available (i.e., as supplementary sources) for the Halton and North Simcoe decisions. The St. Vincent Joint Board Issues Analysis has not yet been completed. These documents interpret and analyze the major issues brought up in the decision document. It should also be noted that these Issues Analysis documents are not mandatory by the EA Branch.

In order to identify the issues and recent trends emerging from the waste management undertakings that have been subject to Joint Board Hearings, under the Environmental Assessment Act, the qualitative nature of the methodology ensures that a thorough issues analysis is conducted. Further details regarding the research methodology and analysis is described later in Chapter 4 of this paper.

The results of this research paper will be useful in demonstrating the importance of the Environmental Assessment Act as a vital planning tool, in Ontario. The paper may also provide useful guidance for EA's and waste management master plans now underway that are inevitably approaching the approvals process. Furthermore, this paper can set a

precedent in guiding and shaping the subsequently evolution of the administration and practice of solid waste management planning and Ontario's EA program. Ideally this research is only the beginning of future studies concerning the Environmental Assessment Act and Waste Management Planning, as the need for successful environmental planning, in Ontario, grows.

The following chapter is a brief literature review that identifies and briefly describes the recurring and persistent concerns in which academics feel underlie assessments of the Canadian EIA process. Chapter 2 contains a description of the Environmental Assessment Act as it applies to waste management planning, in Ontario. Chapter three describes the EnvironmentalAssessment Approval Process in detail. The fourth chapter explains the methodology used in analyzing the data obtained from the documents. This section also discusses the results from the analysis. The final chapter of the paper contains a discussion of conclusions and recommendations.

CHAPTER 1: LITERATURE REVIEW

Environmental Impact Assessment (EIA) in Canada has been the subject of considerable criticism from a wide range of actor groups virtually since the inception of the first EIA processes in the early 1970's. The Canadian government tends to use the term environmental assessment to refer to the generic process of EIA. Consequently, the term will be treated in this paper as synonymous with EIA. Industry has traditionally argued that EIA has become too wide-ranging an exercise and that as a result it has become overly expensive in terms of both time and money (Horte 1983; MacDonald 1984; Page 1986). Academics have identified range of procedural and theoretical deficiencies in Canadian EIA (MacLaren and Whitney 1985; Fenge and Smith 1986; Smith 1987; Storey 1987). Government agencies, depending on their departmental or jurisdictional mandates, have criticized EIA from almost every perspective imaginable (Environment Canada 1982; MacDonald 1984; FEARO 1987). As a result, there tends to be recurring and persistent concerns that underlie assessments of the Canadian EIA process. In the remainder of this literature review, many concerns about the Canadian EIA process will be identified and briefly described by an array of different experts.

In the context of EIA, post-development auditing is a procedure through which the performance of individual environmental assessments is evaluated after the assessed project has begun operation. The evaluation involves a determination of the accuracy of the predictions and assumptions made during the assessment. To date, post-development auditing has not been an entire component of most EIA processes (Duinker 1985; Rigby 1985; Smith 1987; Storey 1987).

The effects of several projects or several components of large projects can have cumulative impacts on an environment. In addition, the ongoing impacts of a project operating over a period of time may have cumulative impacts not apparent at the design and early implementation stage. Current understanding of cumulative impacts and methodologies for considering them in EIA reviews, are not well developed (Rigby 1985; Marsollier 1987).

Scoping, in the context of EIA, is a process which has two primary functions. First, it involves the setting of review boundaries. Issues which are inside, and outside, the scope of the review are identified. Second, it involves defining issues and prioritizing them for assessment purposes. Various authors have suggested that scoping should be recognized as a formal EIA process component and that a hard technique for conducting scoping exercises should be developed (Marshall *et al.* 1985; Fenge and Smith 1986).

Effective EIA depends fundamentally on high quality ecological information. Yet several authors such as Rees (1984) and Marshall *et al.* (1985) have questioned the soundness of the science in EIA. They have argued that the scientific testimony presented in Canadian EIA's is generally not of sufficiently high quality, and that steps must be taken to improve the ecological information sets upon which EIA's are based. Further, it has been suggested that efforts must be made to train researchers in the development of scientific information and in its relevance and use in EIA.

Legal standing of EIA refers to the position of EIA processes in the eyes of the law. Some processes have the force of law while others have been assigned a purely advisory role with no legal force. This situation is cause for concern as some processes may be too legalistic and formal to allow for adequate discussion and public input. Alternatively, a process which does not have any legal standing may become ineffective and lacking credibility as a result (Rees 1984; Fenge and Smith 1986).

All EIA reviews involve the analysis of information relating to the proposed project and its potential environmental and social implications. This information originates with different actors and agencies, for example, industry, government and academia. Some review participants, for a variety of reasons, may not have access to such information. Their ability to prepare position papers and to effectively participate in the review process maybe limited as a result (Lang 1979; Environment Canada 1982; Rees 1984).

A fundamental objective of EIA is to ensure that environmental aspects of a given project are considered early on in the project planning process. In order for this objective to be realized, EIA must be carried out before final decisions on project design and construction schedules are made. In addition, assessments must be completed in a reasonable length of time in order to ensure that the developmental, economic, social and technological climates for the project have not changed so much during the assessment period as to make the assessment dated or irrelevant. However, it is commonly suggested that EIA generally does not take place early enough in the project planning process and that when public reviews take place, they take far too long to complete (Lang 1979; Fenge and Smith 1986; Duinker 1985).

In the early years of EIA, project reviews focused almost exclusively on the ecological and biophysical impacts of the projects being considered. However, over time, increasing emphasis has been placed on the socioeconomic impacts of development as well. Today, the appropriate scope of socioeconomic impacts which should be considered in a review, and the appropriate means for doing so, is the subject of considerable debate (Rees 1979; Fenge and Smith 1986; Storey 1987).

Some view the current EIA infrastructure as being too large and costly. Alternatively, it could be argued that insufficient funding of the EIA infrastructure in the past has prevented effective EIA (Swerdfager 1988). Process maintenance costs are associated with the development and support of the infrastructure necessary to direct EIA. This infrastructure includes such components as EIA administrative networks (for example, the Federal Environmental Assessment Review Office or FEARO), EIA related research institutions (for example, the Canadian Environmental Assessment Research Council or CEARC), public information programs (for example, FEARO publishing programs), and EIA policy development and review mechanisms.

Many authors feel that process implementation costs are far too high, while others have suggested that not enough time and money is spent on EIA implementation (Horte 1983; Page 1986). Process implementation costs are associated with the carrying out of individual project reviews. These costs include the expenses incurred in the preparation

of an Environmental Assessment Document, operation of review panels, the provision of intervener funding, the preparation of project related research papers and so on.

The concerns mentioned above are not unique to the early nineties but in fact they have been present since the early seventies. Unfortunately, little change has taken place to date. It seems that EIA reform has clearly not been a federal and provincial government priority. Perhaps in recognition of the magnitude of these problems, full-scale reviews of EIA mechanisms have just recently been undertaken by the governments of Canada and Ontario. For example, the Ontario government has begun an Environment Assessment Program Improvement Project (EAPIP). These are encouraging signs and the federal and provincial governments are to be commended for their initiatives.

It is important to note that the environmental planning literature was gathered from a collection of multidisciplinary opinions from the natural and social sciences and professional schools of engineering and law. The data base was common in most of the literature where samples of environmental impact assessments were analyzed. Correspondence and personal communications with officials which were used also to further supplement and clarify data. The findings presented in this literature review are intended as preliminary and probably represent the first interaction of a broader research focus on the status of EIA practice in Canada. The objective of this research paper will be to further validate and expand upon the initial findings discussed here.

CHAPTER 2: THE ONTARIO ENVIRONMENTAL ASSESSMENT ACT AND ITS IMPLICATIONS FOR WASTE MANAGEMENT-

2.1 Environmental Assessment Act

There are presently two main pieces of Provincial Legislation which govern environmental approvals for waste management in Ontario. They are the Environmental Assessment Act (EAA) and the Environmental Protection Act (EPA). The Environmental Assessment Act was passed in 1975, made applicable to government ministries and agencies in 1976, and to municipalities in 1980. The EAA is intended to provide for "the protection, conservation and wise management of the environment" through sound planning and informed decision-making (MOE, July 1990). The Act specifies an approval process which must be completed before other approvals or government financing are granted.

The Environmental Assessment Act applies to undertakings by the Government, its agencies and municipalities. While certain public undertakings are exempt because their total cost falls below an established limit, most public projects having possible environmental implications are subject to the EAA.

In other words, the Environmental Assessment Act applies to an "undertaking" which is defined to mean "an enterprise or activity, or a proposal, plan or program in respect of an enterprise or activity (MOE, July 1990)." Thus, it can be seen that plans or programs that would result in enterprises or activities by a municipality could themselves receive approval under this Act. For example, a Waste Management Master Plan that would result in particular activities by a municipality such as the establishment of a landfill site, could be submitted for approval as an undertaking(s).

A proponent is defined as a person who carries, or proposes to carry, out an undertaking. The proponent is forbidden from proceeding with an undertaking that is subject to the EA Act unless an environmental assessment of the undertaking has been submitted to the Minister of the Environment, the assessment has been accepted by the Minister and approval to proceed with the undertaking has been granted.

For the purpose of this Act, "environment" includes not only the natural environment, but "the social, economic and cultural conditions that influence the life of people or a community."

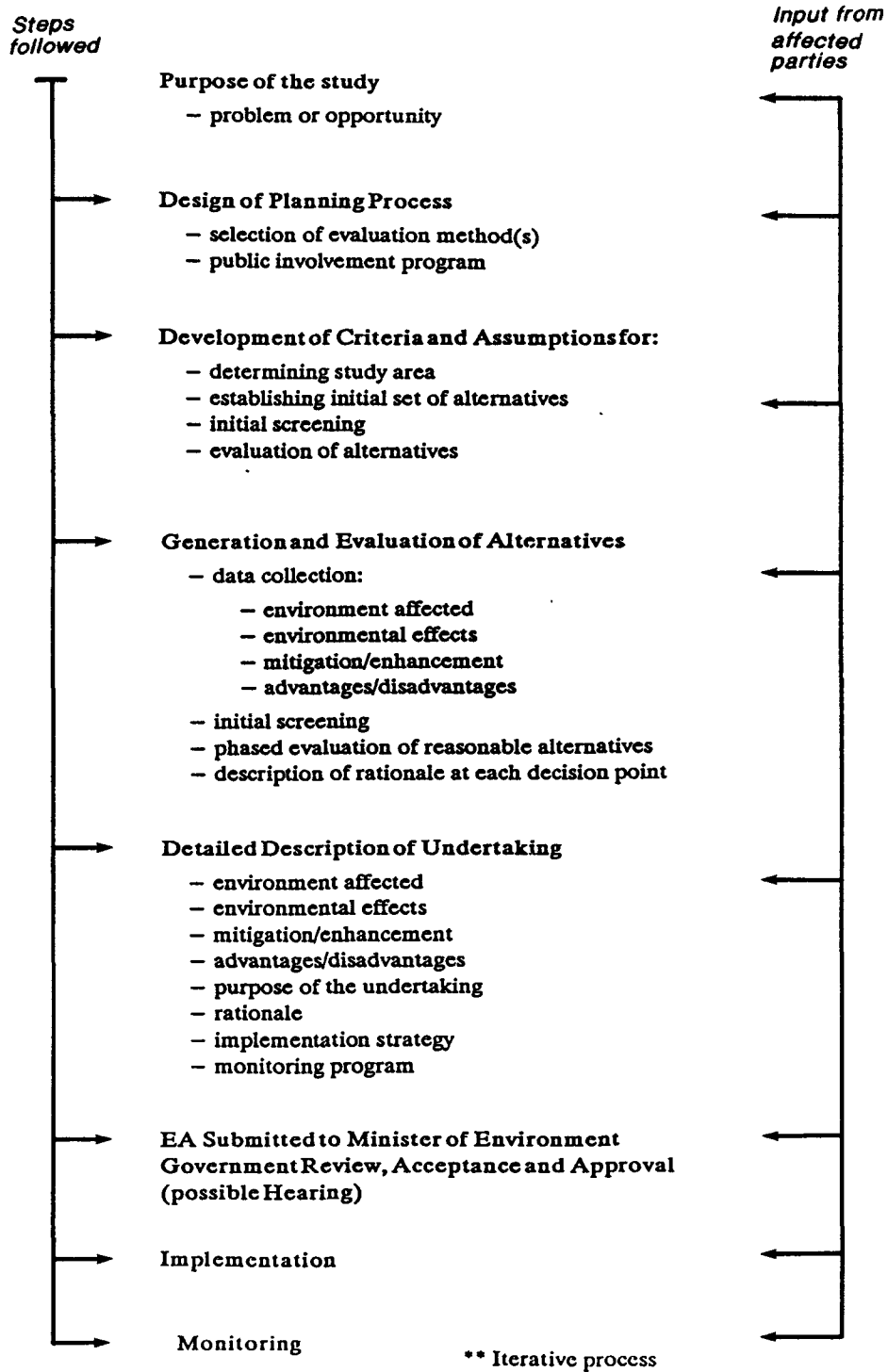
The Environmental Assessment Act requires that, early in the planning process, proponents of undertakings must conduct a study to determine the likely environmental effects of the proposed alternatives and the undertaking (see Figure 1). Reasonable alternatives must be considered, and there must be opportunities for the public to provide input and to comment on the alternatives and the proposed undertaking, including whether or not the undertaking should proceed.

At the present time the Act does not apply to most private projects. Private Energy From Waste (EFW) projects and incineration facilities handling 100 tonnes or more of waste per day were made subject to the Act in March, 1987 (MOE, July 1990). This is the first application of the Act to a major class of private sector undertakings. The Act can apply to other private sector activities either upon the request of that private industry or if the Provincial Cabinet decides that it is expedient to have the Act apply to that private industry. This is done by passing a regulation which designates that activity or facility as an undertaking subject to the EA Act.

2.2 Relation of the Environmental Protection Act (EPA) to Waste Management

The Environmental Protection Act applies to both public and private proponents. It focuses attention on the proposal (project type and site) and does not deal specifically with the planning process leading up to the proposal. The planning element is the essential difference between the Environmental Assessment Act and the Environmental Protection Act. At the same time, existing environmental standards must be upheld, under both acts.

FIGURE 1: THE EA PLANNING FRAMEWORK



In 1980, the EAA was applied to municipal projects, including waste projects. Prior to this, approval for waste facilities was required under the EPA. A site-specific application for a waste disposal site would be directed to the Ministry of the Environment and an EPA public hearing held. The Hearing Board would make a recommendation to the Ministry of the Environment.

The Ministry would have the final decision on whether or not a Certificate of Approval would be issued and, if so, what terms and conditions ought to apply. The EPA hearing generally dealt with the basic safety, environmental and health aspects of the single proposed site and would not normally deal with alternatives. EPA approval is still required, after EAA approval, before an operation or project can begin.

On the contrary, the Environmental Assessment Act requires that proponents of a facility, such as a landfill, consider "alternatives to the undertaking" (systems, technologies and processes), as well as "alternative methods of carrying out the undertaking" (alternative locations (sites) and/or methods of design/operation for the proposed landfill) (MOE, 1989). The assessment of alternatives must consider potential impairment of the natural environment as well as possible effects on the social, technical, economic and cultural environments that may be affected. A more detailed description of the components of an environmental assessment is found in the following sub section.

2.3 Requirements of an Environmental Assessment

The Environmental Assessment Act specifies the content of an environmental assessment document. Subsection 5 (3) of the Act applies to waste management undertakings and states that:

"An environmental assessment submitted to the Minister... shall consist of,

- (a) a description of the purpose of the undertaking;
- (b) a description of and a statement of the rationale for,
 - i) the undertaking,

- ii) the alternative methods of carrying out the undertaking, and
 - iii) the alternatives to the undertaking:
- (c) a description of,
- i) the environment that will be affected or that might reasonably be expected to be affected, directly or indirectly
 - ii) the effects that will be caused or that might reasonably be expected to be caused to the environment, and the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon, or the effects that might reasonably be expected upon the environment,
- by the undertaking, the alternative methods of carrying out the undertaking, and the alternatives to the undertaking; and
- (d) an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking.

The MOE Policy entitled "Environmental Assessment of Planning and Approvals," in a rather misleading or simplistic fashion, names "five features which are key to successful planning under the EA Act." These features are the basis and rationale for selecting site selection, public consultation and hydrogeology issues as this study's focus. The five features are described as follows:

1) Consult with Affected Parties

The planning process should be a cooperative venture with affected parties. Accordingly, early consultation with affected parties is essential.

The proponent should seek to involve all affected parties (government agencies and other organizations, groups or individuals) as early as possible so that their concerns can be identified and addressed before irreversible decisions and commitments are made on the chosen approach or specific proposals. In fact there are ample opportunities for public participation throughout the environmental assessment process as this paper eventually addresses the issue (see Appendix A). To achieve this, the planning process must be constructed around the involvement and ongoing contribution of affected parties. This approach has a number of benefits which include (MOE, July 1990):

- improving the understanding of environmental concerns before the undertaking is selected and focusing the proponent's planning on matters of concern
- encouraging the identification and resolution of issues, to the extent possible, before an EA is formally submitted which may reduce the time involved in the formal approvals process
- promoting mutually acceptable, environmentally sound solutions by developing positive relationships among those involved in consultation.

It is important that the proponent attempt to address all concerns raised and show how and where these concerns were addressed.

2) Consider Reasonable Alternatives

A reasonable range of alternatives must be considered. First the planning must consider 'alternatives to' the undertaking, which fulfill the purpose in functionally different ways. Secondly, the planning must also consider 'alternative methods' of implementing a particular type of alternative. Consequently, alternative methods will be synonymous with "site selection" in this study. The 'do nothing' alternative should also be considered.

3) Consider All Aspects of the Environment

Identify and consider the effects of each alternative on all aspects of the environment.

The planning process must consider not only effects on the natural or biophysical environment but also effects on "the social, technical, economic and cultural conditions that influence the life of man or a community" and their interrelationships (MOE, July 1990). Hydrogeological suitability is an example of a technical issue that this paper intends to address (see Appendix B).

4) Systematically Evaluate Net Environmental Effects

Explicitly evaluate alternatives in light of their advantages and disadvantages developed through a net environmental effects analysis. This fourth feature is included in and also considered a site selection issue.

The planning process must include distinct points where alternatives are evaluated and the net environmental effects (effects remaining after mitigation or enhancement measures have been addressed) associated with each alternative are clearly identified.

Decision making should be phased, narrowing progressively to a preferred alternative. This results in a process where alternatives may be eliminated from consideration at different points in planning. Decisions on what type or combination of alternatives are preferred are generally made earlier in the planning process and more detailed decisions on how to implement the preferred alternatives made later (see Appendix C).

The process must recognize the dynamic nature of environmental decision making. In particular, it must be sensitive to changing conditions and new information and flexible enough to deal with them. This approach, if carried out effectively, results in identifying a preferred alternative which has a thorough and rational justification for environmental approval.

5) Provide Clear Complete Documentation

The EA should strive both to represent accurately the process that was followed in a clear and understandable way and to communicate the results of that process.

The study approach, the planning process followed and the way in which the principles of environmental assessment were addressed should be clearly explained in the EA document. Clarity and simplicity are objectives as well as completeness and precision. The "decision making" process needs to be clearly outlined to explain each decision point during the study and "how" and "why" each decision was made. This can be termed "traceability." It can apply to the site selection process and the overall planning process.

2.4 Pre-Submission Consultation (PSC)

The process that prepares the EA for submission is known as Pre-Submission Consultation (PSC). "Guidelines on Pre-Submission Consultation in the EA Process" (1987) has been published by the Ministry. These Guidelines urge proponents to consult with Government reviewers and other potentially concerned parties in the planning and discussions that precede the formal submission of an environmental assessment under the Act. It is the proponent's responsibility to adopt a planning process that allows and encourages the effective involvement of affected parties. There are certain rules that should be observed by such a planning process. In general, presubmission consultation should identify, inform, and involve all parties that may be affected by a study to address a particular problem or opportunity. The Guidelines of Pre-submission Consultation brings a range of benefits (see Appendix D). Once PSC is completed, the EA document is subject to the EA Act's "Approval Process."

CHAPTER 3: THE APPROVAL PROCESS

3.1 Review Process

On receipt of an environmental assessment submission, the Minister arranges for a review of it to be prepared. The review is coordinated by the Environmental Assessment Branch of the Ministry of the Environment. The participants usually include reviewers in provincial ministries and agencies and selected federal departments and agencies. In specific cases, the Ministry may retain outside experts to assist in the Review (see Appendix E).

The purpose of the review is:

- in general, to provide a broad evaluation of strengths and weaknesses;
- in particular, to determine the extent to which the requirements set out in subsection 5(3) of the EA Act are met.

Sub-section 5(3) requirements have been stated in Chapter 2 of this document.

Two criteria are used by the Environmental Assessment Branch to judge the extent to which an EA meets the Act's requirements:

- 1) Are all required components of the EA Act present?
- 2) Is the technical quality and level of detail of the information satisfactory and was an appropriate range of alternatives considered?

The Environmental Assessment Branch evaluates whether the first criterion has been satisfied. Those ministries and agencies participating in the Review are called Reviewers. Reviewers are specifically asked to consider how well the EA meets the second criterion, within their areas of concern.

Reviewers also advise whether they are satisfied with the weight given to their agencies' policy interests in the proponent's evaluation and selection process.

Where reviewers find significant deficiencies, they may advise on changes to the EA or on further research.

The Environmental Assessment Branch evaluates and consolidates the comments of the various reviewers. This is referred to as the "Review" and is released for comment to the public, municipalities, government ministries and agencies and the proponent before a decision on acceptability of the EA is made.

To do this, the Minister notifies the proponent, any municipalities likely to be affected by the undertaking, and the public that the environmental assessment and the Review are available for inspection. During a minimum 30-day period, anyone may submit written comments on the matter to the Minister of the Environment and may request the Minister to hold a public hearing.

3.2 Decision Process

Two decisions regarding a proposed undertaking are made after the Review of the EA has been published and the minimum 30 day public review period has ended.

The EA Act sets out two basic decision points:

- whether to accept the environmental assessment as a basis for making a decision on the undertaking;
- whether to approve the undertaking.

The decision on acceptance is made by the Minister of the Environment or, if requested by the Minister, by a hearing board. The decision on approval is made by the Minister, together with Cabinet unless the matter is referred to a hearing board (see Appendix F).

The Minister's decision is communicated to the proponent and affected parties.

The proponent or any affected party may, with reasons given, request the Minister to hold a public hearing on the acceptability of the environmental assessment. The Minister is required to do so, in the words of the EA Act, unless in his absolute discretion he considers that the requirement is "trivial or that a hearing is unnecessary or may cause undue delay."

Thus the presentation of reasons and information for or against the acceptability of the EA by affected parties or against further work on it by the proponent are important factors for the Minister to consider.

3.3 Approval of the Undertaking

When an environmental assessment is determined to be acceptable, either as submitted or as amended, a decision is made on whether the undertaking should be approved.

If a hearing board has ruled on acceptability, the same board normally decides whether to approve the undertaking.

If the Minister has determined that the EA is acceptable either as submitted or as amended, the Minister can choose either to make the approval decision or refer the decision on approval to a hearing.

The decision on approval itself, whether made and reported by the Minister or by a hearing board, will have one of three results:

- giving approval to proceed with the undertaking;
- refusing approval to proceed;
- giving approval to proceed with certain conditions.

In the last case the decision will specify the requirements being imposed on the proponent. As outlined in clause 14(1)(b) (see Appendix G) of the Act, the conditions might include such things as methods of implementation, particular mitigative measures,

further research and monitoring programs, and allowed periods of construction and operation.

If made by the Minister together with Cabinet, the decision on approval is final. If made by a hearing board under the Environmental Assessment Act, the decision is final only if the Minister does not intervene within 28 days. During that interval following a board decision, the Minister may, with Cabinet approval, modify the decision in any way, reverse it, substitute a different decision, or instruct the board to reconsider its decision or even order a new hearing to be held.

If the hearing was held by a Joint Board under the Consolidated Hearings Act, 1981 any person entitled to be heard at or to take part in the hearing may appeal the decision to Cabinet within 28 days. Cabinet may modify the decision in any way, reverse it, substitute a different decision or order a new hearing to be held on all or any part of the proposal (MOE, 1989).

3.4 Board Hearings

A public hearing on an environmental assessment called by the Minister of the Environment is usually held before the Environmental Assessment Board. But in cases where approval of the undertaking under the EA Act would lead to further hearings by other tribunals under other acts, the proponent can request a consolidated hearing by a Joint Board under the Consolidated Hearings Act, 1981 and so avoid the cost and delay of multiple hearings (see Appendix H).

The decision of one Board does not bind, through precedent, subsequent Boards in similar matters. On the other hand, analyzing Board decisions is important because they are a potentially powerful tool for their persuasive value in guiding and shaping solid waste management planning and Ontario's EA program. It is also reasonable to assume that the decision of one Board, particularly in important cases such as these, will have a certain amount of influence on and carry a certain amount of weight with other members of the Board in future hearings.

CHAPTER 4: CASE STUDIES AND ANALYSIS OF APPROVAL PROCESS

4.1 Methodology

In order to critically evaluate the Environmental Assessment Approval Process, in Ontario, and more specifically identify the concerns and overall trends emerging from three recent waste management undertakings that have been subject to Joint Board Hearings, under the Environmental Assessment Act, the following methodology will be implemented.

The review and decision documents were obtained respectively from the Ministry of the Environment's Environmental Assessment Branch and the Environmental Assessment Board's Office for each of the three recent waste management cases. Additional Joint Board Issues Analyses for the Halton and North Simcoe decisions were also available at the Environmental Assessment Branch.

As discussed in section 2.3, the Environmental Assessment Branch recognizes five key features to successful environmental planning which include issues pertaining to site selection, public participation and hydrogeology. Specific concerns regarding these issues were identified in the review and decision documents, defined into specific categories, and then aggregated into tables. In other words, each table pertaining to a particular issue, includes the concerns identified in the review and decision documents for Halton, North Simcoe and Meaford–St. Vincent. There are six tables altogether.

The methodology in order to analyze these tables is two–fold. The analysis first begins by simply identifying the specific concerns highlighted by the review and decision, for each particular issue and case. This allows for the review and decision concerns to be compared.

The second part of the methodology is a three–way comparative analysis. Focusing on a particular issue, the three cases are compared with one another, in order to identify trends and those that are emerging. At the same time, those concerns that do not fall under one of the two categories identified will also be worth mentioning. The three–

way analysis will include both the review and the decision, as in the first part of this analysis.

4.2 Background of the 3 Cases

This section is intended to give a brief background for each of the three recent waste management undertakings that have been selected for this particular study.

1) Halton

The Regional Municipality of Halton, which was created in 1974, has the responsibility to provide solid waste management facilities for its area municipalities: the City of Burlington, the Town of Oakville, the Town of Halton Hills, and the Town of Milton. The Region has been attempting to site a landfill for this purpose during the 15 years since 1974.

After one negative Government Review in February 1986 the Region submitted further information and received a positive conclusion on the Supplementary Review in April 1987, the review which is used for this paper. This case is important because it is the first major regional waste management undertaking to be heard under the EA Act, before a Joint Board. The Joint Board Hearing began on May 5, 1987 and concluded on November 8, 1988. In all, the hearing involved 194 days of evidence and argument, almost fifty thousand pages of transcript and about one thousand exhibits. The Joint Board Decision which was released on February 24, 1989, approved a site, known as "Site D" with conditions.

2) North Simcoe

The North Simcoe Waste Management Association (NSWMA) is comprised of five municipalities which include: the Town of Midland, the Town of Penetanguishene, the Township of Tiny, and the Villages of Port McNicoll and Victoria Harbour. Starting in 1979, there was a growing perception that a new site should be found to anticipate the time when the existing Pauze Site would reach capacity in 1988. A landfill component of the proposed overall waste management system would be the undertaking for which approval would be

sought. The Joint Board hearing on the application by the NSWMA to construct and operate a new landfill in Tiny Township began on March 7th, 1989 and ended on September 21st, 1989, after a total of 66 hearing days. The Board issued its Reasons for Decision and Decision on the application on November 17th, 1989 and explained why the application was denied approval.

(3) Meaford–St. Vincent

The Corporation of the Township of St. Vincent and the Town of Meaford have submitted an undertaking for approval under the Environmental Assessment Act which consists of the establishment and operation of a landfill site for a minimum period of 20 years. This is an application to a Joint Board under the Consolidated Hearings Act, 1981 for approval of a municipal landfill.

The hearing began on May 16, 1989 and concluded on July 24 1990, lasting 104 days. The hearing was divided into phases according to the following subjects: the environmental assessment, hydrogeology, design and operations, economic impacts (municipal affordability and impacts of the proposal on property values), agricultural impacts, land use planning and visual impacts. The Joint Board Decision which was released on December 13, 1990 denied approval of the undertaking.

4.3 Individual Case Analyses: Site Selection

Table 4.1 and Table 4.2 list the concerns identified by the Government Review and the Joint Board Decision, respectively, in relation to the "site selection" issue.

4.3.1 Halton

The review identifies 15 out of a possible 25 concerns collected, in Table 4.1 for Halton. The decision, on the other hand, identifies 8 out of a possible 19 concerns compiled in Table 4.2. Table 4.1 and Table 4.2 show that both the review and the decision are concerned with the quality of traceability and replicability in Halton's overall site selection process. Traceability is taken to mean the ability to follow through, in a logical and systematic manner, the path chosen by the proponent in arriving at a site.

Table 4.1: Site Selection – Review's Concerns

Identified Concerns	Halton	North Simcoe	Meaford– St. Vincent
1. difficult to trace proponent's planning process	X	X	X
2. difficult to replicate proponent's decision-making	X	X	X
3. lack of clarity describing evaluation criteria			X
4. lack of clarity ranking evaluation criteria		X	X
5. lack of clarity establishing evaluation criteria			X
6. lack of clarity weighing evaluation criteria		X	X
7. inconsistent evaluation treatment		X	X
8. seriously flawed evaluation methodology	X	X	
9. inconsistent application of criteria		X	X
10. lack of site specific criteria			X
11. no comparison of natural vs. engineered site			X
12. inadequate level of information of alternatives	X		X
13. unclear evaluation of advtges. and disadvts.			X
14. mitigation measures inconsistently applied	X		X
15. potential social effects absent for preferred site	X		
16. previous technical input disregarded		X	X
17. criteria not fully defined and developed	X	X	X
18. insufficient information for mitigation efforts	X		X
19. site specific mitigation measures preferred	X		
20. net effects analysis incorrectly utilized	X		
21. difficult to read EA	X		
22. mitigation measures dismissed too early	X		
23. ranking favours inherent capabilities vs engineered	X		
24. final ranking dependent on efficiency of design	X		
25. subjective ranking is inappropriate	X		

Table 4.2: Site Selection – Board's Concerns

Identified Concerns	Halton	North Simcoe	Meaford– St.Vincent
1. difficult to trace proponent's planning process	X	X	X
2. difficult to replicate proponent's decision-making	X	X	X
3. inconsistent evaluation treatment in screening	X	X	X
4. inconsistency within specific evaluation categories	X		
5. inconsistent application of criteria	X	X	X
6. inconsistency in hydrogeology assessment	X		
7. ranking dependent on efficiency of design	X		
8. inconsistency in risk assessment comparison	X		X
9. waste quantities exaggerated			X
10. seriously flawed evaluation methodology		X	X
11. lack of clarity ranking evaluation criteria			X
12. lack of clarity weighing the evaluation criteria			X
13. lack of clarity describing evaluation criteria			X
14. late comparative evaluation of preferred vs. alternatives			X
15. mitigation of disadvantages of alternatives never explored			X
16. evaluation criteria inconsistently used			X
17. not interested in re-visiting decisions (iteration)			X
18. criteria not fully defined and developed			X
19. no list of sites compiled from exclusionary criteria			X

That element is weak in Halton. Replicability is taken to mean that a different person could reasonably come to the same conclusion as the proponent if the person were to duplicate the planning approach which was taken. In other words, it could be said that replicability is dependent on traceability. There are many specific examples in the review and decision that defy traceability and replicability. For instance, some examples in the review include: seriously flawed evaluation methodology, inadequate levels of information of alternatives make equal comparisons, inconsistently applied mitigation measures, criteria not fully defined and developed, as shown in Table 4.1. On the other hand, the Board highlights the absence of traceability and replicability with different examples. The board mentions the concerns of: inconsistent evaluation treatment in screening, inconsistent application of criteria, inconsistency in the hydrogeologic assessment, and several other examples that are listed in Table 4.2. The review and the decision share one specific example, that is, the dependency on the efficiency of proposed conceptual site designs used during the evaluation of alternative sites. But just because many of the examples are not shared by the review and decision, it does not mean they share the same overall concerns of traceability and replicability, in the site selection process.

4.3.2 North Simcoe

The review identifies 9 out of the 25 concerns possible, in Table 4.1. The decision identifies 5 concerns out of a possible 19 aggregated, in Table 4.2.

Both the review and the decision identify the concerns of traceability and replicability similar to the case of Halton. As in Halton's case, there are many specific concerns that exemplify these process related problems of replicability and traceability. For instance, some of the review's concerns include: lack of clarity in ranking of the evaluation criteria, lack of clarity in the weighing of evaluation criteria and inconsistent application of criteria, as shown in Table 4.1. There are also several other specific examples also indicated in Table 4.1. At the same time, the Board addresses the same particular type of concerns as the review. In other words, Table 4.2 indicates that the Board addressed the same difficulties of replicability and traceability with the site selection process as the review.

4.3.3 Meaford–St. Vincent

The review identifies 16 out of the 25 concerns listed in Table 4.1. The decision identifies 16 out of the 19 possible concerns in Table 4.2. Again, as in the cases of Halton and North Simcoe, traceability and replicability seem to be the main concerns identified in the Meaford–St. Vincent case. There are numerous concerns commonly identified in both the review and the decision. Inconsistent evaluation treatment, lack of clarity in the ranking and weighing of evaluation criteria, and criteria not fully defined and developed are some examples of concerns as shown in Table 4.1 and Table 4.2.

Similar to the previous two cases, the Joint Board has generally identified the same specific concerns underlying the overall site selection process concerns of traceability and replicability, as has the Government Review. Again, traceability is a process that is easy to follow and understand while replicability is taken that a different person could reasonably have come to the same conclusion as the proponent.

4.4 Individual Case Analyses: Public Consultation

Table 4.3 and Table 4.4 are lists of all the "public consultation" concerns that have been identified in each of the three cases, respectively, by the Government Review and the Joint Board Decision.

4.4.1 Halton

The review identifies 4 of the 6 possible concerns related to public consultation in Halton's overall planning process as indicated in Table 4.3. The Joint Board identifies 5 out of the potential 7 concerns, in Table 4.4.

Both the review and the decision are concerned with insufficient public participation involvement throughout the proponent's overall planning process. More specifically, the review is concerned with the absence of a public advisory body, the public's concern with the consideration of compensation and that the public concerns are not always being addressed. These concerns identified in the review are products of insufficient public participation efforts by the proponent.

Table 4.3: Public Consultation – Review’s Concerns

Identified Concerns	Halton	North Simcoe	Meaford– St.Vincent
1. insufficient public involvement in decision–making	X		X
2. public advisory body absent in process	X		
3. public concern for consideration of compensation	X		
4. public concern not always addressed	X	X	X
5. proactive approach to PSC is absent		X	X
6. little to promote problem resolution and mediation			X

Table 4.4: Public Consultation – Board’s Concerns

Identified Concerns	Halton	North Simcoe	Meaford– St.Vincent
1. insufficient public participation	X	X	X
2. public perception of bias in the decion–making	X		
3. unclear consultation by proponents	X		
4. lack of self–education on issues	X		
5. public concerns not always addressed	X		
6. public involvement was too late		X	
7. PSC Guidelines not followed			X

The Joint Board identified five different concerns relating to the public participation issue that was not covered in the review, in Table 4.4. These concerns include: the public's perception of bias in the proponent's decision-making process, unclear consultation by the proponent, lack of the public's self-education, public involvement too late in the process and the Pre-Submission Consultation (PSC) Guidelines were inadequately followed.

Both the review and the decision documents indicate that there is a lack of public concerns being addressed by the proponent. In other words, a proactive approach to public consultation is absent and not mentioned specifically by either the review or the decision.

4.4.2 North Simcoe

The review identifies only 2 out of 6 concerns addressed to public participation in North Simcoe, as Table 4.3 indicates. The decision only also identifies 2 concerns but out of a possible 6, in Table 4.4.

The two specific concerns that are identified by the review are that: public concerns are not always addressed and a proactive approach to PSC is absent. The review does not say in so many words that there is insufficient public participation but it can be implied by the two previous concerns mentioned. On the other hand, the Joint Board does identify insufficient public participation as a major concern in the overall planning process. The Board also indicates that public involvement was too late. In other words, sufficient public participation was absent early on in the proponent's overall planning process. Both the review and the decision tend to agree that public participation was insufficient in the proponent's overall planning process.

4.4.3 Meaford St. Vincent

The review recognizes 4 out of the 6 concerns aggregated, in Table 4.3. The decision identifies 2 out of the possible 6 concerns related to public consultation issues in Meaford, as shown in Table 4.4.

Insufficient public participation in the decision-making of the proponent's planning process was identified as a problem by both the review and the decision. Specifically, the review was more concerned with public concerns not always being addressed, proactive approach to PSC was absent and that there was little done to promote problem resolution and mediation. Meanwhile, the board too, indicated that PSC Guidelines were not followed resulting in insufficient public participation, as indicated in Table 4.4. Therefore, insufficient public participation in the overall planning process is a prevalent concern in the Meaford case according to the review and decision documents.

4.5 Individual Case Analysis: Hydrogeology

Tables 4.5 and 4.6 are lists compiled of all the "hydrogeological concerns" that have been identified from the 3 cases, by the Government Review and Joint Board Decision, respectively.

4.5.1 Halton

In Table 4.5, the review identifies 1 of the 3 hydrogeological concerns tabulated. The decision identifies 4 particular concerns dealing with hydrogeology out of a potential 14, as shown in Table 4.6.

Hydrogeology assessment results are dependent on the type of hydrostratigraphic or hydrogeological models used, according to the concerns outlined by the review and the decision, in Table 4.5 and Table 4.6. The Board identifies several specific concerns. The concerns include: unpredictable contamination of migration pathways, potentially negative impacts from escaping leachate, reliability of engineered contaminant systems and uncertainty of the effectiveness of contingency measures. These hydrogeological concerns identified by the Board are not specifically addressed in the review document.

4.5.2 North Simcoe

One concern is identified by the review relating to the hydrogeology issue, in Table 4.5. The decision identifies 4 out of a list of 14, in Table 4.6.

Table 4.5: Hydrogeology – Review's Concerns

Identified Concerns	Halton	North Simcoe	Meaford–St. Vincent
1. inconsistent hydrogeological models being used 2. potential effects of improper monitoring & manag't 3. differing reports on hydrogeological concerns	X	X	X

Table 4.6: Hydrogeology – Board's Concerns

Identified Concerns	Halton	North Simcoe	Meaford–St. Vincent
1. disagreements with hydrogeological models used	X	X	X
2. contamination migration pathways unpredictable	X	X	X
3. potential –ve impacts from escaping leachate	X	X	
4. reliability of engineered contaminant systems	X		
5. uncertainty of effectiveness of contingency meas.	X		
6. inconsistent levels of site investigation		X	X
7. lack of sufficient data			X
8. uncertainty with sampling methods			X
9. uncertainty with hydraulic testing			X
10. lack of MOE standards on methodologies			X
11. small safety margin for hydrogeological suitability			X
12. unsatisfied with soil permeabilities			X
13. water chemical analysis absent			X
14. water use survey not adequately considered			X

The review is particularly concerned with the potential effects of improper monitoring and management. On the other hand, the Board generally states the overall hydrogeological concern with regard to the disagreement and confusion that different models have presented. More specifically, the board has pointed out concerns, in Table 4.6, such as: unpredictable contamination migration pathways, potentially negative impacts from escaping leachate and inconsistent levels of site investigation. The inconsistency of hydrogeology models appear to be problematic for field experts, the reviewers and Joint Board members alike.

4.5.3 Meaford–St. Vincent

The review identifies one general concern dealing with the issue of hydrogeology, in Table 4.5. The decision recognizes a list full of concerns, as shown in Table 4.6. The concern from the review in Table 4.5 interprets that differing hydrogeologic reports from consultants are due to differing hydrogeological models producing dissimilar results.

The decision agrees with the review, in that the main concern is in the way different hydrogeological models produce differing results, except that the Board provides a more detailed account of the concerns attributed to the inconsistency in the hydrogeologic modelling. These particular concerns address lack of sufficient data, uncertainty with sampling methods, uncertainty with hydraulic testing, lack of Ministry of Environment (MOE) standards on methodologies, small margin for hydrogeological suitability, unsatisfied with soil permeabilities, the absence of water chemical analyses and the inadequate consideration of a water use survey, as shown in Table 4.6. Therefore, the Board tends to highlight very particular concerns that deal with inconsistent hydrogeological modelling, while the review identifies the broader or overall concern of hydrogeology as Table 4.5 and Table 4.6 show.

4.6 Three Way Case Analysis: Site Selection

Part two of this analysis identifies the trends and trends emerging from the three cases considering the three issues of interest, in this study. In Chapter 4, Section 4.1 briefly describes the background of the three undertakings chosen for this particular study. That section is important in setting the scene for this section because it reveals that two of

the three undertakings that went to Joint Board Hearings, under the EA Act, were not approved (see Table 4.7). To recap, the North Simcoe and Meaford–St. Vincent cases were not approved, and the Halton case was approved with conditions. Therefore, the 3–way comparison becomes more resourceful because it is identifying and comparing the issues of concern between an approved disapproved undertakings.

There are three important assumptions that must be considered with regard to part two of this analysis. As the six tables indicate, some concerns are more prevalent than others when comparing the three cases with one another. Therefore, in order to identify the trends and trends emerging for the purpose of this study, a weight will be attached to the number of Xs marked across the row for each concern. In other words, 1 X across a row will indicate the need for concern but no trend is apparent, 2 Xs will indicate that a trend may be emerging, and 3 Xs implies that a trend definitely exists. These assumptions are useful in distinguishing the importance of some concerns and issues relative to one another.

4.6.1 Site Selection

According to Table 4.1, the review identifies the lack of traceability and replicability as trends in the proponent's site selection decision–making process based on the Halton, North Simcoe, and Meaford–St. Vincent cases. More specifically, the review points out the concern for all three cases, that "the criteria is not fully defined and developed in the evaluation". The reviews for all three cases indicate many trends emerging. In other words, two out of the three cases, as documented in the reviews, include emerging trends in such concerns as: lack of clarity in the ranking of evaluation criteria, lack of clarity in the weighing of evaluation criteria, inconsistent evaluation treatment, inconsistent application of criteria, seriously flawed evaluation methodology, inadequate levels of information for alternatives compared to the preferred site, mitigation measures inconsistently applied, previous technical reports not considered in EA's evaluation and insufficient information to incorporate adequate mitigation measures.

Many other examples point out the lack of traceability among the three cases but presently, do not seem to be emerging as trends. They include such concerns as: lack of

**Table 4.7: Joint Board Decisions: Waste Management
Projects (July 1990)**

Project Type	Joint Board Decisions	Joint Board Decision To Disapprove Project
Master Plans	0	0
Individual EAs	3	2
Total	3	2

clarity in the establishment of evaluation criteria, lack of site specific criteria, unclear evaluation of advantages and disadvantages, mitigation measures dismissed too early and net effects analysis incorrectly utilized in Table 4.1.

In relation to site selection issues in Table 4.2, the decision has common concerns to the review but specific trends differ within the traceability and replicability trend identified. For example, inconsistency in the hydrogeology assessment and seriously flawed evaluation methodology are identified as emerging trends by the Board.

There is a list of many other specific examples addressing the traceability and replicability problem, in Table 4.2. Some of them include: mitigation disadvantages of alternative sites were never explored, no interest in iteration or revisiting decisions along the evaluation process and no list was compiled of sites that were screened used exclusionary criteria.

4.6.2 Public Consultation

The review indicates that public concerns were not always addressed, in all three cases. This dominant trend within the public consultation is obvious in Table 4.3. The individual case analyses, in Tables 4.3 and 4.4, point out that insufficient public participation is the predominant concern identified in the overall planning process. Although insufficient public participation is not mentioned in the North Simcoe review document, the two specific examples identified in Table 4.3 can be considered as insufficient public participation and therefore, supports that a trend exists. There seems to be a trend emerging with the concern that a proactive approach to PSC is absent.

Other examples are classified as insufficient public participation but they do not emerge as trends over the three cases according to the reviewers. They are examples such as: the absence of a public advisory body and lack of effort to promote problem resolution and mediation, as shown in Table 4.3.

The Board Decision points out a trend with the concern of insufficient public participation among the Halton, North Simcoe and Meaford–St. Vincent cases, in Table

4.4. Also, there are no other trends prevalent or emerging in all three cases according to the Board but feel that the remaining concerns should be noted as important. For example, the public's perception of bias towards the decision-making process, unclear consultation by proponents, lack of self-education, public involvement too late in the process and Pre-Submission Consultation (PSC) Guidelines not adequately followed are all important and relevant concerns relating to public consultation issues.

The concerns that were identified only once in one of the three cases do not hint at any specific trends emerging but they are essential in providing further examples of what is occurring in the overall trend.

4.6.3 Hydrogeology

Both the review and the decision identify the trend that hydrogeologic models used to determine the technical soundness of sites are questionable. Moreover, Tables 4.5 and 4.6 show this trend occurring across the Halton, North Simcoe and Meaford-St. Vincent cases. For example, the review of North Simcoe does not suggest openly the unreliability of the models, but instead, mentions more specifically that there are potential effects of improper monitoring and management.

The Joint Board specifically identifies a definite trend which addresses the specific concern of "unpredictable contamination pathways" in the Halton, North Simcoe and Meaford-St. Vincent cases in Table 4.6. Other trends identified by the board tend to be emerging for the particular concerns of potentially negative impacts from escaping leachate and inconsistent levels of site investigation. All the many other hydrogeologic concerns which are mostly identified in Meaford-St. Vincent's decision are shown in Table 4.5. They address the reliability of the models used to assess hydrogeology but are purely specific examples which do not indicate any trends according to the three cases in

Table 4.6. On the other hand, findings indicated that there is a lack of Ministry of Environment (M.O.E.) standards on hydrogeological model methodologies. This concern is identified in the last of three cases heard by the Joint Board and it may be the beginning of a trend in future hearings to come.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS-

5.1 Conclusions

In response to the purpose stated at the beginning of this study, the following conclusions can be made.

Generally, an equally proportional number of concerns were raised by the Environmental Assessment Board (EAB) and the Government Review relating to the issues of site selection and public consultation. In other words, these EA related issues are addressed with the same emphasis by both the Government Review and the Joint Board. On the other hand, the Joint Board was much more concerned about hydrogeological issues than the Government Review.

Site selection and public consultation issues were predominant in each of the three cases analyzed. For instance, the site selection issue did not adopt the interpretation of Subsection 5(3) which requires that the undertaking be derived from a logically and consistently applied planning process which is technically sound, and easy to follow ("trace") and replicate. With respect to the second issue, public consultation in EA planning processes lacked the productive dialogue among participants, which frustrated rather than improved the planning process. In fact, two out of the three decisions selected for this study were not approved, based on these two issues. On the contrary, it is very important to mention that both these issues were identified in Halton's experience, in what proves to be the first and only undertaking approved by the Joint Board, under the EA Act.

Because two of the three decisions before the Joint Board were not approved, there is a concern that Ministry officials do not apply enough judgement when reviewing the environmental assessment. Therefore, it would be helpful for the Board to deal with serious unresolved inconsistencies before the environmental assessment is considered acceptable from the Ministry's perspective.

With the focus and attention on site selection and public consultation issues in EA planning processes, it is safe to conclude that a technically sound or hydrogeological suitable landfill site is a necessary but insufficient condition in order to obtain EA approval.

The many existing and emerging trends in the study strongly alluded to the bad use of evaluation methods. Consequently, two key principles of good planning are the basis of the requirements set out in the Environmental Assessment Act, and in the Ministry's Interim Guidelines on Environmental Assessment Planning and Approvals: accountability and traceability. Moreover, evaluation methods assist in only one part of the evaluation or site selection process. Hence, a properly chosen and applied evaluation method is of little use if the impacts are poorly predicted, and if the preferred alternative is not the one which best addresses the concerns of those making the decision. Therefore, the evaluation of alternatives is a key component of the EA process.

Perhaps the most powerful and troubling conclusion to be taken from the Halton, North Simcoe and Meaford–St. Vincent landfill EA processes is the tremendous expenditure of time, money and human resources that can be involved in gaining approvals for a landfill in Ontario today. There maybe many other solid waste management proposals whose planning approach is clearly weaker than Halton's accepted undertaking, as Table 5.1 suggests, and are slowly moving through the EA process. These proposals will soon require Government Review and perhaps also a hearing before a decision is made on approval. Only time will tell how many more future EA planning efforts are approved or not.

5.2 Recommendations

Based on the analysis of the Halton, North Simcoe and Meaford–St.Vincent cases, the following recommendations are made.

In order to balance the emphasis of hydrogeological concerns, the Government Review needs to be more conscious of identifying hydrogeological concerns and also making the proponent aware of them. The seven matters outlined in the Halton Decision

Table 5.1: EA Program Statistics:Waste Management Projects

Project Type	Status			Total
	PSC	Review	Approved	
Master Plans	44	1	1	46
Individual EAs	46	9	10	65
Total	90	10	11	111

for assessing the hydrogeological suitability of a site should be a consistently used guideline, in order to set a precedent.

All parties involved in the EA site selection process should adopt the North Simcoe Board's interpretation of Subsection 5(3) which requires that "the undertaking be derived from a logically and consistently applied planning process which is technically sound and easy to follow (trace) and replicate." Proponents about to begin the EA process should ensure that the planning process that they intend to carry out fully meets these requirements. With regard to the public consultation concern, all participants in EA planning processes should participate in a manner which encourages a productive dialogue among participants. At the same time they should facilitate problem resolution, where possible, and improve rather than frustrate the planning process.

The Joint Board appears to be calling for a more prominent, dedicated and intelligent role for the EA Branch in conducting a critical evaluation of Reviewer's comments while preparing the Government Review; in order to identify and resolve inconsistencies and ensure that the information is complete enough and available to those affected, so that the hearing can proceed in an intelligent manner.

In response to improving evaluation methods, there is a movement towards the use of more sophisticated techniques in other jurisdictions, and some proponents in Ontario. However, the pressures to increase traceability and accountability also create the potential for increased controversy, and a backlash against both formal evaluation methods and the EA process. Therefore, the Ministry should promote the use of formal evaluation methods, the EA Branch should encourage the careful choice of evaluation methods and in reviewing EAs, the Branch should watch for errors and deficiencies like those which were identified in the EA's reviewed for this study.

This study adds to the body of knowledge surrounding Ontario's evolving EA and Approvals process; particularly as it applies to the subject of solid waste management.

5.3 Study Limitations

Due to the small number of recent Waste Management EA's available, the results of this study may be altered somewhat with more cases. Thus, the undertakings may not truly be representative of future EA's subject to the Joint Board, under the EA Act. A larger data set may have been more indicative of those cases yet to reach the approval process. The study's methodology is based on assumptions that were arbitrarily identified by the researcher. These are the limitations identified in this study.

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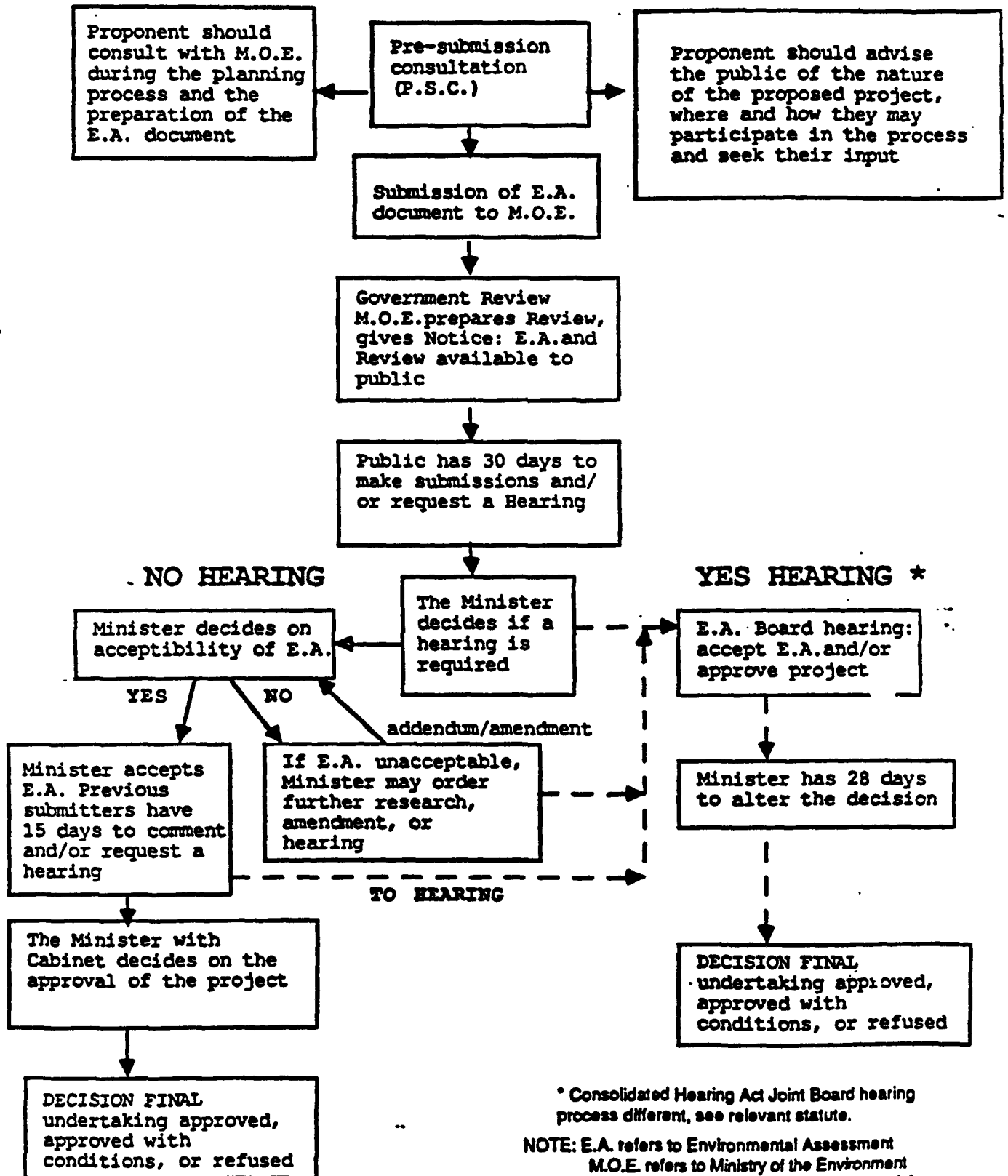
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APPENDICIES

APPENDIX A

PUBLIC PARTICIPATION IN THE ENVIRONMENTAL ASSESSMENT PROCESS



* Consolidated Hearing Act Joint Board hearing process different, see relevant statute.

NOTE: E.A. refers to Environmental Assessment
M.O.E. refers to Ministry of the Environment
(adapted from 'A Citizen's Guide to Environmental Assessment')

APPENDIX B

In the Halton Decision, the Board outlined 7 matters which it considered to be of "considerable significance" when assessing the hydrogeological suitability of a site. They are:

- The hydrogeology of the area must be comprehensible to the Board...
- The loss of contaminants should be minimal (and preferably zero), as a result of either natural containment or engineered works...
- Natural containment and attenuation of contaminants is preferred to engineered containment and attenuation...
- If it is predicted that contaminants may move away from a landfill site, the postulated contamination migration pathways should be predictable...
- It should be demonstrated that predicted leachate migration from the site will have no significant adverse impact on surface waters...
- Monitoring to identify contaminant escape and migration pathways should be straightforward...
- There should be the highest possible confidence in the effectiveness of contingency measures to intercept and capture lost contaminants..."(Halton Board Decision pp.109-112)

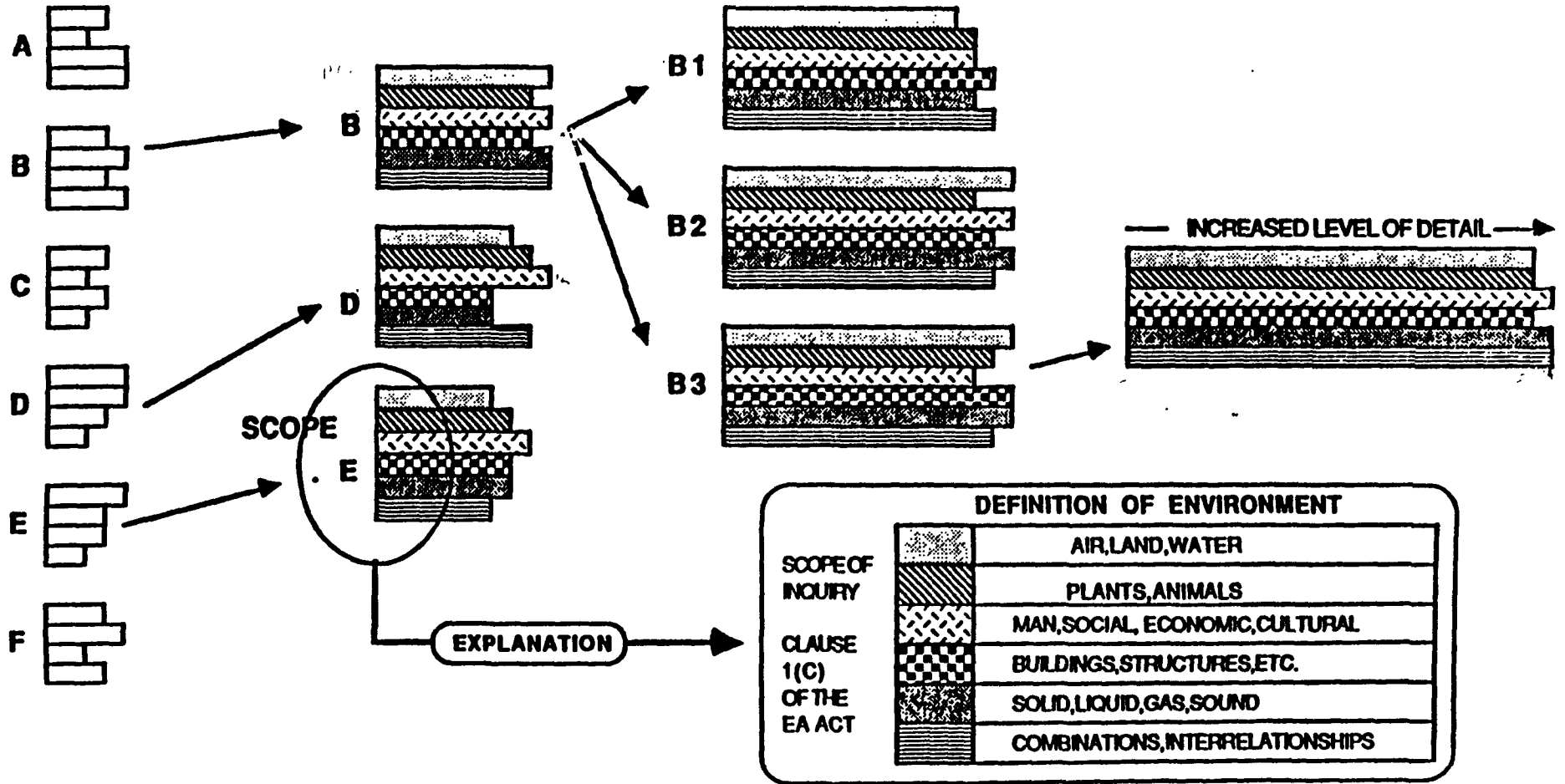
APPENDIX C

LEVEL OF DETAIL OF EXAMINATION OF ALTERNATIVES IN A PARTICULAR STUDY

**IDENTIFICATION
AND INITIAL
SCREENING OF
ALTERNATIVES**

EVALUATE ALTERNATIVES THROUGH INCREASING LEVEL OF DETAIL, NARROWING TO:

**THE PREFERRED
ALTERNATIVE
(UNDERTAKING)**



APPENDIX D

For the proponent:

- helps in meeting EA requirements for planning and documentation
- identifies permits, licences, and approvals required
- identifies alternatives to consider
- directs the proponent to further sources of expertise and information
- encourages the proponent to identify and resolve issues to the extent possible before an EA is formally submitted
- focuses planning on issues of concern
- addresses public and agency concerns
- helps to design appropriate methods for assessing environmental effects

For affected parties:

- promotes undertakings which address the concerns of affected parties
- provides a means of identifying and resolving issues to the extent possible between the proponent and the affected parties before the undertaking is chosen and approval is sought
- increases public awareness of a problem and of the alternative solutions to it that may affect them
- provides an opportunity for the undertaking to be more acceptable to affected parties by allowing public concerns to influence decisions

For the provincial environment:

- promotes good planning by fostering an effective investigation of alternatives before the undertaking is chosen

- ° ensures that planning identifies all areas of the environment potentially of concern and incorporates all appropriate mitigation measures
- ° improves the range and quality of information available on which decisions are based
- ° increases the efficiency of the approvals process
- ° encourages more informed, environmentally sound decisions

Planning Process and Consultation

It is the proponent's responsibility to adopt a planning process that allows and encourages the effective involvement of affected parties. Such a planning process should observe the following rules:

1. Pre-submission consultation means that affected parties participate in the planning process. Consultation is not a separate procedure conducted parallel or subsequent to a planning process. Instead the planning process is constructed around the involvement and contributions of affected parties.
2. Planning occurs through a phased sequence of decisions. Consultation occurs before final decisions are made and in a manner that allows affected parties to contribute intelligently to the decisions required. Often several phases of decisions are developed to narrow a set of alternatives through progressively more detailed steps until an undertaking is selected.
3. Consultation begins with the earliest planning stages. Affected parties are consulted long before any irreversible decisions are made. Early decisions are often among the most controversial and

APPENDIX E

SUMMARY OF ROLES: THE ROLE OF THE REVIEW COORDINATOR AND REVIEWERS IN THE EA PROCESS

**Review
Coordinator
EA Branch**

**Pre-Submission
Consultation**

Follow "Pre-Submission Consultation in the EA Process". discuss with the proponent the components of the EA.

Advise proponent as to possible existing data source.

Formal Review Period

Set deadlines for reviewers' comments and the completion of the review.

Determine the contributors to the review in consultation with the reviewers.

Keep proponent and review team informed periodically on the progress of the review and assist in resolving issues raised.

Coordinate and prepare the review.

Evaluate the EA to determine if the planning process described in the EA is consistent with the requirements of Section 5(3) of the Act.

Provide advice on how to improve the EA, if deficient.

Work with reviewers to ensure that their comments are accurately reflected in the review, are logical, understandable, substantiated, and respond to all questions which should be addressed by the review.

Obtain and highlight reviewers' comments.

Conclude on compliance with 5(3).

Post-Review Period

In consultation with Legal Services Branch advise the Minister on the type of notices required.

Advise the Minister on the acceptability of the EA.

Coordinate and contribute to a revised review, if one is necessary.

Advise the Minister on the approval of the undertaking.

Hearing

Prepare and present evidence which addresses the interpretation of the EAA; the role of the review, participants in the EA process; whether or not the EA has complied with Section 5(3), and how the EA should be improved, if significant deficiencies are found.

SUMMARY OF ROLES (Cont'd)

Reviewers

Pre-Submission Consultation

To follow "Pre-Submission Consultation in the EA Process".

Advise the proponent based on the review Ministry's guidelines on how to prepare EAs.

Advise the proponent about the agency's existing data.

Discuss with the proponent the technical quality and completeness of the EA and the policy interests of the reviewer.

Provide copies of any written comments made in PSC to EA Advisor for EA Branch files.

Formal Review Period

Meet deadlines set by the review coordinator for reviewers' comments.

If an extension of time is required, advise the Review Coordinator and state reasons.

Contribute to the review by:

- evaluating the EA to determine if the technical quality and completeness of the components of the EA are satisfactory
- providing advice on how well the EA addresses the policy interests of the reviewer's agency, as appropriate
- providing advice on how the EA should be improved, if significant deficiencies are found, by pointing out what changes and/or research should be carried out to obtain a satisfactory EA
- preparing a summary statement of their position on the EA and the undertaking.

Ensure that their comments are accurately reflected in the review, are logical, understandable, substantiated, and deal with all the areas which should be addressed by the reviewer.

Post-Review Period

Make submissions to the Minister, in special circumstances, on the acceptability of the EA, the approval of the undertaking, (including any conditions of approval) and the requirement for a hearing.

Hearing

Prepare and present the agency's views, as required.

APPENDIX F

30-day period, anyone may submit written comments on the matter to the Minister of the Environment and may request the Minister to hold a public hearing.

5.2 Decision Process

Two decisions regarding a proposed undertaking are made after the Review of the EA has been published and the minimum 30 day public review period has ended.

The EA Act sets out two basic decision points:

- ° whether to accept the environmental assessment as a basis for making a decision on the undertaking;
- ° whether to approve the undertaking.

The decision on acceptance is made by the Minister of the Environment or, if requested by the Minister, by a hearing board. The decision on approval is made by the Minister, together with Cabinet unless the matter is referred to a hearing board.

(a) Acceptance of the Environmental Assessment

To determine the acceptability of the EA, the Minister must consider:

- ° The purpose of the EA Act.
- ° The government and agency review of the EA.
- ° Any submissions made by the public, government ministries and agencies or the proponent.

° The Environmental Assessment.

With this information in hand, the Minister decides whether the environmental assessment:

- ° is acceptable as submitted for the decision on approval;
- ° would be acceptable with certain amendments;
- ° requires further research, investigation, changes, and additions by the proponent to be acceptable;
- ° should have its acceptability decided by a hearing board rather than by the Minister.

The Minister's decision is communicated to the proponent and affected parties.

The proponent or any affected party may, with reasons given, request the Minister to hold a public hearing on the acceptability of the environmental assessment. The Minister is required to do so, in the words of the EA Act, unless in his absolute discretion he considers that the requirement is "frivolous and vexatious or that a hearing is unnecessary or may cause undue delay".

Thus the presentation of reasons and information for or against the acceptability of the EA by affected parties or against further work on it by the proponent are important factors for the Minister to consider.

5.2.1 Approval of the Undertaking

When an environmental assessment is determined to be acceptable, either as submitted or as amended, a decision is made on whether the undertaking should be approved.

APPENDIX G

Gouvernement
de
l'Ontario



Gouvernement
de
l'Ontario

Environmental Assessment Act

Revised Statutes of Ontario
1980

Chapter 140

as amended by

1988: Chapter 71 s. 18;

1989: Chapter 71 s. 31 and

1989: Chapter 72 s. 32

April 1990

Loi sur les évaluations environnementales

Lois révisées de l'Ontario
de 1980

Chapitre 140

tel qu'il est modifié par

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et la loi 3 de l'année 71 de 1989

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1989

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- (b) give approval to proceed with the undertaking subject to such terms and conditions as the Minister considers necessary to carry out the purpose of this Act and in particular requiring or specifying,
 - (i) the methods and phasing of the carrying out of the undertaking,
 - (ii) the works or actions to prevent, mitigate or remedy effects of the undertaking on the environment,
 - (iii) such research, investigations, studies and monitoring programs related to the undertaking, and reports thereof, as he considers necessary,
 - (iv) such changes in the undertaking as he considers necessary,
 - (v) that the proponent enter into one or more agreements related to the undertaking with any person with respect to such matters as the Minister considers necessary,
 - (vi) that the proponent comply with all or any of the provisions of the environmental assessment as accepted by the Minister that may be incorporated by reference in the approval,
 - (vii) the period of time during which the undertaking, or any part thereof, shall be commenced or carried out; or
- (c) refuse to give approval to proceed with the undertaking.

Matters to be considered by the Minister

(2) In determining whether to give approval, give approval subject to terms and conditions or refuse to give approval to proceed with an undertaking in accordance with subsection (1), the Minister shall consider,

- (a) the purpose of this Act;
- (b) the environmental assessment of the undertaking as accepted by the Minister;
- (c) the submissions, if any, made to the Minister with respect to the environmental assessment.

APPENDIX H

5.3 Board Hearings

A public hearing on an environmental assessment called by the Minister of the Environment is ordinarily held before the Environmental Assessment Board. But in cases where approval of the undertaking under the Act would lead to further hearings by other tribunals under other acts, the proponent can request a consolidated hearing by a Joint Board under the Consolidated Hearings Act, 1981 and so avoid the cost and delay of multiple hearings.

(a) Hearing Participants

The following are eligible to participate at Board hearings:

- the proponent,
- any person who has asked for a hearing,
- other persons or agencies recognized by the Board as having an interest in the proceedings, and
- the Minister of the Environment, represented by counsel or otherwise.

(b) Environmental Assessment Board Hearings

The composition and powers of the Environmental Assessment Board are set out in Part III of the Environmental Assessment Act. They include the following:

- The Board is independent; its members are appointed by Cabinet but are not employed by any ministry.
- Except in very rare circumstances, all Board hearings are open to the public.
- EA Board decisions become final in 28 days unless the Minister intervenes on behalf of the government.

The Board may be required to hold a hearing by the Minister at any time after the expiry of the 30-day public notice period following the publication of the Review. In addition, at certain times, the proponent or anyone else can request that a hearing be held:

- ° within 30 days (or more if the Minister stipulates) of public notification that an environmental assessment and government review are available for inspection;
- ° within 15 days of public notification that the environmental assessment has been accepted, either as submitted or as amended, by the Minister.

During these intervals, any person may submit written notice to the Minister requesting a hearing. This notice must be accompanied by a written presentation of information and reasons why the hearing is necessary. On receiving this notice the Minister must call a hearing unless it is determined that the request is frivolous or vexatious or that a hearing is unnecessary or may cause undue delay.

(c) Joint Board Hearings Under the Consolidated Hearings Act, 1981

When a project requires approval under several Acts and before several boards, the Consolidated Hearings Act, 1981 provides for a single hearing on all approvals. The relevant Acts are set out in a schedule to the Consolidated Hearings Act, 1981. They include the Environmental Assessment Act, the Environmental Protection Act, the Expropriations Act, the Ontario Municipal Board Act, the Ontario Water Resources Act and the Planning Act.

A Joint Board is established ad hoc for each application and will have at least one member (and perhaps more) from the Environmental Assessment Board or the Ontario Municipal Board or both. In relation to the decisions required under the Act (acceptability of the environmental assessment and/or approval of the undertaking) the Joint Board acts as though it were an Environmental Assessment Board, with equal or greater powers.

In three respects, a Joint Board hearing may differ from an EAB hearing:

- ° The hearing may be 'phased', that is, decisions on particular matters under consideration may be deferred until a later date.
- ° The decision may, within 28 days, be appealed to Cabinet by any participant in the hearing.

For these reasons, as well as to save time, Joint Board hearings are sometimes preferred by participants.

A consolidated hearing may be chosen by the proponent or ordered by individual boards. The proponent wishing a consolidated hearing must give written notice to the Hearings Registrar, explaining the general nature of the undertaking, the hearings that may be required, and the Acts in question.